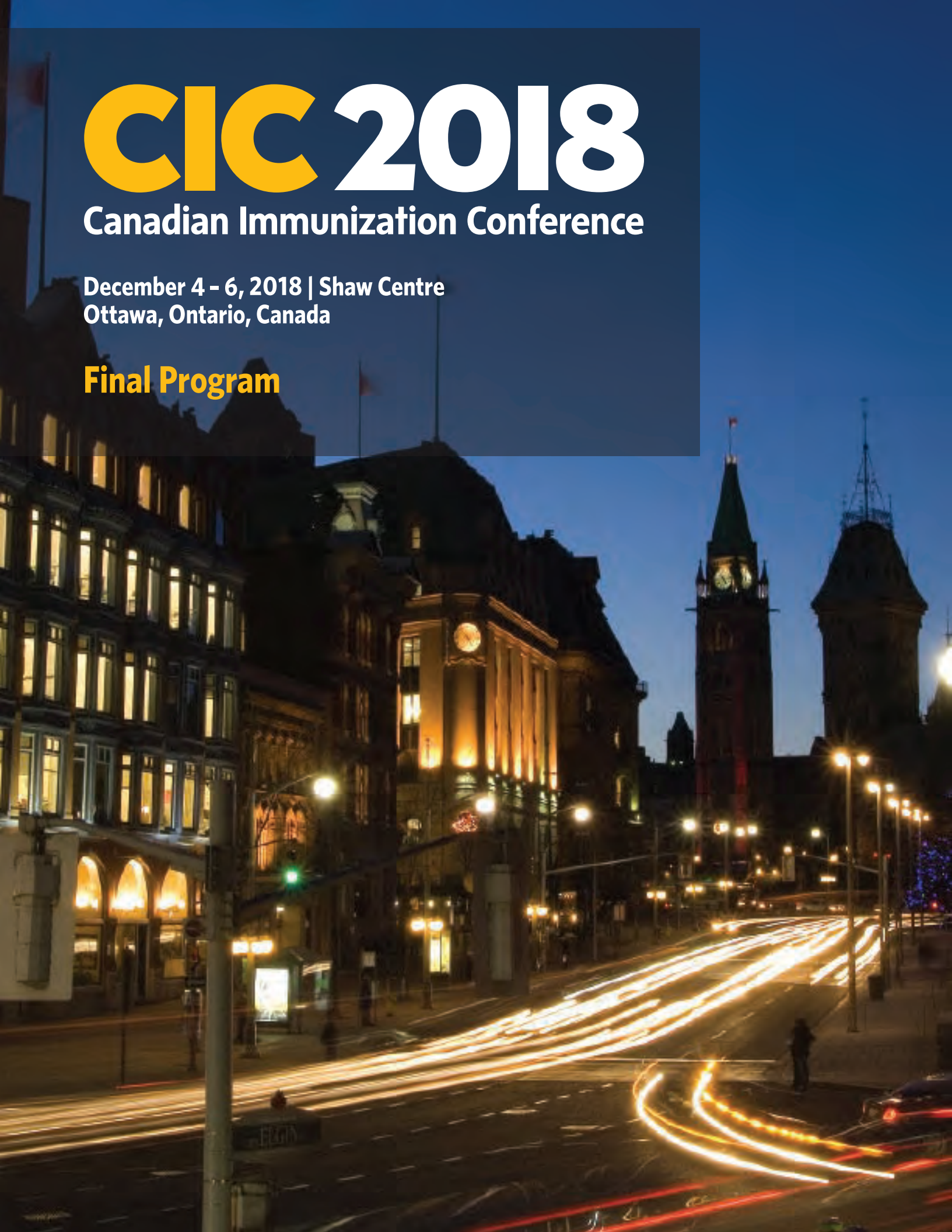

CIC 2018

Canadian Immunization Conference

December 4 – 6, 2018 | Shaw Centre
Ottawa, Ontario, Canada

Final Program

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COLLABORATORS

CANADIAN ASSOCIATION FOR IMMUNIZATION RESEARCH, EVALUATION AND EDUCATION

CAIRE is a unique professional organization of more than 140 Canadian researchers dedicated to building the scientific foundation for optimal immunization programs. Members are involved in vaccine and program development, program evaluation, social science of vaccine use and training of the next generation of vaccinologists. CAIRE's mission is to encourage and enhance vaccinology research so Canadians have timely access to new and improved vaccines and optimal programs. CAIRE promotes collaboration and networking amongst the vaccinology disciplines to ensure that suitable expertise exists to maintain Canada as a world leader in high-quality vaccinology research.

CANADIAN PUBLIC HEALTH ASSOCIATION

The Canadian Public Health Association (CPHA) is the independent national voice and trusted advocate for public health, speaking up for people and populations to all levels of government. We champion health equity, social justice and evidence-informed decision-making. We leverage knowledge, identify and address emerging public health issues, and connect diverse communities of practice. We promote the public health perspective and evidence to government leaders and policy-makers. We are a catalyst for change that improves health and well-being for all.

CANADIAN PAEDIATRIC SOCIETY

The Canadian Paediatric Society (CPS) is the national association of paediatricians, committed to working together to advance the health of children and youth by nurturing excellence in health care, advocacy, education, research and support of its membership. As a voluntary professional association, the CPS represents more than 3,300 paediatricians, paediatric subspecialists, paediatric residents, and other people who work with and care for children and youth.

PUBLIC HEALTH AGENCY OF CANADA

The Public Health Agency of Canada (PHAC) empowers Canadians to improve their health. In partnership with others, its activities focus on preventing disease and injuries, promoting good physical and mental health, and providing information to support informed decision-making. It values scientific excellence and provides national leadership in response to public health threats.

CAIRE

CANADIAN PUBLIC HEALTH ASSOCIATION

Canadian Paediatric Society

Public Health Agency of Canada | Agence de la santé publique du Canada

WIRELESS NETWORK: CIC2018 PASSWORD: IMMUNIZE

CONFERENCE OBJECTIVES

CIC 2018 will provide participants the opportunity to:

- Profile new research, successful strategies and best practices to encourage future innovation and collaboration.
- Connect stakeholders to shape the future of Canada's vaccination research, policies and programs.
- Examine current vaccine- and immunization-related issues from various disciplines and sectors and discuss relevant knowledge translation approaches.
- Explore strategies to address emerging issues and potential impacts on decision-making, research, policy and practice.

LEARNING OBJECTIVES

Having attended CIC 2018, delegates are better prepared to:

- Utilize effective evidence-based programs, best clinical practices and policy approaches.
- Describe vaccine-related research and identify colleagues and partners to develop initiatives.
- Identify vaccination-related challenges and solutions, trends, emerging issues and evidence gaps.

COMMITTEES

EXECUTIVE COMMITTEE

- Ian Culbert, Canadian Public Health Association
- Gordean Bjornson, Canadian Association for Immunization Research and Evaluation
- Marie Adèle Davis, Canadian Paediatric Society
- Gina Charos, Public Health Agency of Canada

CONFERENCE ORGANIZING COMMITTEE

- Ian Culbert, Co-Chair, Canadian Public Health Association
- Patricia Salsbury, Co-chair, Public Health Agency of Canada [November - July; November - December]
- Erin Henry, Co-chair, Public Health Agency of Canada [August - October]
- Brenda Coleman, Scientific Co-Chair, University of Toronto
- Fawziah Lalji, Scientific Co-Chair, University of British Columbia
- Disha Alam, Canadian Association of Midwives
- Gordean Bjornson, Canadian Association for Immunization Research and Evaluation
- Susan Bowles, Canadian Pharmacists Association
- Eliana Castillo, Society of Obstetricians and Gynaecologists of Canada
- Marie Adèle Davis, Canadian Paediatric Society
- Eve Dubé, Immunize Canada
- Nany Grimard Ouellette, First Nations and Inuit Health Branch, Indigenous Services Canada
- Christine Halpert, Canadian Nursing Coalition for Immunization
- Nathalie Labonté, Vaccine Industry Committee [BIOTECanada]
- Janet McElhaney, Canadian Geriatrics Society
- Shelly McNeil, Association of Medical Microbiology and Infectious Disease Canada & National Advisory Committee on Immunization
- Monika Naus, Canadian Immunization Committee
- Lisa Paddle, Public Health Agency of Canada
- Elisabeth Pagé, Canadian Institutes of Health Research – Institute of Infection and Immunity
- Caroline Quach, National Advisory Committee on Immunization
- Jennifer Ralph, Canadian Institutes of Health Research – Institute of Infection and Immunity

SCIENTIFIC COMMITTEE

- Brenda Coleman, Scientific Co-Chair, Canadian Association for Immunization Research and Evaluation
- Fawziah Lalji, Scientific Co-Chair, Canadian Association for Immunization Research and Evaluation
- Christina Bancej, Public Health Agency of Canada
- Lucie Marisa Bucci, Canadian Public Health Association
- Dorothy Moore, Canadian Paediatric Society
- Otto G. Vanderkooi, Association of Medical Microbiology and Infectious Disease Canada

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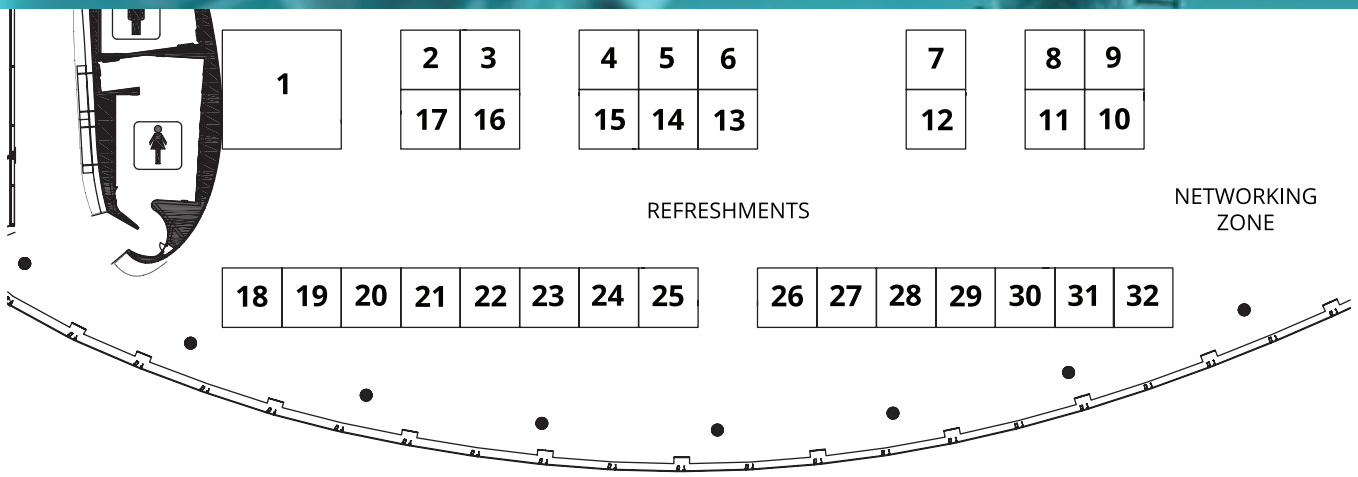
EXHIBITORS



1918 SPANISH FLU EXHIBIT, LEVEL 3

One hundred years ago, infectious diseases were the leading cause of death worldwide. In Canada, they now cause less than 5% of all deaths — largely thanks to vaccines. Unmasking Influenza attempts to capture the social and political impact on Canada during the 1918 flu pandemic and to shed light on whether or not we are prepared for the next great pandemic. This exhibit commemorates the global story of disease, death and tragedy which was ultimately responsible for the loss of more than 50,000 Canadians.

DEFINING MOMENTS CANADA, LEVEL 2

Defining Moments Canada is proud to present "Struggle Without Rest," its travelling exhibit about the impact of the Spanish flu on diverse Canadian communities. The Spanish Flu Pandemic of 1918-1919 swept through Canada, causing unprecedented mortality and leading to massive social upheaval and change. With stories from one coast to the other, this exhibit shines a light on the diverse, untold stories of the flu pandemic that would, in many ways, shape Canada's future.

TUESDAY, DECEMBER 4

PROGRAM OVERVIEW

Simultaneous Interpretation available

7:00 - 8:30	**CO-DEVELOPED LEARNING ACTIVITIES** **Let's do it better: Novel delivery systems and immunization schedules** Room 206/208		
9:00 - 10:45	**OPENING CEREMONY** Canada Hall 1 & 2	**PLENARY I** **Pandemic influenza: Past and future vaccine and preparedness challenges** Canada Hall 1 & 2	
10:45 - 11:30	**REFRESHMENT BREAK WITH EXHIBITORS** Parliament Foyer		
11:30 - 13:00	**CONCURRENT SESSIONS**		
	How pharmacists bridge the gap in services Room 201	**Improving vaccination acceptance and uptake in pregnancy** Room 210	**New vaccines in the next 2-5 years** Room 203
	Optimizing immunization in Indigenous populations Room 208	**Strengthening the role of vaccines in the control of pandemics** Room 202	**Using technology to connect Canadians to their immunization records across Canada** Room 207
	Oral Presentations Session 1: Room 205; Session 2: Room 206		
13:00 – 14:30	**NETWORKING LUNCH** Canada Hall 1 & 2		
14:30 – 16:00	**CONCURRENT SESSIONS**		
	Immunization registries for coverage assessment and public health action Room 201	**New products and technologies to advance vaccines and adjuvant biology** Room 206	**People with pre-existing acute or chronic conditions** Room 203
	Shifting sands underpinning influenza policy Room 202	**Tell me more about the "vaccine hesitant"** Room 210	**Using social media as a tool for outbreak response and to improve vaccine uptake** Room 207
	Oral Presentations Session 3: Room 205 Session 4: Room 208		
16:00 - 17:30	**WELCOME RECEPTION** Parliament Foyer		

The Flash Your Badge program entitles you and a guest to discounts throughout the city.
No need to print the passport, all you have to do is present your delegate badge at participating vendors.

7:00 - 8:30 **CO-DEVELOPED LEARNING ACTIVITIES** **ROOM 206/208**

LET'S DO IT BETTER: NOVEL DELIVERY SYSTEMS AND IMMUNIZATION SCHEDULES

The session will look at alternate immunization schedules and the impact of pharmacists in the delivery system, particularly on maternal and senior special populations.

LEARNING OBJECTIVES:

- Identify drivers for optimizing pediatric immunization schedules from a public health perspective, dissect out challenges, and formulate novel approaches, including alternative and mixed vaccine schedules, to optimize disease prevention in a resource-constrained environment.
- Understand novel strategies and vaccine delivery systems to maximize the public health impact and efficiency of existing and new programs that target special populations, such as pregnant women and older individuals.

FACULTY:

- Scott A. Halperin, MD, Professor of Pediatrics and Microbiology & Immunology, Dalhousie University
- Manish Sadarangani, MD, Vaccine Evaluation Center, BC Children's Hospital Research Institute; Division of Infectious Diseases, Department of Pediatrics, University of British Columbia

MODERATOR:

- Fawziah Lalji, Professor, Faculty of Science, University of British Columbia

The program was co-developed with CPS and GlaxoSmithKline and was planned to achieve scientific integrity, objectivity and balance.

Except where stated, all images courtesy of Ottawa Tourism

TUESDAY, DECEMBER 4

9:00 – 10:45 **OPENING CEREMONY** **CANADA HALL 1 & 2**

WELCOME REMARKS:

- The Honourable Ginette Petitpas Taylor, Minister of Health
- Ian Culbert, Executive Director, Canadian Public Health Association
- Siddika Mithani, President Public Health Agency of Canada
- Brian Ward, Interim Chair, Canadian Association for Immunization Research, Evaluation and Education
- Marie Adèle Davis, Executive Director, Canadian Paediatric Society

9:00 – 10:45 **PLENARY I** **CANADA HALL 1 & 2**

PANDEMIC INFLUENZA: PAST AND FUTURE VACCINE AND PREPAREDNESS CHALLENGES

Consistent with this year's CIC pandemic influenza theme to commemorate the 100th anniversary of the devastating 1918 Spanish Flu pandemic, Dr. Cox will describe the impact of the four influenza pandemics for which we have reliable virologic and epidemiologic data. From her vantage point as a world leader in influenza surveillance, she will describe challenges and advances in global surveillance and recent contributions to successful vaccination programs, including improvements in the vaccine virus selection process. Finally, she will explain significant challenges faced during the production and administration of vaccines during past influenza pandemics and describe recent international initiatives to improve the control of both seasonal and pandemic influenza. These include rapid sharing of influenza viruses and sequence data, development of new pandemic preparedness tools, and recent advances in efforts to improve influenza vaccines.

LEARNING OBJECTIVES:

- Discuss the impact of past and future influenza pandemics.
- Identify advances in influenza surveillance, and new tools designed to assist in pandemic preparedness and their contribution to vaccination programs.
- Explore challenges for production and administration of influenza vaccines during past pandemics.
- Explain how recent developments in influenza prevention and control measures for both seasonal and pandemic influenza might impact our pandemic response.

SPEAKER

- Nancy Cox, (retired) Director, Influenza Branch, CDC; (retired) Director, WHO Collaborating Centre for Surveillance, Epidemiology and Control of Influenza

MODERATOR

- Bonnie Henry, Provincial Health Officer, British Columbia Ministry of Health

10:45 – 11:30 **REFRESHMENT BREAK WITH EXHIBITORS** **PARLIAMENT FOYER**

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MEMBRE DE MÉDICAMENTS NOVATEURS CANADA

CCPP

CA0117PVA005F

TUESDAY, DECEMBER 4

11:30 – 13:00 **CONCURRENT SESSIONS**

ROOM 201 HOW PHARMACISTS BRIDGE THE GAP IN SERVICES

As one of the most accessible groups of health care professionals, pharmacists can be instrumental in providing patients with pertinent information to make informed choices when it comes to immunizations. This session will explore the expanding role of pharmacists in vaccinations and the increased role of advising and administering vaccines for flu and other vaccine-preventable illnesses.

Three presentations will illustrate concrete examples of how pharmacists are increasingly improving access to vaccinations and evidence-based advice in a variety of settings:

- Reducing the immunization care gap and the role of Quebec pharmacists.
- Improving access to travel vaccines and the impact of pharmacists incorporating travel immunization into their practice, clinical outcomes and patient satisfaction.
- Hospitalization as an opportunity to connect to hard-to-reach and high-risk populations with a focus on hospital-based program for asplenic patients in response to suboptimal vaccination rates in this population.

LEARNING OBJECTIVES:

- Describe the role of pharmacists in improving access to recommended adult vaccines.
- Discuss current perspectives and future prospects for pharmacists in the provision of travel vaccines.
- Describe a hospital-based approach to meeting vaccination needs for a high-risk population.

SPEAKERS:

- Daniel Thirion, Professeur, Faculté de pharmacie, Université de Montréal
- Sherilyn Houle, Assistant Professor, School of Pharmacy, University of Waterloo
- Tasha Ramsey, Pharmacotherapy Specialist, Infectious Disease; Assistant Professor, College of Pharmacy, Dalhousie University

MODERATOR:

- Susan Bowles, Associate Professor, College of Pharmacy and Department of Medicine (Geriatrics), Dalhousie University

11:30 – 13:00 CONCURRENT SESSIONS

ROOM 210 IMPROVING VACCINATION ACCEPTANCE AND UPTAKE IN PREGNANCY

Session presenters can respond to questions in either English or French.

In Canada, vaccination against influenza in pregnancy has been recommended since 2007. However, vaccine uptake in pregnancy remains suboptimal and well below the recommended target of 80%. The reasons for low uptake of vaccination during pregnancy include lack of vaccine acceptance by both providers and pregnant women and access barriers to vaccination services. With the new recommendation to vaccinate against pertussis in every pregnancy, it is important to understand the determinants of vaccine acceptance in pregnant women, the willingness of maternity care providers to recommend vaccination to their pregnant patients, and the issues affecting access to vaccination services for pregnant women.

LEARNING OBJECTIVES:

- Identify key elements underpinning vaccine acceptance / vaccine hesitancy as they relate to pregnant women.
- Explore the drivers and barriers that will influence maternity care providers in their willingness to vaccinate in pregnancy.
- Describe effective interventions for increasing vaccine acceptance and uptake in pregnancy, looking both at demand for vaccination and access to vaccination services.

SPEAKERS:

- Devon Greyson, Assistant Professor, Health Communication, University of Massachusetts
- Courtney Green, Manager, Medical Research and Guidelines, Society of Obstetricians and Gynaecologists of Canada
- Nicholas Brousseau, Médecin-conseil en maladies infectieuses, Institut national de santé publique du Québec
- Eliana Castillo, Clinical Associate Professor of Medicine and Obstetrics and Gynaecology, University of Calgary

MODERATOR:

- Eve Dubé, Researcher, Institut national de santé publique du Québec; Invited Professor, Anthropology, Université Laval

ROOM 203 NEW VACCINES IN THE NEXT 2 – 5 YEARS

Session presenters can respond to questions in either English or French.

Vaccine technology has evolved significantly in the last decade, profoundly changing the future of vaccine development. Vaccines are under development for infections that are significant problems in specific populations.

In the last two decades *Clostridium difficile* infection (CDI) has emerged as a worldwide public health issue and the most common hospital-related infection. Some people carry the bacteria and develop no symptoms, or mild diarrhea; more severe infections can lead to life-threatening inflammation of the colon.

An estimated one in five pregnant women carries Group B Streptococcus (GBS) bacteria, a major cause of maternal and infant ill health. Current GBS prevention focuses on screening strategies and giving antibiotics to women in labour to reduce disease in neonates. However, this approach may be difficult in low-income settings, where many births take place at home, and laboratory capacity for screening for GBS is limited.

This session will present an overview of vaccines targeting *C. difficile* and GBS and their potential impact on public health in Canada.

11:30 – 13:00 CONCURRENT SESSIONS

LEARNING OBJECTIVES:

- Explore advances in the development of new vaccines for CDI and GBS.
- Examine challenges in vaccine development and research.
- Summarize how development of new vaccines will impact public health in Canada.

SPEAKERS:

- Deborah Money, Executive Vice Dean, Faculty of Medicine, University of British Columbia
- Ted Steiner, Professor and Associate Head, Department of Biochemistry, Microbiology and Immunology, Division of Infectious Disease, University of British Columbia
- Shelley Deeks, Chief, Communicable Disease, Emergency Preparedness and Response, Public Health Ontario

MODERATOR:

- David Scheifele, Emeritus Professor of Pediatrics, University of British Columbia; Senior Scientist, Vaccine Evaluation Center, BC Children's Hospital Research

ROOM 208 OPTIMIZING IMMUNIZATION IN INDIGENOUS POPULATIONS

Session presenters can respond to questions in either English or French.

The incidence and burden of certain vaccine-preventable diseases (VPDs) are disproportionately higher in some Indigenous populations compared to the overall Canadian population. This symposium will explore the factors contributing to the declining rates of influenza vaccination among service providers working at a health centre located in a non-isolated First Nations community, as well as describing culturally-based promotional strategies to improve vaccine coverage. The session will present the implementation of an outbreak dose of MMR vaccine in remote First Nations communities in Ontario and will describe the emerging disease caused by Haemophilus influenzae type A in northern Indigenous communities.

LEARNING OBJECTIVES:

- Describe the factors contributing to the declining rates of influenza vaccinations among health service providers.
- Identify successful initiatives to support immunization programming and optimize vaccine uptake in First Nations communities.
- Assess the decision-making process and implementation of a novel intervention for mumps outbreak control within remote First Nations communities and share lessons learned.
- Explore the emerging disease caused by Haemophilus influenzae type A and HIA vaccine development.

SPEAKERS:

- Dinah Palinkas-Routly, Manager of Clinical & Nursing Services, Kanesatake Health Center Inc.
- Eniko Neashish, Gestionnaire des programmes par intérim, Centre de santé Wemotaci
  - Coprésentatrice : Maryse Weizineau, responsable des soins infirmiers par intérim
  - Coprésentatrice : Taïsha Niquay, intervenante en santé communautaire
- Leanne Coward, Practice Consultant, Public Health, First Nations and Inuit Health, Indigenous Services Canada
- Andrew Cox, Senior Research Officer, Vaccine Program, Human Health Therapeutics Research Centre, National Research Council

MODERATOR:

- Anne Lebans, Nurse Consultant, First Nations and Inuit Health, Indigenous Services Canada

11:30 – 13:00 **CONCURRENT SESSIONS**

ROOM 202 STRENGTHENING THE ROLE OF VACCINE IN THE CONTROL OF SEASONAL AND PANDEMIC INFLUENZA

How can influenza vaccine play a more significant role in the control of seasonal and pandemic influenza? This session will address the efforts being made to improve the effectiveness of influenza vaccine and to facilitate a fast and effective vaccination response in a pandemic.

Dr. Bryna Warshawsky will provide an overview of current global initiatives to produce more effective influenza vaccines and to manufacture them more rapidly. She will also provide an update on universal influenza vaccine research – a vaccine that is intended to provide robust long-lasting protection against multiple subtypes of influenza.

Recent updates to Canada's national pandemic influenza vaccine strategy will be the second focus. Dr. Bonnie Henry will highlight the new risk management approach, lessons learned from the 2009 H1N1 pandemic, and key elements of the pandemic vaccine response. She will outline the key assumptions underlying the updated vaccine strategy and describe the key decisions and triggers for action. Dr. Henry will also review how Canada would address limitations to vaccine supply using the Pandemic Vaccine Prioritization Framework.

LEARNING OBJECTIVES:

- Describe current initiatives to improve influenza vaccine manufacturing processes and vaccine effectiveness.
- Discuss the challenges in mounting a rapid vaccination response to a pandemic.
- Identify the key elements of Canada's pandemic vaccine strategy.

SPEAKERS:

- Bonnie Henry, Provincial Health Officer, British Columbia Ministry of Health
- Bryna Warshawsky, Medical Director, Communicable Diseases, Emergency Preparedness and Response, Public Health Ontario

MODERATOR:

- Erin Henry, Director, Immunization Programs and Pandemic Preparedness Division, Centre for Immunization and Respiratory Infectious Diseases (CIRID), Public Health Agency of Canada

ROOM 207 USING TECHNOLOGY TO CONNECT CANADIANS TO THEIR IMMUNIZATION RECORDS ACROSS CANADA: LEVERAGING THE CANADIAN VACCINE CATALOGUE

Imagine the benefits of a Canada-wide, secure capability for managing lifelong immunization records, available from anywhere needed: at the point of care, on the web, or with a mobile app. Advances in digital technologies have created the opportunity for solutions which address local, provincial/territorial and federal requirements, while engaging clients in the management of their immunization records.

Join us for this session demonstrating how technology is being used to connect Canadians to public health and their immunization records, using the Canadian Vaccine Catalogue (CVC), Canada's new national immunization data dictionary. Learn about the CVC and other key digital tools being developed and implemented in Canada to ensure immunizations administered by *any* provider, *anywhere* in Canada are available securely, to clients and providers alike.

Developers and implementers from the Ottawa Hospital Research Institute, the Ontario Ministry of Health and Long-term Care, and the British Columbia Centre for Disease Control will update you and provide interactive demonstrations of their projects, utilizing the Digital Health Immunization Repository (DHIR) and CVC as part of a suite of digital immunization tools.

TUESDAY, DECEMBER 4

11:30 – 13:00 CONCURRENT SESSIONS

LEARNING OBJECTIVES:

- Describe the architecture of digital health solutions in Ontario, and understand how it will integrate with consumer health applications to increase public access to immunization information.
- Explain how the CANImmunize project has worked with Ottawa Public Health and other public health units to develop and refine consumer reporting of immunizations.
- Describe the Canadian Vaccine Catalogue, the new national immunization dictionary, and how to access it.

SPEAKERS:

- Katherine Atkinson, Lead, Research and Business Development, CANImmunize, The Ottawa Hospital mHealth Lab, Ottawa Hospital Research Institute
- Cameron Bell, Lead, Technical Architect, CANImmunize, The Ottawa Hospital mHealth Lab, Ottawa Hospital Research Institute
- Lori Kane, Public Health Subject Matter Expert, Digital Health Solutions and Innovation Branch, Ontario Ministry of Health and Long-term Care
- Elizabeth Lee– Clinical Manager, Public Health Informatics and Information Solutions, British Columbia Centre for Disease Control
- Beverly Knight, Interoperability Standards Manager, Canada Health Infoway

MODERATOR:

- Tara Mawhinney, Consultant, Ontario Ministry of Health and Long Term Care

ROOM 205 ORAL ABSTRACTS SESSION 1

- Varicella breakthrough cases occurring in previously vaccinated children between 2000 and 2015 in the Canadian IMPACT centres — Ben Tan
- Pertussis vaccine effectiveness in a frequency matched population-based case-control Canadian Immunization Research Network study in Ontario 2009-2015 — Natasha Crowcroft
- The effect of 16 years of meningococcal vaccination programs in Canada — Nicole Le Saux
- The emergence of meningococcal W ST-11 clone in British Columbia, 2017 — Monika Naus
- Nephrotic syndrome following four-component meningococcal B vaccine (4CMenB) — Gaston De Serres

ROOM 206 ORAL ABSTRACTS SESSION 2

- Efficacy and safety of an adjuvanted herpes zoster subunit vaccine in autologous hematopoietic stem cell transplant recipients 18 years of age or older: First results of the phase 3 randomized, placebo-controlled ZOE-HSCT clinical trial — Robyn Widenmaier
- Prospective evaluation of diphtheria-tetanus-acellular pertussis-polio-Haemophilus influenzae type b (DTaP-IPV-Hib) and pneumococcal vaccination in children who completed chemotherapy for acute lymphocytic leukemia: A Canadian Immunization Research Network Study — Karina Top
- An Enveloped Virus-like Particle (eVLP) Cytomegalovirus (CMV) Vaccine is immunogenic and safe: Preliminary results of a First-in-Human (FiH) Canadian Immunization Network Clinical Trials Network - VBI Vaccines study — Joanne Langley
- Viral genomic variation and vaccine effectiveness across consecutive influenza A(H3N2) epidemics in Canada, 2016-17 and 2017-18 — Danuta Skowronski
- Vaccine effectiveness against lineage matched and mismatched influenza B viruses across 8 seasons in Canada, 2010-11 to 2017-18 — Danuta Skowronski

13:00 – 14:30 NETWORKING LUNCH CANADA HALL 1 & 2

14:30 – 16:00 **CONCURRENT SESSIONS**

ROOM 201 IMMUNIZATION REGISTRIES FOR COVERAGE ASSESSMENT AND PUBLIC HEALTH ACTION

Since the Canadian Consensus Conference on Immunization Registries in 1998, progress has been made on the development of a network of inter-connectable immunization registries with due attention to functionality required to support immunization services and coverage assessment. In this session, participants will be informed about the status of immunization registries in Canada, and hear about specific examples of use of registry data for actions to improve vaccine uptake.

LEARNING OBJECTIVES:

- Describe the status of immunization registries in Canadian jurisdictions, along with their key features and functionality.
- Identify how the use of registry data for mapping of immunization uptake can be used for public health action to improve vaccine coverage.
- Explore initiatives to support First Nations populations in benefiting from immunization registries and their use to monitor immunization rates and offer immunization services.

SPEAKERS:

- Jennifer Pennock, Director, Surveillance and Epidemiology Division, Centre for Immunization and Respiratory Infectious Diseases, Public Health Agency of Canada
- Shovita Padhi, Medical Health Officer, and Christina Fung, Epidemiologist, Fraser Health Authority, British Columbia
- Kari Bergstrom, Manager, Immunization Business, Health and Wellness Promotion Branch, Alberta Health, Alberta Health, and Darlene Richter, Manager, Community Health, Primary Care & Public Health, Stoney Health Services, Alberta

MODERATOR:

- Monika Naus, Medical Director, Communicable Diseases & Immunization Service, BC Centre for Disease Control, and Associate Professor, School of Population and Public Health, University of British Columbia

ROOM 206 NEW PRODUCTS & TECHNOLOGIES TO ADVANCE VACCINES AND ADJUVANT BIOLOGY

Recent advances in vaccine technology have the potential to improve immune responses to current and future vaccines. For example, micro-needle patches have the potential to revolutionize the field from the perspective of implementing new vaccines, increasing coverage and addressing hesitancy.

Dissolvable micro-needle patches could simplify delivery of influenza vaccines, thereby enabling distribution and storage outside the cold chain, disposal as non-sharps waste, and possible self-administration under medical supervision or possibly at home.

Viral vectors as promising tools for gene therapy and vaccines and nanoparticles play an increasingly significant role in vaccine design and development. The session will present how new plant-based vaccines, single dose immunization, changes to adjuvants, and a universal influenza vaccine will increase the potential to treat more infectious diseases by vaccination.

LEARNING OBJECTIVES:

- Review recent advances in vaccine technology and the capacity to improve immune responses to current and future vaccines.
- Identify how micro-needle patches have the potential to revolutionize the field from the perspective of implementing new vaccines, increasing coverage and addressing hesitancy.
- Explore how new technology can offer potential solutions for vaccine design and development.

14:30 – 16:00 **CONCURRENT SESSIONS**

SPEAKERS:

- Robert Atmar, Professor, Infectious Diseases, Department of Medicine & Department of Molecular Virology and Microbiology, Baylor College of Medicine
- Nadine Rouphael, Affiliate Faculty, Emory Vaccine Center; Associate Professor, Department of Medicine, Division of Infectious Diseases, Emory University School of Medicine; Investigator, Emory Center for AIDS Research
- Lakshmi Krishnan, Director, Research & Development, National Research Council Canada

MODERATOR:

- Janet McElhaney, VP Research & Scientific Director, Health Sciences North Research Institute; Professor, Clinical Sciences Division, Northern Ontario School of Medicine

ROOM 203 PEOPLE WITH PRE-EXISTING ACUTE OR CHRONIC CONDITIONS

Our patient population is increasingly complex, with underlying pre-existing acute and chronic conditions. Keeping them protected against vaccine-preventable infections is challenging; we need to not only know what vaccines are recommended, but to understand when best to administer these vaccines. A patient-centred approach, with medical and nursing expertise, is key. In this session, we will review, through cases and examples, vaccines for specific diseases, and review resources and approaches available to help guide patients and healthcare workers.

LEARNING OBJECTIVES:

- Explore the impact of pre-existing acute and chronic conditions and added risk for complications of vaccine-preventable diseases.
- Describe the benefits of a patient-centered approach and examine impacts on future vaccine uptake.
- Review resources and approaches available to healthcare practitioners to keep patients protected.

SPEAKERS:

- Anne Pham-Huy, Assistant Professor, Physician Lead, Primary Immunodeficiency Clinic and Pediatric Infectious Diseases Consultant, Department of Pediatrics, Faculty of Medicine, University of Ottawa
- Karina Top, Associate Professor, Division of Infectious Diseases, Department of Pediatrics, Dalhousie University
- Alex Carignan, Professeur agrégé, Département de microbiologie et d'infectiologie, Faculté de médecine et des sciences de la santé, Université de Sherbrooke

MODERATOR:

- Caroline Quach, Professor, Department of Microbiology, Infectious Diseases and Immunology, Université de Montréal; Pediatric ID & Medical Microbiology, CHU Sainte-Justine; Chair, NACI

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14:30 – 16:00 **CONCURRENT SESSIONS**

ROOM 202 SHIFTING SANDS UNDERPINNING INFLUENZA POLICY

This session will engage participants in a range of perspectives on influenza policy in Canada to stimulate a critical and reflective dialogue on the current state of, and potential future directions for, influenza policy. Panelists will provide the influenza immunization policy and program context and evaluation results from three provinces:

1. British Columbia: Mandatory mask-versus-vaccinate policy implementation; evaluation of the policy and impact on absenteeism among health workers.
2. Ontario: Universal Influenza Immunization Program and review of the evidence on repeat vaccination effects, including ethical, financial and public confidence considerations.
3. Quebec: Review of evidence and new changes to influenza policies and program.

LEARNING OBJECTIVES:

- Describe the challenges of influenza policy implementation evaluation.
- Evaluate the implications of emerging evidence on repeat vaccination effects on influenza policy implementation.
- Apply lessons learned from three Canadian jurisdictions to local context.

SPEAKERS:

- Michelle Murti, Public Health Physician, Public Health Ontario
- Jeff Kwong, Senior Scientist, Institute for Clinical Evaluative Sciences, Scientist, Public Health Ontario; Family Physician, Toronto Western Family Health Team; Associate Professor, Department of Family & Community Medicine and Dalla Lana School of Public Health, University of Toronto
- Rodica Gilca, Médecin-conseil, Direction des risques biologiques et de la santé au travail, Institut national de santé publique du Québec

MODERATOR:

- Susan Bowles, Associate Professor, College of Pharmacy and Department of Medicine (Geriatrics), Dalhousie University

TUESDAY, DECEMBER 4

14:30 – 16:00 **CONCURRENT SESSIONS**

ROOM 210 TELL ME MORE ABOUT THE "VACCINE HESITANT"

Vaccine hesitancy campaigns have gained momentum recently and with that, vaccine acceptance has become an increasingly complex and fascinating issue. To better address hesitancy in a constructive manner, we need to know more about the vaccine hesitant. What do we know about this population and where does the hesitancy stem from? Hear first-hand how parents, public health specialists and academics view this shift.

LEARNING OBJECTIVES:

- Examine new evidence on the vaccine-hesitant population in Canada.
- How do social trends such as "fake news" and decreased confidence in authority figures intensify the problem of vaccine hesitancy?
- Explore vaccine hesitancy from the parents' perspective.

SPEAKERS:

- Tara Hills, Former vaccine-hesitant mother, Ottawa
- Martine Dubuc, Senior Nurse Advisor and Supervisor, Immunization Promotion and Education, Public Health Agency of Canada
- André Picard, Health Columnist, The Globe and Mail

MODERATOR:

- Eve Dubé, Researcher, Institut national de santé publique du Québec; Invited Professor, Anthropology, Université Laval

ROOM 207 USING SOCIAL MEDIA AS A TOOL FOR OUTBREAK RESPONSE AND TO IMPROVE VACCINE UPTAKE

The use of social media by public health is an emerging issue. In outbreaks of vaccine-preventable diseases, the target population is often identified based on epidemiologic characteristics, but realistically is difficult to reach. Traditional media often reaches the general population and not those at risk. Using social media as a low-cost tool for outbreak response to reach the target population is now a necessary reality for public health agencies and requires particular skills and expertise.

Using two case studies, this session will describe Toronto Public Health's use of social media in a community outbreak of mumps among 18 to 35-year-old adults, and Toronto Public Health's use of social media to reach the men who have sex with men population and encourage vaccination following a hepatitis A outbreak in this group.

LEARNING OBJECTIVES:

- Describe the importance of including social media messaging routinely as part of outbreak response in vaccine-preventable disease outbreaks.
- Identify the types of social media platforms available for reaching a target population in an outbreak setting.
- Identify how to assemble a team in participants' local organizations to plan, prepare and coordinate a social media response in an urgent situation.

SPEAKERS:

- Vinita Dubey, Associate Medical Officer of Health, Communicable Disease Control and Vaccine Preventable Disease Program, Toronto Public Health
- Jill MacLachlan, Health Marketing Specialist, Communications, Toronto Public Health
- Michael Benusic, 4th year Public Health and Preventive Medicine Resident, University of Toronto

TUESDAY, DECEMBER 4

14:30 – 16:00 **CONCURRENT SESSIONS**

ROOM 205 ORAL ABSTRACTS SESSION 3

- Invasive pneumococcal disease burden after introduction of routine pediatric PCV13: Where do we go from here? — Allison Mcgeer
- Clinical features and outcomes of invasive pneumococcal disease in Canada between 1991-2015 — Manish Sadarangani
- Potential impact of routine use of 13-valent pneumococcal conjugate vaccine on hospitalizations for pneumonia among older adults in Canada — Jelena Vojicic
- The unique epidemiology of mumps in British Columbia, 2012-2017 — Eva Weingartl
- Mumps outbreaks in post-secondary settings - time for another dose of vaccine? — Trevor Arnason

ROOM 208 ORAL ABSTRACTS SESSION 4

- Implantation d'un programme provincial d'entretien motivationnel sur l'immunisation dans les maternités — Danielle Auger
- Résultats préliminaires du programme EMMIE (Entretien Motivationnel en Maternité pour l'Immunisation des Enfants) : amélioration de l'intention de vaccination et diminution de l'hésitation des parents — Julie Bergeron
- Renforcement des compétences en entretien motivationnel de conseillers en vaccination par la création d'une communauté virtuelle de pratique au palier provincial — Monique Landry
- Accompagnement en organisation des services de vaccination pour les enfants de 0-5 ans au Québec — Maryse Guay
- Développement d'indicateurs de couverture vaccinale à partir du registre de vaccination du Québec — Eveline Toth

16:00 - 17:30 **WELCOME RECEPTION** **PARLIAMENT FOYER**

End the first day of sessions with a casual networking reception with exhibitors. Meet fellow attendees from across the country and sample food and beverage selections as you mingle, network and make lasting connections.

BOOK SIGNING: ANDRÉ PICARD

MATTERS OF LIFE AND DEATH: PUBLIC HEALTH ISSUES IN CANADA

In his book, *Matters of Life and Death: Public Health Issues in Canada*, respected health journalist and columnist at the Globe and Mail (and actual "Public Health Hero"!) reflects upon the interconnection between physical health, the health of society and public policy. Picard provides facts to help Canadians make knowledgeable health choices and acts as a strong voice against public policy that diminishes Canadian society. Providing an antidote to widespread fear-mongering and misinformation, Matters of Life and Death is essential reading for anyone with an investment in public health topics — in other words, everyone.

WIRELESS NETWORK: CIC2018 PASSWORD: IMMUNIZE

Our vision is a world in which no one suffers or dies from a vaccine-preventable disease.

Visit us at **Booths 6, 13, 14** and **17,** where our team will be pleased to answer your questions.

Notre ambition est celle d'un monde où personne n'ait à souffrir ou à mourir d'une maladie qui puisse être évitée par la vaccination.

Veuillez visiter nos **kiosques 6, 13, 14** et **17,** où notre équipe aura plaisir de répondre à vos questions.

sanofipasteur.ca

SANOFI PASTEUR

WEDNESDAY, DECEMBER 5

PROGRAM OVERVIEW

Simultaneous Interpretation available 🎧

7:00 - 8:30	**CO-DEVELOPED LEARNING ACTIVITIES**		
	The illness and prevention of meningococcal B in adolescence, and HPV in males Room 206/208	**Why flu is still nothing to sneeze at: Evidence-based vaccine recommendations for older adults** Room 205/207	
8:45 - 10:30	**WELCOME REMARKS AND AWARDS PRESENTATIONS** 🎧 Canada Hall 1 & 2	**PLENARY II** **A global perspective on mandatory infant & childhood immunization: Rationales, issues and knowledge gaps** 🎧 Canada Hall 1 & 2	
10:30 - 11:00	**REFRESHMENT BREAK WITH EXHIBITORS** Parliament Foyer		
11:00 - 12:30	**CONCURRENT SESSIONS**		
	introduction of a provincial program for motivational interviewing on immunization in maternity wards 🎧 Room 203	**Increasing vaccine acceptance and uptake: Innovative interventions from the Immunization Partnership Fund** 🎧 Room 210	**Safety in numbers: A collaborative workshop to build capacity in the surveillance and management of adverse events following immunization in Canada** 🎧 Room 208
	We Need to Do Better - NextGen Influenza Vaccines 🎧 Room 202	**What's new with NACI** 🎧 Room 201	**Oral Abstracts** Session 5 - Room 205 Session 6 - Room 206 Session 7 - Room 207
12:30 - 14:00	**NETWORKING LUNCH** Canada Hall 1 & 2	**UNMASKING INFLUENZA** **The 1918 spanish flu in Canada and preparing for the next pandemic** Room 215	
14:00 – 15:30	**CONCURRENT SESSIONS**		
	Are Canadians condemned to suffer from rare and sever vaccine-preventable diseases or is it time for a change in the decision-making paradigm? 🎧 Room 203	**Living better longer: The role of new vaccines in healthy aging** 🎧 Room 202	**National immunization Technical Advisory Groups (NITAGs): Interpreting the evidence** 🎧 Room 201
	Practical communication tools for immunizers 🎧 Room 208	**Successful implementation of maternal vaccination programs: How to get there?** 🎧 Room 210	**Oral Abstracts** Session 8 - Room 205 Session 9 - Room 206 Session 10 - Room 207
15:30 - 17:30	**POSTER PRESENTATIONS** Canada Hall 1		

7:00 - 8:30 **CO-DEVELOPED LEARNING ACTIVITIES**

ROOM 206/208 THE ILLNESS AND PREVENTION OF MENINGOCOCCAL B IN ADOLESCENCE, AND HPV IN MALES

This session will provide the health care provider with the latest international and Canadian information on meningococcal and HPV disease and prevention in the adolescent population. There will be a focus on meningococcal B vaccines in teenagers, and HPV immunization for males. With this extended knowledge, participants can then engage on ideas that would increase prevention of these important diseases.

LEARNING OBJECTIVES:

- Summarize the adolescent data known about meningococcal B disease, and the vaccines available for prevention.
- Develop a concise explanation to share with health care providers and caregivers who ask you for clarification of what is known.
- Assess the latest information on HPV immunization for males and the best course of action for optimal protection.

FACULTY:

- Vivien Brown, Assistant Professor, University of Toronto; Board Member, Immunize Canada; Chair, HPV Prevention Week 2018
- Steven Moss, Associate Professor of Paediatrics, University of Toronto; Emergency Physician, Hospital for Sick Children

The program was co-developed with CPS and Pfizer and was planned to achieve scientific integrity, objectivity and balance.

7:00 - 8:30 **CO-DEVELOPED LEARNING ACTIVITIES**

ROOM 205/207 WHY FLU IS STILL NOTHING TO SNEEZE AT: EVIDENCE-BASED VACCINE RECOMMENDATIONS FOR OLDER ADULTS

Influenza vaccines are about half as effective for adults over 65 as they are for adults under 65. NACI has performed a comprehensive literature review of the high-dose and adjuvanted influenza vaccines, the output of which has been used to inform NACI's 2018/2019 seasonal influenza vaccine statement, which now recommends that the high-dose vaccine be offered to individuals over the standard-dose vaccine for adults over 65. This session will review how NACI evaluates the evidence for these vaccines, provide highlights from the most recent NACI Literature Review and NACI recommendations, and provide a rationale for the updated recommendations. Finally, this session will provide an overview of the evolving body of data, with a focus on real-world evidence generated in the US using new methods that exploit large data sets and administrative databases.

LEARNING OBJECTIVES:

- Review how new influenza vaccine data is evaluated by NACI to support recommendation development.
- Summarize new evidence for influenza vaccine options for adults over 65 and provide an update on NACI's recommendations, at the programmatic and individual level, and Canadian seasonal influenza immunization programs.
- Provide insights from real-world evidence and experience: Review the US and Canadian experience with the high-dose influenza vaccine.

FACULTY:

- Shelly McNeil, Professor, Division Head, Division of Infectious Diseases, Dalhousie University; Clinician Scientist, Canadian Center for Vaccinology, IWK Health Centre and Nova Scotia Health Authority
- Joanne Langley, Professor, Departments of Pediatrics and Community Health and Epidemiology, Faculty of Medicine; CIHR-GSK Chair in Pediatric Vaccinology, Dalhousie University; Associate Director, Clinical Evaluation Unit, Canadian Center for Vaccinology, Head, Division of Infectious Diseases, IWK Health Centre

MODERATOR:

- Brenda Coleman, Clinical Scientist, Infectious Disease Epidemiology Research Unit, Mount Sinai Hospital; Assistant Professor, Dalla Lana School of Public Health, University of Toronto

The program was co-developed with AMMI Canada and Sanofi Pasteur and was planned to achieve scientific integrity, objectivity and balance.

WEDNESDAY, DECEMBER 5

8:45 – 10:30 **WELCOME REMARKS AND AWARDS** **CANADA HALL 1 & 2**

WELCOME REMARKS:

- Theresa Tam, Chief Public Health Officer, Public Health Agency of Canada

AWARDS PRESENTATIONS:

- 2018 Award of Excellence in Immunization: The Centre for Family Medicine's International Travel and Immunization Clinic
- Dr. John Waters Memorial Award: Dr. Gaston De Serres

8:45 – 10:30 **PLENARY II** **CANADA HALL 1 & 2**

A GLOBAL PERSPECTIVE ON MANDATORY INFANT & CHILDHOOD IMMUNIZATION: RATIONALES, ISSUES AND KNOWLEDGE GAPS

Globally, infant and childhood vaccine uptake rates are not high enough to control vaccine-preventable diseases, with outbreaks occurring even in high-income countries such as Canada. This has led to a number of high-, middle-and low income countries to enact, strengthen or contemplate mandatory infant and/or childhood immunization to try to address the uptake gap. Not only is there no standard approach to mandatory immunization, it is also often controversial.

This session will provide an overview of mandatory immunization from a global perspective, looking at what vaccines are included, age groups covered and mandatory program flexibility. The ethics of mandatory legislation, including impact of options for opting out, penalties or incentives, and degree of enforcement, will be discussed. The session will explore whether compensation programs for causally associated serious adverse events following immunization exist, and will review the data on outcomes of mandatory legislation – both intended and unintended.

LEARNING OBJECTIVES:

- Describe the complexity of mandatory immunization.
- Identify factors that need to be considered if/when mandatory immunization is being considered.
- Assess variable outcomes of mandatory immunization in different contexts.

SPEAKER

- Noni MacDonald, Professor, Department of Pediatrics, IWK Health Centre, Dalhousie University

DISCUSSANTS

- HIC NITAG: Amanda Cohn, Executive Secretary
- Ontario: Natasha Crowcroft, Chief, Applied Immunization Research and Evaluation, Public Health Ontario
- Zimbabwe NITAG, Nhamo Gonah, Chair
- Shawn Harmon, Honorary Fellow, University of Edinburgh; Adjunct Professor, Department of Pediatrics, Dalhousie University

10:30 – 11:00 **REFRESHMENT BREAK WITH EXHIBITORS** **PARLIAMENT FOYER**

WIRELESS NETWORK: CIC2018 PASSWORD: IMMUNIZE

ROOM 203 INTRODUCTION OF A PROVINCIAL PROGRAM FOR MOTIVATIONAL INTERVIEWING ON IMMUNIZATION IN MATERNITY WARDS

Session presenters can respond to questions in either English or French.

This session will present evidence on an educational intervention using motivational interviewing (MI) concepts in the maternity ward. Planning the transition from a research project to the provincial EMMIE program will be discussed, as will the challenges and opportunities that arose during the roll-out of the program's first phase.

Examples of mitigation strategies deployed in order to manage the implementation challenges encountered will be discussed. The evaluation plan for the program will be presented, and the preliminary results will be shared with the participants, such as the results of the evaluative implementation monitoring, the obstacles and facilitators of the various stakeholders (qualitative methodology), improvement of parental vaccine hesitancy, and the impacts on vaccine coverage. The session will conclude with lessons learned and the next steps for the roll-out of the program's second phase or wider dissemination of this approach.

LEARNING OBJECTIVES:

- Describe the evidence supporting the EMMIE program.
- Describe the planning for the EMMIE program and implementing it in maternity wards.
- Illustrate the challenges of implementing the EMMIE program and possible solutions to those challenges.

SPEAKERS:

- Nadine Sicard, Consulting Physician in Infectious Diseases, *Ministère de la Santé et des Services sociaux du Québec*
- Arnaud Gagneur, Researcher, Research Centre at the Integrated University Health and Social Services Centre of Estrie
- Danielle Auger, Consulting Physician in Infectious Diseases, *Ministère de la Santé et des Services sociaux du Québec*
- Monique Landry, Consulting Physician, Public Health Protection Branch, *Ministère de la Santé et des Services sociaux du Québec*
- Eve Dubé, Researcher, *Institut national de santé publique du Québec*; Visiting Professor, Anthropology, Université Laval

ROOM 210 INCREASING VACCINE ACCEPTANCE AND UPTAKE: INNOVATIVE INTERVENTIONS FROM THE IMMUNIZATION PARTNERSHIP FUND

Although vaccines are both safe and effective, not enough Canadians are getting vaccinated, and Canada still sees outbreaks of vaccine-preventable diseases that lead to serious illness and death. Recognizing this public health challenge, the Government of Canada committed $25 million over five years through Budget 2016 to increase vaccination rates. Resulting from this investment is the Immunization Partnership Fund (IPF), the Public Health Agency of Canada's first grants and contributions program that supports innovative strategies aimed at improving vaccination coverage and contributes to strengthening capacity and evidence to increase vaccine acceptance and uptake. This session will present findings from three IPF-funded projects.

11:00 – 12:30 CONCURRENT SESSIONS

LEARNING OBJECTIVES:

- Identify lessons learned for addressing sub-optimal vaccination coverage rates in different populations and settings.
- Describe adoptable interventions and strategies that can improve immunization acceptance and uptake.
- Explore promising strategies to help raise vaccine literacy among school-aged children and adolescents.

SPEAKERS:

- Jonathan Spence, Project Lead, Reminder/Recall Project, BC Interior Health
- Erin Bentley, Senior Public Health Policy & Planning Officer, PEI Department of Health and Wellness
- Ian Roe, Content Strategist, Kids Boost Immunity, BC Centre for Disease Control

MODERATOR:

- Tara Beitel, Senior Policy Analyst, Public Health Agency of Canada

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ROOM 208 SAFETY IN NUMBERS: A COLLABORATIVE WORKSHOP TO BUILD CAPACITY IN THE SURVEILLANCE AND MANAGEMENT OF ADVERSE EVENTS FOLLOWING IMMUNIZATION

Public health management and reporting of adverse events following immunization (AEFIs) are essential components of the vaccine safety system, which requires collaboration between immunization providers and all levels of the public health system to be successful. In this workshop, participants will learn how vaccine safety is monitored in Canada and about the respective roles of providers and public health in surveillance, as well as the resources available to clinicians and public health units through the Special Immunization Clinic network.

Through case discussions and a question-and-answer period with a panel of experts on vaccine safety, participants will have the opportunity to review common and complex AEFI scenarios, discuss approaches to management and communication strategies with patients and families, and share ideas and resources that support AEFI surveillance and management in their locales.

LEARNING OBJECTIVES:

- Describe the importance of vaccine pharmacovigilance in Canada, including the roles of public health and clinicians in adverse event surveillance.
- Assess AEFI scenarios and plan a course of action for reporting and management, including additional consultation options for complex AEFIs.
- Incorporate best practices for AEFI reporting and management into routine work and develop skills for communicating with public health and clinical colleagues about AEFIs.

SPEAKERS:

- Shelley Deeks, Chief, Communicable Diseases, Emergency Preparedness and Response, Public Health Ontario
- Karina Top, Associate Professor of Pediatrics and Community Health & Epidemiology, Dalhousie University; Pediatric Infectious Disease Specialist, IWK Health Centre
- Tara Harris, Manager, Immunization and Vaccine Preventable Diseases, Public Health Ontario

ROOM 202 WE NEED TO DO BETTER - NEXTGEN INFLUENZA VACCINES

Most influenza vaccines are still produced in eggs, a platform that has not changed in over 75 years. Although some newer vaccines (e.g., adjuvanted, high-dose, LAIV, recombinant) have incremental advantages for some populations, most still have sub-optimal efficacy – particularly in years when the virus strains included in the vaccine are mismatched with the wild-type viruses circulating in the population – leading to an erosion of confidence in influenza vaccines by some.

New approaches are needed to improve vaccine efficacy, and new platforms could be critical in the event of a pandemic. Many approaches are being considered to develop next-generation influenza vaccines guided by an improved understanding of human immune responses. One promising vaccine candidate is based on virus-like particles (VLPs) made in plants. A Canadian company has recently completed a pivotal phase 3 study of a quadrivalent influenza vaccine. How this vaccine differs from existing products and high-level data from the phase 3 study will be discussed.

LEARNING OBJECTIVES:

- Describe the strengths and weaknesses of current influenza vaccines.
- Identify the immune response to influenza and how to use this information to make better vaccines and identify knowledge gaps.
- Describe how the plant-derived VLP vaccine differs from existing products and identify next steps.

SPEAKERS:

- Matthew Miller, Assistant Professor, Department of Biochemistry and Biomedical Sciences, McMaster University
- Brian Ward, Professor of Infectious Diseases, McGill University; Medicago Medical Officer

MODERATOR:

- Mark Loeb, Professor, Pathology and Molecular Medicine (primary), Health Research Methods, Evidence, and Impact, McMaster University

ROOM 201 WHAT'S NEW WITH NACI?

This session will have three sections, beginning with a review of the new National Advisory Committee on Immunization (NACI) publications and recommendations released since the 2016 Canadian Immunization Conference. The session will explore vaccine release dates and highlight the online availability of publications. The session will review the current NACI work plan and key milestones will be presented. Details on the future direction of NACI, including a description of its expanded mandate and the requirements for additional analyses to provide more comprehensive guidance on vaccine use in Canada, will be explored.

LEARNING OBJECTIVES:

- Describe new products and NACI recommendations since the 2016 Canadian Immunization Conference.
- Explore the current work plan and key milestones.
- Identify key points for the future direction of NACI, including the expanded mandate and additional analyses requirements.

11:00 – 12:30 CONCURRENT SESSIONS

SPEAKERS:

- Caroline Quach, Professor, Department of Microbiology, Infectious Diseases and Immunology, Université de Montréal; Pediatric ID & Medical Microbiology, CHU Sainte-Justine; Chair, NACI
- Matthew Tunis, Executive Secretary, National Advisory Committee on Immunization Secretariat, Centre for Immunization and Respiratory Infectious Diseases, Public Health Agency of Canada

MODERATOR:

- Althea House, Manager, National Advisory Committee on Immunization Secretariat, Centre for Immunization and Respiratory Infectious Diseases, Public Health Agency of Canada

ROOM 205 ORAL ABSTRACTS SESSION 5

- The use of an Electronic Medical Record (EMR) to improve opportunistic immunisations for inpatients at RCH Melbourne — Narelle Jenkins
- Creation of data products from Panorama to inform local immunization program planning and service delivery — Christina Fung
- Real-time Integration: Achieving complete immunization records for all First Nations children in Alberta — Cathy McDermott
- Nudging online reporting – Applying behavioural insights to vaccine reporting — Karen Beckermann
- Effectiveness of interventions delivered through digital interventions at improving vaccine uptake and series completion - A systematic review and meta-analysis — Katherine Atkinson

ROOM 206 ORAL ABSTRACTS SESSION 6

- Communicating with new mothers about infant vaccination: An ethnographic study in British Columbia's Fraser Health Region — Devon Greyson
- Evaluation of new palivizumab recommendations in healthy term infants in Nunavik, Quebec — Rodica Gilca
- Influenza vaccination status among Canadian households with young children, reasons for non-vaccination, and factors associated with non-vaccination for the 2017-2018 influenza season — Lindsey Sherrard
- Where is the risk? Identification of geospatial hotspots of unimmunized children in Ontario — Andrean Bunko
- Immunization status and other characteristics of Ontario students with non-medical exemptions: 2016-2017 school year — Sarah Wilson

ROOM 207 ORAL ABSTRACTS SESSION 7

- Determinants of non-vaccination for seasonal influenza in Canada — Maxime Roy
- Addressing influenza vaccine hesitancy in Ontario community pharmacies: Identifying targets for action using the behaviour change framework — Gokul Raj Pullagura
- Recurrent adverse events following vaccination with influenza vaccine can lead to vaccine hesitancy in adults: CANVAS 2017/18 results from the Canadian Immunization Research Network — Brenda Coleman
- The challenges and needs of immunization program managers to improve vaccine acceptance and uptake — Chandni Sondagar
- Communication materials to enhance vaccine acceptance: Do existing tools adhere to best practices in risk communication? A study by the Canadian Immunization Research Network — Maryline Vivion

WEDNESDAY, DECEMBER 5

12:30 – 14:00	**NETWORKING LUNCH**	**CANADA HALL 1 & 2**

12:30 – 14:00	**DOCUMENTARY: UNMASKING INFLUENZA**	**ROOM 215**

UNMASKING INFLUENZA
THE 1918 SPANISH FLU IN CANADA AND PREPARING FOR THE NEXT PANDEMIC

On the centenary of the 1918 Spanish Flu, the 1-hour documentary *Unmasking Influenza* examines the lasting impact on Canada of the world's most deadly flu pandemic and reveals whether or not we are prepared for the next.

Screening in English only. The documentary will be broadcast in English following the conference on the Cable Public Affairs Channel. This commemorative project is presented by: Sound Venture Productions, the Royal Canadian Geographical Society and the Government of Canada.

BOOK SIGNING: ANNE BUDGELL (3:30 – 4:30, PARLIAMENT FOYER)

WE ALL EXPECTED TO DIE: SPANISH INFLUENZA IN LABRADOR, 1918-1919

At the end of World War I, after four years of unimaginable man-made destruction, a swiftly killing virus travelled the planet. Up to one hundred million people perished in the most lethal pandemic in recorded history, the so-called "Spanish" influenza.

Nowhere on earth was the flu more deadly than in isolated settlements on the far northeastern coast of North America. In *We all Expected to Die: Spanish influenza in Labrador, 1918-1919* Anne Budgell reconstructs the horrific impact of the pandemic in hard-hit Labrador locations.

14:00 – 15:30 **CONCURRENT SESSIONS**

ROOM 203

ARE CANADIANS CONDEMNED TO SUFFER FROM RARE AND SEVERE VACCINE-PREVENTABLE DISEASES, OR IS IT TIME FOR A CHANGE IN THE DECISION-MAKING PARADIGM?

Session presenters can respond to questions in either English or French.

Cost-effectiveness analysis has become a standard method to estimate the value of a vaccine relative to its costs, and an influential element in decision-making. However, such analyses can be biased towards vaccines targeting very common and not necessarily severe diseases because of the economic benefit for the health system. The decision-making process is much more complex for vaccines targeting rare but serious diseases, such as invasive meningococcal disease, for which the cost-effectiveness of programs is unfavourable, and correspondingly the number needed to vaccinate exceedingly high. This discrepancy has raised concerns regarding the validity of methodologies and assumptions currently used in economic evaluations for these vaccines, as well as the criteria used to decide on their adoption.

This session will provide an overview of the experience with, challenges of, and potential solutions for, improving decision-making regarding these vaccines in Canada.

LEARNING OBJECTIVES:

- Review the new vaccines and immunization programs introduced in Canada in recent years.
- Examine reasons behind decisions for their inclusion into publicly-funded routine programs or targeting high-risk groups, and their implications.
- Identify main challenges of the traditional decision-making and commercial paradigms for vaccines targeting rare and severe diseases, and potential solutions for Canada.

SPEAKERS:

- Natasha Crowcroft, Chief, Applied Immunization Research and Evaluation, Public Health Ontario; Professor, Laboratory Medicine and Pathobiology and Dalla Lana School of Public Health, University of Toronto; Adjunct Scientist, Institute for Clinical Evaluative Sciences
- Monika Naus, Medical Director, Communicable Diseases & Immunization Service, British Columbia Centre for Disease Control; Associate Professor, School of Population and Public Health, University of British Columbia
- Maria Eugenia Espinoza Moya, PhD candidate, Health Services Research, Institute of Health Policy, Management and Evaluation, University of Toronto
- Philippe De Wals, Professor, Department of Social and Preventive Medicine, Laval University; Associate Professor, Department of Community Health Sciences, University of Sherbrooke; Medical Advisor, Quebec's National Public Health Institute

MODERATOR:

- Natasha Crowcroft, Chief, Applied Immunization Research and Evaluation, Public Health Ontario; Professor, Laboratory Medicine and Pathobiology and Dalla Lana School of Public Health, University of Toronto; Adjunct Scientist, Institute for Clinical Evaluative Sciences

14:00 – 15:30 **CONCURRENT SESSIONS**

ROOM 202 LIVING BETTER LONGER: THE ROLE OF NEW VACCINES IN HEALTHY AGING

As Canada's population ages, there will be increasing pressures on an already strained health care system to cope with and treat older adults. The incidence and severity of diseases can increase with aging, and clinical trials of new vaccines with enhanced efficacy against influenza, pneumococcus, and herpes zoster are underway.

Influenza is the most consequential vaccine-preventable disease in late life, leading in both morbidity and mortality. Declining immunity with age has been blamed for this, as have increased rates of vaccine failure. Pneumonia and lower respiratory tract infections are currently the third leading cause of death worldwide, and are predicted to rise to the leading cause of death as populations continue to age. The risk of developing herpes zoster (or shingles) dramatically increases with age, and as many as 50% of the 85+ age group develop the disabling complication of post-herpetic neuralgia.

Presenters will discuss findings from clinical trials and explore the impact of new vaccines on aging populations. In addition, the benefits of vaccination beyond the target population – an emerging area of focus in addressing the global threat of antimicrobial resistance (AMR) – will be explored.

LEARNING OBJECTIVES:

- Explain the burden and impact of illnesses on older adults and on the healthcare system.
- Describe the results of clinical trials of new vaccines with an impact on efficacy against influenza, pneumococcus, and herpes zoster, and the impact on vaccine-preventable diseases.
- Explore how the benefits of vaccination extend beyond the individual and the target population, and may contribute to the prevention of AMR.

SPEAKERS:

- Melissa Andrew, Associate Professor, Medicine and Geriatric Medicine, Dalhousie University; Affiliated Scientist, Canadian Center for Vaccinology, IWK Health Centre and Nova Scotia Health Authority
- Janet McElhaney, VP Research & Scientific Director, Health Sciences North Research Institute; Professor, Clinical Sciences Division, Northern Ontario School of Medicine
- Shelly McNeil, Professor, Division Head, Division of Infectious Diseases, Dalhousie University; Clinician Scientist, Canadian Center for Vaccinology, IWK Health Centre and Nova Scotia Health Authority

14:00 – 15:30 **CONCURRENT SESSIONS**

ROOM 201 NATIONAL IMMUNIZATION TECHNICAL ADVISORY GROUPS (NITAGS): INTERPRETING THE EVIDENCE

Canada will host the 3rd National Immunization Technical Advisory Groups' (NITAGs) Global NITAGs Network (GNN) following CIC2018. Long-established NITAGs (such as NACI, JCVI and ACIP) and newer NITAGs will leverage each other's work and know-how, and executive secretaries and Chairs from various NITAGs worldwide will discuss NITAG-relevant priorities and challenges.

Although all NITAGs seem to have the same "baseline" information, including SAGE and other international recommendations, burden of illness and local epidemiology, characteristics of vaccines (efficacy and safety), and immunization strategy, national recommendations may vary. Understanding how decisions are made and what factors influence these decisions is key.

This session will present how different NITAGs interpret the evidence available and make a recommendation. Using the example of infant pneumococcal conjugate vaccine programs, presenters will review the Evidence to Recommendations Framework developed by SAGE and recommendations from the various countries that led to the decision to use the PCV-13 vaccine rather than PCV-10, and a 2+1 versus a 3+1 program – and even a 1+1 program.

LEARNING OBJECTIVES:

- Describe factors that influence decision-making for different NITAGs.
- Discuss how evidence review, created elsewhere, can be applied in other countries.
- Explore the pros and cons of various childhood PCV programs.

SPEAKERS:

- Christoph Steffen, Medical Officer, World Health Organization
- Mathew Tunis, Executive Secretary, National Advisory Committee on Immunization

DISCUSSANTS:

- Rupa Singh, Executive Secretary, Nepal NITAG
- Anta Tal Dia, Chair, Senegal NITAG
- Magdalena Bastias Garcia, Executive Secretary, Chili NITAG
- Andrew Earnshaw, Executive Secretary, JCVI
- Amanda Cohn, Executive Secretary, ACIP

MODERATOR:

- Caroline Quach, Professor, Department of Microbiology, Infectious Diseases and Immunology, Université de Montréal; Pediatric ID & Medical Microbiology, CHU Sainte-Justine; Chair, NACI

#cic2018cci

WEDNESDAY, DECEMBER 5

14:00 – 15:30 **CONCURRENT SESSIONS**

ROOM 208 PRACTICAL COMMUNICATION TOOLS FOR IMMUNIZERS

The World Health Organization has identified communication training for health care workers as one strategy to address vaccine hesitancy. This session will provide an overview and practical demonstration of three tools immunizers can utilize to enhance communication with individual clients and groups: the A-S-K Approach© (Acknowledge-Steer-Knowledge), the CARD© System (Comfort-Ask-Relax-Distract), and I Boost Immunity.

LEARNING OBJECTIVES:

- Demonstrate how a tool such as the A-S-K© approach and other resources can facilitate and support difficult immunization conversations with clients and their families.
- Describe an evidence-based and client-centered approach called CARD© to reduce pain, fear and fainting during school based immunization clinics.
- Demonstrate how innovative uses of digital technology can be used to empower, engage and incentivize peer-to-peer dialogue about vaccination by connecting local grassroots education directly to global disease prevention.

SPEAKERS:

- Katharine Chilton, Vaccine Educator, Communicable Diseases and Immunization Service, BC Centre for Disease Control
- Anna Taddio, Professor, Leslie Dan Faculty of Pharmacy, University of Toronto
- Leslie Alderman, Supervisor, Vaccine Preventable Disease Program, Niagara Region Public Health and Emergency Services
- Ian Roe, Content Strategist, BC Centre for Disease Control

MODERATOR:

- Christine Halpert, Senior Practice Leader, Communicable Diseases and Immunization Service, BC Centre for Disease Control

WEDNESDAY, DECEMBER 5

14:00 – 15:30 **CONCURRENT SESSIONS**

ROOM 210 SUCCESSFUL IMPLEMENTATION OF MATERNAL VACCINATION PROGRAMS: HOW TO GET THERE?

'It wasn't actually until after Brady was gone that we got an official diagnosis that confirmed he had whooping cough. People don't think much about diseases like whooping cough these days. I know that before going through this nightmare, I never would have imagined this could happen—our mission since his loss has been to educate everyone on the importance of getting vaccinated.' Jon and Kathy, January 28, 2012

Vaccination during pregnancy is the new frontier in vaccinology. It is a powerful strategy to protect vulnerable young infants from tetanus, influenza and pertussis before they are old enough to receive their own vaccinations. The question facing health professionals is "how to get there?". The implementation of current recommendations for universal immunization in pregnancy against influenza and pertussis remains a significant challenge as evidenced by the limited uptake of current recommendations across Canada.

This session will provide an opportunity for participants to identify the biggest barriers that they face in terms of implementing the existing recommendations, and draw on world-class expertise to determine how best to overcome those barriers. A series of breakout group discussions are planned in order to identify and overcome evidence gaps; explore what practitioners need to know, by when, and from whom in order to increase immunization uptake during pregnancy; understand how policy and communications can help boost uptake; and determine, at a systems level, what steps could be taken to better monitor immunization uptake. Each participant will leave with a clear set of steps that could make all the difference for Canadian families.

LEARNING OBJECTIVES:

- Identify global best practices in uptake of maternal vaccination through environmental scan.
- Discuss lessons learned from the implementation of maternal immunization programs in the United Kingdom.
- Describe the crucial role that effective public communication has on vaccine uptake.
- Review the national priorities for research around maternal pertussis immunization in pregnancy in Canada.

SPEAKERS:

- Eliana Castillo, Clinical Associate Professor of Medicine and Obstetrics and Gynaecology, University of Calgary
- Gayatri Amirthalingam, Consultant Epidemiologist, Public Health England, London (presenting by video)
- André Picard, Health Columnist, The Globe and Mail
- Manish Sadarangani, Assistant Professor, Department of Pediatrics, University of British Columbia; Investigator, BC Children's Hospital

MODERATOR:

- Eliana Castillo, Clinical Associate Professor of Medicine and Obstetrics and Gynaecology, University of Calgary

ROOM 205 ORAL ABSTRACTS SESSION 8

- Barriers and enabling factors of school-based HPV vaccination programs: Multi-provincial study conducted by the Canadian Immunization Research Network — Eve Dubé
- Support for mandatory vaccination in British Columbia — Julie A. Bettinger
- Integrating values and science in vaccination policy: Results of a deliberative public engagement on childhood vaccination in Ontario — Kieran O'Doherty
- Exploring parents' reactions to emotional and non-emotional measles vaccination promotion messages: a qualitative analysis — Alexandra Paradis
- Minimising immunisation pain of childhood vaccines: The MIP Pilot Study — Narelle Jenkins

ROOM 206 ORAL ABSTRACTS SESSION 9

- Carriage of Haemophilus influenzae type A among children in rural Northwestern Ontario — Marina Ulanova
- Childhood immunization in an Alberta First Nations community: An institutional ethnography of nurse immunizers — Shannon MacDonald
- Immunization coverage in two-year-old First Nations children living on reserve, 2011-2016 — Emily De Rubeis
- Epidemiology of a pertussis outbreak in central Saskatchewan First Nations communities — Michelle Allard-Johnson
- Vaccine uptake among Indigenous people in Northern Ontario is influenced by geography and prior relationships with health care workers: Results of a prospective qualitative study sponsored by the Canadian Immunization Research Network — Kristin Burnett

ROOM 207 ORAL ABSTRACTS SESSION 10

- Impact of an adolescent booster dose on the incidence of pertussis in Quebec and British Columbia — Nicholas Brousseau
- Impact of moving the second dose of MMR from 18 months to school entry, British Columbia — Samara David
- Outbreak of invasive meningococcal disease (serogroup W) in the Okanagan, British Columbia — Michele Andrews
- Preparedness for and response to meningococcal outbreaks: A Canadian Immunization Research Network Clinical Trials Network randomized controlled trial of two schedules of 4CMenB vaccine in adolescents and young adults — Joanne Langley
- Mixed vaccination schedule with one dose of nonavalent and one dose of bivalent HPV vaccine versus two doses of nonavalent vaccine: Comparison of immunogenicity and safety — Chantal Sauvageau

GSK vaccines offer protection for people of all ages.

As a healthcare professional, you know that vaccines can play an important role in disease prevention throughout a person's life. **How can we help?**

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VACCINOLOGY STUDENT RESEARCH PROGRAM

Led by the Canadian Association for Immunization Research, Evaluation and Education (CAIRE), with support from the Meningitis Research Foundation of Canada, this program is a showcase of student/trainee research. Twelve students are participating in this year's program with 6 of the students receiving travel bursaries to attend CIC2018. Bursary applications were evaluated on pertinence to immunization programs in Canada, the methods used, timeliness, originality and effort involved. The 12 students will be participating in a mini oral presentation of their work on Tuesday, December 4 during lunch (room 215) and participants are welcome to attend.

One student will be selected as the recipient of an educational bursary from the Dr. Bernard Duval Foundation and will be announced on Thursday, December 6. We encourage delegates to browse the posters and engage with presenters.

1. Safety of H1N1 pandemic vaccines during the 2009 outbreak in Manitoba — Alex Aregbesola
2. Investigating the effect of seasonal influenza vaccination on the development of anesthesia/paresthesia, headaches, and seizures, Canadian Immunization Research Network, 2012-2016 — May Ahmed
3. Does consecutive influenza vaccination reduce protection against influenza: A systematic review and meta-analysis — Jessica Bartoszko
4. B cell responses to 13-valent pneumococcal conjugate vaccine in adult patients with severe chronic kidney disease — Gabrielle Gaultier
5. Immunogenicity and safety of the 13-valent pneumococcal conjugate vaccine compared to 23-valent pneumococcal polysaccharide in immunocompetent adults: A systematic review and meta-analysis — Nirma Vadlamudi
6. Knowledge, attitudes, beliefs and behaviours of the general public about the role of pharmacists as immunizers — Antonia Di Castri
7. Content development and validity testing of a framework for the assessment of health-related risks, including vaccination needs, among travellers by pharmacists in Ontario — Heidi Fernandes
8. Development and testing of a framework for the assessment of health-related risks, including vaccination needs, among travellers by pharmacists in Ontario — Heidi Fernandes
9. Developing product monograph language that supports evidence-informed use of vaccines in pregnancy — Terra Manca
10. The effect of timing of tetanus-diphtheria-acellular pertussis vaccine administration in pregnancy on the avidity of pertussis antibodies — Bahaa Abu-raya
11. Prevention of human papillomavirus-associated anal cancer among men living with HIV: Examining knowledge, attitudes, and beliefs regarding HPV-associated disease and prevention — Jennifer Gillis
12. Rates of cervical intraepithelial neoplasia in women in British Columbia: A data linkage evaluation of the school-based HPV immunization program — Sarai Racey
13. Human papillomavirus HPV vaccine uptake in gay, bisexual, and other men who have sex with men Montreal, Toronto, and Vancouver: A CIRN-funded study — Ramandip Grewal
14. Experiences and attitudes towards HPV and HPV vaccination among GB2M in Ontario, Canada: Results from the #iCruise study — Ramandip Grewal
15. Persistence of antibodies after a single dose of quadrivalent HPV vaccine and the effect of a dose of nonavalent vaccine given several years later — Vladimir Gilca
16. Cross-reactive priming effect of bivalent and quadrivalent vaccine for HPV 31/33/45/52/58: Bridging analysis from two clinical trials — Vladimir Gilca
17. No prevalent HPV16/18 infections after two doses of HPV vaccine in girls: An interim analysis from the quadrivalent HPV vaccine evaluation study — Kimberly Marty
18. Effectiveness of one dose of quadrivalent HPV vaccine against HSIL and CIN: A data-linkage study — Manish Sadarangani
19. Evaluation of immunization in the neonatal intensive care unit at British Columbia Women's Hospital — Manish Sadarangani
20. Molecular epidemiology of Neisseria meningitidis in children and adults with invasive meningococcal disease in Canada between 2002 and 2017 and correlation with outcomes — Manish Sadarangani
21. Evaluation of transferrin receptor-based vaccine formulations against Neisseria gonorrhoeae — Epshita Islam

22. Meningococcal Antigen Typing System (MATS) analysis of Canadian invasive serogroup B Neisseria meningitidis isolates, 2010-2014 — Dennis K. S. Law
23. Revealing processes that confer immunity to nasal infection by Neisseria meningitidis — Elissa Currie
24. The use of novel hybrid antigens of the bacterial transferrin receptor for protection against Neisseria meningitidis and Neisseria gonorrhoeae — Jamie Fegan
25. Childhood vaccine safety: Background rates of three conditions of interest — Anne Wormsbecker
26. Determining the policies and practices of childhood immunization reminders and recalls in Alberta — Shannon MacDonald
27. Immunization by history in the school-based setting — Stephanie Meier
28. The CARD System for improving the vaccination experience at school: Results of a small-scale implementation project — Anna Taddio
29. Protecting York Region's private school students from vaccine-preventable diseases — Melissa Chao
30. Staying clear of pain and fear: A survey of policies and practices in Ontario public health school immunization clinics — Lucie Bucci
31. A multi-site examination of factors related to vaccine uptake in youth with Autism Spectrum Disorder — Jillian Filliter
32. Vaccine coverage among children with epilepsy in Ontario: A Canadian Immunization Research Network study — Jessy Donelle
33. Vaccine coverage among children with epilepsy in Manitoba: A Canadian Immunization Research Network study — Karina Top
34. Varicella antibody levels in children less than 1 year: Assessment of waning immunity — Shelly Bolotin
35. Measles antibody levels in children less than 1 year: Assessment of waning immunity — Shelly Bolotin
36. Measles importations in Canada, 1998-2017 — Francesca Reyes Domingo
37. Epidemiology of a measles outbreak in Toronto, Ontario - March to May 2017 — Olayemi (Yemi) Kadri
38. Vaccine safety surveillance and trends in adverse events following immunization reporting in Toronto, 2010-2017 — Olayemi (Yemi) Kadri
39. Preventability of invasive pneumococcal disease in children under 5 years of age, BC 2014-2017 — Chelsea Treloar
40. Decline in adverse event following immunization reporting in British Columbia, 2005-2017 — Chelsea Treloar
41. Revisiting the epidemiology of pertussis in Canada — Edward Thommes
42. Asymptomatic infection and transmission of pertussis in households: A systematic review — Natasha Crowcroft
43. Developing an agent-based modelling platform to test interventions to control pertussis: A Canadian Immunization Research Network study — Karsten Hempel
44. The evolving nature of Bordetella pertussis in Ontario, 2009-2017 — Raymond Tsang
45. Invasive meningococcal disease in Canada, 2012-2016 — Maxime Roy
46. Clinical and economic impact of adolescent meningococcal serogroup B vaccination with a new vaccine in the Canadian population — Fiorella Fanton
47. Epidemiology of invasive Haemophilus influenzae, invasive pneumococcal disease, and invasive meningococcal disease in northern Canada, 2001-2015 — Grace Huang
48. Continuing surveillance of Haemophilus influenzae in northwestern Ontario and the emergence of serotype a as a significant cause of invasive disease — Ashley Cerqueira
49. Canadian pandemic influenza preparedness - How Canada is preparing for an influenza pandemic — Sharon Smith
50. Pandemic Influenza Severity Assessment – Modelling Canadian influenza epidemic activity and severity thresholds using the moving epidemic method — Liza Lee
51. Adverse events following immunization with influenza vaccines during the 2017/18 influenza season — Cameron Coulby
52. FluWatchers: Evaluation of a crowd-sourced influenza-like illness surveillance application for influenza seasons 2015/16 to 2017/18 — Liza Lee
53. Development of the indicator framework for FluWatch, Canada's national influenza surveillance program — Christina Bancej
54. Using routinely collected laboratory and health administrative data to assess influenza vaccine effectiveness: Introducing the Flu and Other Respiratory Viruses Research (FOREVER) Cohort — Hannah Chung
55. Influenza vaccine effectiveness in cancer patients: A population-based study using health administrative and laboratory testing data from Ontario — Hannah Chung

56. How to achieve consensus in complex decision-making processes? The case of the Quebec influenza Immunization Program revision — Maryline Vivion
57. Estimating the hospital burden of influenza in Canada, 2010-2017 — Andrea Nwosu
58. Adverse events following immunization with a live zoster vaccine in Ontario, 2012-2017 — Michelle Murti
59. Healthcare worker absenteeism rates after vaccinate-or-mask policy implementation in British Columbia, 2012-2017 — Michelle Murti
60. Could a third dose of mumps-containing vaccine be considered for healthcare workers (HCWs) in Alberta during mumps outbreaks? — Robyn Harrison
61. Changes in the burden of laboratory-confirmed influenza in hospitalized adults: Toronto Ontario, 2010/11 to 2016/17: Association with testing for influenza — Kazi Hassan
62. Which healthcare workers work with acute respiratory illness? Evidence from Canadian acute care hospitals during four winters from 2010/11 to 2013/14 — Lili Jiang
63. Hemagglutinination-inhibition (HI) assay titres: Levels associated with protection against laboratory-confirmed influenza — Brenda Coleman
64. Quantification of the total neuraminidase content in influenza vaccines, 2015-2018 — Danuta Skowronski
65. Repeated exposure to an adjuvanted quadrivalent subunit influenza virus vaccine (aQIV): A randomized, observer blind, multicenter study — Constantina Boikos
66. An enhanced vaccination program with the adjuvanted seasonal influenza vaccine is highly cost effective at the programmatic level in Manitoba and Nova Scotia — Constantina Boikos
67. Retrospective evaluation of mismatch from egg-based isolation of influenza strains compared to cell-based isolation and the possible implications for vaccine effectiveness — Constantina Boikos
68. Effectiveness of the cell culture-based and egg-based seasonal influenza vaccines during the 2017-2018 Northern Hemisphere influenza season — James Mansi
69. Laboratory-confirmed influenza hospitalizations among pregnant women: Clinical outcomes and effectiveness of maternal vaccination from the PREVENT international study — Deshayne Fell
70. Safety of inactivated influenza vaccination in first trimester of pregnancy in an Australian population-based cohort study — Annette Regan
71. Health outcomes of children born to mothers who received pandemic H1N1 influenza vaccination during pregnancy — Deshayne Fell
72. Can we predict who will get a flu shot in pregnancy? Determinants of pregnant Canadians' intentions regarding influenza immunization — Devon Greyson
73. Communauté de pratique en organisation des services de vaccination — Maryse Guay
74. Evolution of recommendations and uptake of maternal immunization in Canada — Juan Vargas
75. The effect of information—motivation—behavioral skills model-based continuing medical education on pediatric influenza immunization uptake: A randomized, controlled trial — William Fisher
76. Mandatory immunization education sessions for parents seeking a philosophical or religious exemption – A survey of parents' attitudes and beliefs — Vinita Dubey
77. Mandatory infant and childhood immunization: Rationales, issues and knowledge gaps — Shawn Harmon
78. Physician dismissal of vaccine refusers: A legal and ethical analysis — Shawn Harmon
79. Increasing timely immunization uptake in infants — Rosalie Tuchscherer
80. Serotype-specific trends in invasive pneumococcal disease: Patterns of serotype replacement — Bruce Mungall
81. A systematic literature review and network meta-analysis feasibility study to assess the comparative efficacy and comparative effectiveness of pneumococcal conjugate vaccines — Shehzad Iqbal
82. Predicting invasive pneumococcal disease incidence: A forecasting approach — Matthew Wasserman
83. Twenty-six years of invasive pneumococcal disease in Canadian children, 1991-2017: The Canadian Immunization Monitoring Program — Julie A. Bettinger
84. Decline in incidence of hospitalization due to pneumococcal and all-cause pneumonia in Canadian children, 2004-2015 — Stephane B. Dion
85. Shared medical surveillance program: A collaborative resource of the IWK Health Centre and Dalhousie University — Karen Green
86. Prevention of respiratory syncytial virus in Nunavik infants: Qualitative evaluation of the immunoprophylaxis program with palivizumab — Eve Dubé
87. Limited impact of pneumococcal vaccines on invasive pneumococcal disease in Nunavik, Quebec — Philippe De Wals

88. Effectiveness of pneumococcal conjugate vaccines to prevent serotype 3 invasive pneumococcal disease in Quebec — Geneviève Deceuninck
89. No hyporesponsiveness to serotype 3 with repeated doses of 13-valent pneumococcal conjugate vaccine (PCV) – An analysis of 9 pediatric clinical trials — Heather Sings
90. Persistence of vaccine serotypes causing invasive pneumococcal disease after introduction of the 13-valent vaccine in Calgary — James Kellner
91. Frequency of physician claims for otitis media in children aged < 2 years in relation with conjugate pneumococcal vaccines use in Quebec — Zhou Zhou
92. Impact of the 13-valent pneumococcal conjugate vaccine (PCV13) on invasive pneumococcal disease in Alaskan children and adults — Michael Bruce
93. Shifting epidemiology of pneumococcal vaccine serotypes among various age groups in Canada from 2010-2017 — Averil Griffith
94. Potential clinical and economic impact of switching from the 13-valent to 10-valent pneumococcal conjugate vaccine in Quebec — Marie-claude Breton
95. Pneumococcal vaccination provides substantial value for money for Canadians — Marie-claude Breton
96. The hidden clinical and economic burden of pneumonia — Marie-claude Breton
97. The public health impact of herpes zoster immunization in Canada — Desirée Van Oorschot
98. Vaccines for herpes zoster: A Canadian cost-effectiveness analysis — Desirée Van Oorschot
99. The impact of reactogenicity after administration of the recombinant zoster vaccine upon the physical functioning and quality of life of older adults — Robyn Widenmaier
100. A systematic review of the risk of herpes zoster and complications in immunocompromised adults — Sarah Buchan
101. The comparative efficacy, safety, and reactogenicity, of herpes zoster vaccines: A network meta-analysis — Ashleigh McGirr
102. Looking beyond the number of serotypes: A Canadian cost-effectiveness modelling approach comparing PCV13 and PHiD-CV — Ashleigh McGirr
103. PCV13 serotype trends over time in pneumococcal community-acquired pneumonia: Which method(s) work best? — Jason J. Leblanc
104. Multi-target plasmid controls for conventional and real-time PCR-based serotyping of Streptococcus pneumoniae — Jason J. Leblanc
105. Streptococcus pneumoniae serotyping: Assessing the performance of a PCR- and sequencing-based testing algorithm — Jason J. Leblanc
106. Whole genome phylogenetic analysis of Streptococcus pneumoniae causing an outbreak of serotype 4 (St4) invasive pneumococcal disease outbreak in Alberta — Otto G. Vanderkooi
107. The incidence and economic burden of Clostridium difficile in Ontario — Jennifer Pereira
108. A comparative evaluation of the burden of disease caused by influenza A and B during the 2011-2014 influenza seasons in Canada: An analysis from the Canadian Immunization Research Network Serious Outcomes Surveillance Network — Michaela Nichols
109. 2016/2017 Influenza burden of disease and end-of-season influenza vaccine effectiveness estimates for preventing influenza-related hospitalization among Canadian adults: An analysis from the Canadian Immunization Research Network Serious Outcomes Surveillance network — Michaela Nichols
110. Influenza vaccine effectiveness in older adults and the impact of repeated vaccination, 2010/11 to 2015/16 influenza seasons in Ontario — James Jung
111. High-dose influenza vaccine program evaluation in Manitoba — Inga Hossack
112. Examining the Knowledge, Attitudes and Experiences of Canadian Seniors Towards Influenza (the EXACT survey) — Melissa K. Andrew
113. Determinants of uptake of and adherence to seasonal influenza vaccination among elderly North Americans: A systematic review and meta-analysis — George Okoli
114. An overview of the Canadian Armed Forces Immunization Program — Martin Tepper
115. Impact of the addition of new vaccines in the early childhood schedule on vaccine coverage by 24 months of age from 2006-2016 in Quebec — Marilou Kiely
116. Impact of vaccine delays at the 2-, 4-, 6- and 12-month visits on incomplete vaccine status by 24 months of age in Quebec — Marilou Kiely
117. Vaccine manufacturers' potential liability in negligence for overstating product risks — David Faour
118. Exploring the effect of risk and benefit information on the intention to vaccinate: A survey-based study — Samantha Meyer
119. Vaccine hesitancy around the globe: Analysis of three years of WHO/UNICEF joint reporting form data 2015-2017 — Sarah Lane

120. Implementation of an Immunization Assessment Tool (IAT) for adults in Prince Edward Island: A public health nursing perspective — Donna Halperin
121. Knowledge, attitudes, beliefs and behaviours regarding adult immunization in Prince Edward Island — Donna Halperin
122. Viral hepatitis B immunization among newcomers to Ontario — Abdool Yasseen
123. Immunization – A fundamental first service for newly arrived refugees — Ann Liddy
124. HPV knowledge, attitudes and beliefs: Newcomer perspectives on the HPV vaccine — Lindsay Wilson
125. Exploration of HPV vaccine coverage, series commencement and completion among Grade 9 girls in Vancouver Coastal Health (VCH), British Columbia — Yumian Hu
126. Last call for HPV vaccine in Toronto - Sending a reminder letter to Grade 12 females to improve HPV vaccination rates — Karen Beckermann
127. Addressing vaccine hesitancy: Identifying gaps in knowledge and skills among front-line vaccine-preventable diseases program staff — Karen Beckerman
128. Immunization resources – Are they meeting the practical needs of immunization program managers? — Chandni Sondagar
129. A dynamic web-based visualization of herd immunity — Hina Hakim
130. Evaluation of an online immunization communication course — Katharine Chilton
131. Integrating vaccine coverage data and marketing analytics to create local profiles of individuals who may be less likely to be vaccinated — Carole Craig
132. A scoping review: Understanding the Canadian dialogue on vaccine-injury compensation — Sandani Hapuhennedige
133. From knowledge to practice - Developing infographics to implement guidelines to reduce the pain of immunization — Leah Welsh
134. Using a quality improvement approach to addressing medication incidents at vaccine clinics — Leah Welsh
135. Social media strategies to increase vaccine uptake and reach urban hipsters: Responding to a mumps outbreak in Toronto — Jill Maclachlan
136. A missing link? The use of public health data linkage to improve data completeness in mumps case investigations — Sarah Wilson
137. Weaving the web: Enhancing online vaccine safety information in Ontario — Tara Harris
138. Improving vaccine coverage amongst adults: knowledge, attitudes, beliefs and behaviours of healthcare providers regarding the role of pharmacists as immunizers — Scott Halperin
139. The influence of gender on adult vaccine uptake: Results from the 2016 Adult Immunization Coverage Survey — Chris Bell
140. How does relative vaccine efficacy translate into absolute vaccine efficacy to inform incremental population benefit and public health recommendations? — Gaston De Serres
141. Planning for post-regulatory guidance on therapeutic vaccines for infectious diseases in Canada — Matthew Tunis
142. Canada's new national vaccination coverage goals and disease reduction targets — Joy Pulickal
143. Incorporation of health economic evaluations into immunization decision-making in Canada: Barriers, facilitators and next steps — Joanne Langley
144. Economic evaluation of an expanded high-risk hepatitis A immunization program in Ontario — Beate Sander
145. Cost-effectiveness of a vaccination program for West Nile virus in Ontario — Beate Sander
146. Addressing the immunization research-to-policy gap in Canada: Collaborative development of an integration pathway to assist strategic planning — Maria Eugenia Espinoza Moya
147. Critical assessment of economic evaluations on protein-based meningococcal vaccines in developed countries — Maria Eugenia Espinoza Moya
148. The development of rVSV-ZEBOV, 'Canada's vaccine for Ebola': A programmatic approach to clinical trials at the Canadian Immunization Research Network — Jessica McCarthy
149. Global environmental scan of legislation governing National Immunization Technical Advisory Groups (NITAG), mandatory vaccine programs, and compensation for serious adverse events following immunization in high-, middle-, and low-income countries — David Faour
150. Environmental scan of public health recommendations for off-label use of vaccines amongst National Immunization Technical Advisory Groups (NITAG) Global NITAG Network (GNN) countries — Karina Top
151. Generation of poliovirus-negative serum using immunoadsorption — May Elsherif

THURSDAY, DECEMBER 6

PROGRAM OVERVIEW

Simultaneous Interpretation available

7:00 - 8:30	**CO-DEVELOPED LEARNING ACTIVITIES**	
	Reducing pneumococcal disease in Canada: How are we doing? Room 206/208	**Moving forward for better reduction of HPV-related diseases and cancers in Canada** Room 205/207
9:00 - 10:30	**AWARDS PRESENTATION** Canada Hall 1 & 2	**PLENARY III** **Public health in the age of anxiety** Canada Hall 1 & 2
10:30 - 11:00	**REFRESHMENT BREAK** Parliament Foyer	
11:00 - 12:30	**CONCURRENT SESSIONS**	
	Advancing evidence-based human papillomavirus vaccination delivery for gay, bisexual and other men who have sex with men and people living with HIV Room 201	**Legal issues in immunization** Room 202
	Optimizing vaccination programs using science: The experience of mixed schedules in Quebec Room 203	**Taking on the challenge of vaccine hesitancy - interventions at the practice and population level** Room 208
	Oral Abstracts Session 11: Room 205 Session 12: Room 206 Session 13: Room 207	
12:30 – 13:00	**NETWORKING LUNCH** Canada Hall 1 & 2	
13:00 – 14:30	**PLENARY IV** **Looking ahead: The future of vaccine design and delivery** Canada Hall 1 & 2	

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WIRELESS NETWORK: CIC2018 PASSWORD: IMMUNIZE

7:00 - 8:30 **CO-DEVELOPED LEARNING ACTIVITIES**

ROOM 206/208 REDUCING PNEUMOCOCCAL DISEASE IN CANADA: HOW ARE WE DOING?

Pneumococcal disease (PD) has been a public health concern worldwide, with significant detrimental personal, societal, and economic impact. In Canada, pneumococcal vaccines were introduced into publicly-funded programs with the polysaccharide vaccine in the late 1990s for adults 65+, followed by the conjugated pneumococcal vaccines from 2002 for the pediatric programs.

Overall, pediatric programs have been effective. However, despite a degree of herd effect in the adult population, there remains a significant burden of disease that is difficult to diagnose and treat and can significantly impact the health and well-being of the aging adult. Enhanced public health measures that aim to increase protection against pneumococcal disease in the overall population could lead to improved disease management for invasive pneumococcal disease (IPD) and community-acquired pneumonia (CAP).

LEARNING OBJECTIVES:

- Provide an overview of the history of pneumococcal immunization programs in Canada, including coverage rates in children and adults.
- Describe the general societal impact of pediatric pneumococcal immunization programs in Canada.
- Assess the benefit of adding PCV13 to the immunization schedule of older adults.
- Discuss barriers, as well as novel ways − including interdisciplinary teams − to optimize protection of patients at risk for pneumococcal disease.

FACULTY:

- Allison McGeer, Microbiologist & Infectious Disease Consultant; Medical Director, Infection Control, Mount Sinai Hospital; Professor, Laboratory Medicine and Pathobiology and Public Health Science, University of Toronto
- James Kellner, Professor, Department of Pediatrics, University of Calgary
- Betty Golightly, President, Go Travel Health Inc.

MODERATOR:

- Marie Adèle Davis, Executive Director, Canadian Paediatric Society

The program was co-developed with AMMI Canada and Pfizer and was planned to achieve scientific integrity, objectivity and balance.

7:00 - 8:30 **CO-DEVELOPED LEARNING ACTIVITIES**

ROOM 205/207 MOVING FORWARD FOR BETTER REDUCTION OF HPV-RELATED DISEASES AND CANCERS IN CANADA

The session will focus on the objective for further reduction of the burden of HPV associated diseases and cancers in Canada. The Canadian Cancer Society Report on HPV and the impact of present public health programs will be discussed to highlight the current situation on HPV associated cancers and challenges in further reducing the HPV burden will be discussed. Also, the call to action of the Federation of Medical Women will be shared as well as international efforts in the decrease of HPV-related cancers. The burden of HPV disease in women and men will be summarized to highlight the value to further reduce HPV-related cancers through public health programs and education.

LEARNING OBJECTIVES:

- Recognize the burden of HPV-related diseases and cancers in Canada.
- Summarize the impact of public health vaccination programs in the reduction of HPV related diseases in Canada.
- Describe the Canadian efforts to further reduce the burden of HPV associated diseases and cancers.
- Discuss the challenges of HPV vaccine public programs in the future in Canada.
- Recognize the importance of cohorts and high risk groups not protected by public health program to further reduce the HPV burden.

FACULTY:

- Marc Steben, Family physician; chair, Canadian HPV Prevention Network; Associate Professor, School of Public Health, Université de Montréal, Family medicine group 1851

MODERATOR:

- Eliana Castillo, Clinical Associate Professor of Medicine and Obstetrics and Gynaecology, University of Calgary

The program was co-developed with CPS and Merck Canada Inc. and was planned to achieve scientific integrity, objectivity and balance.

THURSDAY, DECEMBER 6

9:00 – 10:30 **AWARDS PRESENTATION** **CANADA HALL 1 & 2**

AWARDS PRESENTATION:

- Dr. Bernard Duval Foundation Vaccinology Student Research Program Bursary

  Dr. Duval was a founding member of CAIRE and recognized for significant contributions to immunization in Canada. **Presented by**: Gaston De Serres, Institut national de santé publique du Québec

9:00 – 10:30 **PLENARY III** **CANADA HALL 1 & 2**

PUBLIC HEALTH IN THE AGE OF ANXIETY

Controversies and skepticism surrounding vaccinations, though not new, have increasingly come to the fore as more individuals decide not to vaccinate themselves or their children for cultural, religious, or other reasons. Their personal decisions put the rights of the individual on a collision course with public and community safety. Canadians who are suspicious or dismissive of vaccines belong to a variety of sub-cultures and religious communities and arrive at their decisions on the basis of reasons, feelings, and intuitions that are often opaque to clinicians, policy makers and scholars interested in public health.

Although the public debate on the question of vaccine safety is often bitterly polarized, there is value in moving past some of the convenient stereotypes that constrain productive conversations. In this plenary presentation, Paul Bramadat will present the key findings of our *Public Health in the Age of Anxiety: Religious and Cultural Roots of Vaccine Hesitancy* (University of Toronto Press, 2017), and explore vaccine hesitancy from the vantage point of a scholar of religion and culture.

LEARNING OBJECTIVES:

- Provide a concise profile of religion and spirituality in Canada.
- Identify key arguments made by physicians, nurses, policy makers, social scientists, and humanists, explored in *Public Health in the Age of Anxiety.*
- Discuss both the common distinction between "cultural" and "religious" explanations for vaccine hesitancy, and the power and popularity of often spiritualized critiques of the status quo.

SPEAKER

- Paul Bramadat, Professor and Director, Centre for Studies in Religion and Society, University of Victoria

MODERATOR

- Eve Dubé, Researcher, Institut national de santé publique du Québec; Associate Professor, Social and Preventive Medicine, Université Laval

10:30 – 11:00 **REFRESHMENT BREAK** **PARLIAMENT FOYER**

BOOK SIGNING: PAUL BRAMADAT

PUBLIC HEALTH IN THE AGE OF ANXIETY

Controversies and skepticism surrounding vaccinations, though not new, have increasingly come to the fore as more individuals decide not to inoculate themselves or their children for cultural, religious, or other reasons. Their personal decisions put the rights of the individual on a collision course with public and community safety.

Public Health in the Age of Anxiety enhances both the public and scholarly understanding of the motivations behind vaccine hesitancy in Canada. The volume brings into conversation people working within such fields as philosophy, medicine, epidemiology, history, nursing, anthropology, public policy, and religious studies. The contributors critically analyze issues surrounding vaccine safety, the arguments against vaccines, the scale of anti-vaccination sentiment, public dissemination of medical research, and the effect of private beliefs on individual decision-making and public health. These essays model and encourage the type of productive engagement that is necessary to clarify the value of vaccines and reduce the tension between pro and anti-vaccination group.

ROOM 201 ADVANCING EVIDENCE-BASED HUMAN PAPILLOMAVIRUS VACCINATION DELIVERY FOR GAY, BISEXUAL AND OTHER MEN WHO HAVE SEX WITH MEN AND PEOPLE LIVING WITH HIV

The National Advisory Committee on Immunization recommends HPV vaccination for all individuals aged 9-26 years, ideally prior to sexual debut, and all jurisdictions across Canada offer universal vaccination for girls and boys. Some jurisdictions across Canada have also implemented targeted publicly-funded HPV vaccine policies for gay, bisexual, and other men who have sex with men (GBMSM) and people living with HIV (PLWH) who are prioritized for HPV-associated disease prevention due to a disproportionately high burden of disease. Yet individual, social, and systems level barriers may lead to inequitable access and poor uptake.

In this workshop, emerging evidence regarding HPV vaccine uptake among GBMSM and PLWH will be presented. Participants will engage in shared interpretation of research findings to identify remaining evidence gaps and recommend best practices in the context of targeted HPV vaccine policies.

LEARNING OBJECTIVES:

- Describe ongoing research examining HPV vaccine uptake among gay, bisexual and other men who have sex with men and people living with HIV.
- Recognize barriers and facilitators to HPV vaccine uptake within these populations.
- Translate findings to the participants' own jurisdictions in order to propose practical and relevant solutions to obstacles and recommend directions for future research and effective evidence-based programming.

FACILITATORS:

- Ann Burchell, Scientist, Department of Family and Community Medicine, Li Ka Shing Knowledge Institute, St. Michael's Hospital
- Shelley Deeks, Chief, Communicable Diseases, Emergency Preparedness and Response, Public Health Ontario
- Troy Grennan, Physician Lead, HIV/STI Program, BC Centre for Disease Control
- Jennifer Gillis, PhD candidate, Dalla Lana School of Public Health, University of Toronto
- Ramandip Grewal, PhD student, Dalla Lana School of Public Health, University of Toronto

ROOM 202 LEGAL ISSUES IN IMMUNIZATION

At this session, participants will have an opportunity to learn about and discuss recent developments in legal issues in immunization. Panelists will describe the context and current status of three different legal issues intertwined with immunization programs in Canada, based on specific recent events in the jurisdiction, recent reviews of the literature, or other related works.

LEARNING OBJECTIVES:

- Explore the legal perspective on human rights requirements in Canada as applied to publicly funded immunization programs.
- Describe the legal and ethical issues relevant to refusal by practitioners to provide care to those who refuse immunization.
- Identify the perspectives and consideration of a vaccine injury compensation scheme in Canada.

11:00 – 12:30 CONCURRENT SESSIONS

SPEAKERS:

- Rochelle Pauls, Legal Counsel, Labour, Employment and Human Rights, BC Ministry of Attorney General, Legal Services Branch
- Shawn Harmon, Honorary Fellow, University of Edinburgh; Adjunct Professor, Department of Pediatrics, Dalhousie University
- Sandani Hapuhennedige, Research Analyst, Simcoe Muskoka District Health Unit, Ontario

MODERATOR:

- Monika Naus, Medical Director, Communicable Diseases & Immunization Service, BC Centre for Disease Control, and Associate Professor, School of Population and Public Health, University of British Columbia

ROOM 203 OPTIMIZING VACCINATION PROGRAMS USING SCIENCE: THE EXPERIENCE OF MIXED SCHEDULES IN QUEBEC

Session presenters can respond to questions in either English or French.

The *Comité sur l'immunisation du Québec* recently recommended the implementation of mixed schedules for several vaccination programs, using vaccines produced by different manufacturers. This strategy for optimizing programs, though evidence-based, raises issues of an operational nature at the time it is implemented. This session aims to present Quebec's recent experience in this context.

Two presentations will cover the scientific arguments that led to recommending a mixed schedule for:

- infant pneumococcal vaccination
- HPV vaccination for young people aged 9 to 17

A final 20-minute presentation will cover the operational challenges of implementing such strategies, including vaccine supply, immunizer training, and the acceptability of the immunizer population and experts.

LEARNING OBJECTIVES:

- Explain the evidence underlying the recommendations from the *Comité sur l'immunisation du Québec* on using a mixed schedule for certain vaccination programs.
- Identify the various issues related to implementing those vaccination schedules.
- Discuss the "pros and cons" of this innovative strategy.

SPEAKERS:

- Philippe De Wals, Professor, *Département de médecine sociale et préventive*, Université Laval; Consulting Physician, *Institut national de santé publique du Québec*
- Chantal Sauvageau, Consulting Physician in Infectious Diseases at the *Institut national de santé publique du Québec*; Associate Professor, Faculté de médecine, Université Laval
- Monique Landry, Consulting Physician, Public Health Protection Branch, *Ministère de la Santé et des Services sociaux du Québec*

ROOM 208 TAKING ON THE CHALLENGE OF VACCINE HESITANCY - INTERVENTIONS AT THE PRACTICE AND POPULATION LEVEL

What can be done to address vaccine hesitancy? To decide on accepting a vaccine is not a simple process. In fact, new research finds vaccine acceptance is complex and may involve emotional, cultural, social, spiritual or political factors. This session explores how health professionals and the wider community may address obstacles in vaccine acceptance. We explore steps towards a solution, with strategies and innovative interventions presented.

LEARNING OBJECTIVES:

- Explore evidence on strategies to address vaccine hesitancy.
- Describe the principles of motivational interviewing and how these principles improve communication with clients and families who are vaccine hesitant.
- Identify interventions to improve immunization acceptance and uptake among infants, children, adults, seniors and special populations.

SPEAKERS:

- Jessica Harper, Immunization Promotion Nurse, ImmunizeBC
- Michelle Driedger, Professor, Department of Community Health Sciences, University of Manitoba
- Eve Dubé, Researcher, Institut national de santé publique du Québec; Associate Professor, Social and Preventive Medicine, Université Laval

MODERATOR:

- Martine Dubuc, Senior Nurse Advisor and Supervisor, Immunization Promotion and Education, Public Health Agency of Canada

ROOM 205 ORAL ABSTRACTS SESSION 11

- Immunogenicity of two compared with three doses of the quadrivalent HPV vaccine up to 10 years post-vaccination: Phase III post-licensure randomized trial — Manish Sadarangani
- Rates of cervical intraepithelial neoplasia in women in British Columbia: A data linkage evaluation of the school-based HPV immunization program — Sarai Racey
- Healthcare provider perspectives on the uptake of human papillomavirus vaccine among newcomers to Canada: A qualitative study — Taylor Augustson
- Investigation and response to the largest mumps outbreak in the City of Toronto in over 20 years — Omar Ozaldin
- Effectiveness of an 'outbreak dose' of MMR vaccine during a mumps outbreak in two First Nations communities in northern Ontario — Jo Ann Majerovich

ROOM 206 ORAL ABSTRACTS SESSION 12

- Point-of-care influenza vaccination for pregnant patients at a tertiary care centre: The patient experience — Rose Abbott
- Implementation of point-of-care vaccination for pregnant patients — Laura Idarraga Reyes
- Low levels of detectable pertussis antibodies in a large cohort of pregnant women in Canada — Chris Bell
- Prevalence of pertactin-deficient bordetella pertussis isolates in Ontario from 2009–2017 — Shelly Bolotin
- The effect of timing of tetanus-diphtheria-acellular pertussis vaccine administration in pregnancy on the avidity of pertussis antibodies — Bahaa Abu-raya

ROOM 207 ORAL ABSTRACTS SESSION 13

- Influenza vaccine effectiveness in older adults with diabetes, 2010-11 to 2015-16 influenza seasons in Ontario — Jeff Kwong
- Estimation of burden of hospitalizations and deaths associated with influenza in Quebec — Rodica Gilca
- Waning protection of influenza vaccine? Early- vs. late-season influenza vaccine effectiveness estimates over 3 seasons in Canada: An analysis from the Serious Outcomes Surveillance Network of the Canadian Immunization Research Network — Shelly A. McNeil
- Analysis of relative effectiveness of high-dose versus standard-dose influenza vaccines using an instrumental variable method — Robertus Van Aalst
- Influenza surveillance case definitions miss a substantial proportion of older adults hospitalized with laboratory-confirmed influenza: A report from the Serious Outcomes Surveillance Network of the Canadian Immunization Research Network — Melissa K. Andrew

THURSDAY, DECEMBER 6

12:30 – 13:00 **NETWORKING LUNCH** **CANADA HALL 1 & 2**

13:00 – 14:30 **PLENARY IV** **CANADA HALL 1 & 2**

LOOKING AHEAD: THE FUTURE OF VACCINE DESIGN AND DELIVERY

The field of vaccinology is rapidly changing. Advances in science and the need to protect public health help inform development of vaccines against viral diseases and infections. There is movement away from the traditional "isolate-inactivate-inject" paradigm toward the development of vaccines through the lens of personalized vaccinology. The term "vaccinomics" refers to the development of vaccines based on the increased understanding of personalized immune responses.

Dr. Gregory Poland will describe how vaccinomics and vaccine-related adverse events may be genetically determined — and therefore predictable. By examining the current state of vaccine research and the challenges in modern vaccine development, he will explore how individual biomarkers can determine risk and immunity, and assist in optimizing the development of new vaccines and the future envisioned by such changes.

LEARNING OBJECTIVES:

- Describe the concept of vaccinomics and personalized vaccinology.
- Explore the need for new paradigms by which new vaccines are developed in the 21st century.

SPEAKER

- Gregory Poland, Director, Vaccine Research Group, Mayo Clinic

MODERATOR

- Scott Halperin, Professor of Pediatrics and Microbiology & Immunology, Canadian Center for Vaccinology, Dalhousie University

Image courtesy of Ivan Yu @yuknowit

2018 AWARD OF EXCELLENCE IN IMMUNIZATION

The Award of Excellence in Immunization was established to recognize the efforts of an individual or group/ organization who/that has made an outstanding contribution at the community level to front-line immunization programs, policy or advocacy.

THE CENTRE FOR FAMILY MEDICINE'S INTERNATIONAL TRAVEL AND IMMUNIZATION CLINIC

The Centre for Family Medicine's International Travel and Immunization Clinic is an interprofessional team within a family health team located in Kitchener-Waterloo, Ontario that has promoted, innovated, and provided training in vaccination programs and initiatives since its inception in 2007.

Dr. Heather Dixon is a family physician and the founding director of the clinic. She works collaboratively with Dr. Ryan McKee, another family physician, and a team of nurses (Wende Bedirian, Barbara Anstett, Tara Otterbein, Kara Skimson, and Kelsey Gagne). Together, this team provides leadership in the vaccination of the family health team's 27,000 patients, including high-risk immunocompromised patients and the vulnerable population of government-assisted refugees arriving in Kitchener-Waterloo. They provide education and training to family medicine residents, medical students, and nursing students associated with McMaster University, pharmacy students associated with the University of Waterloo, and clinicians throughout the Kitchener-Waterloo region.

This team has provided many innovations, including:

1. Developing an approach to providing and promoting immunization of high-risk immunocompromised individuals with conditions such as functional and anatomic asplenism and sickle cell disease
2. Developing a process with public health to provide immunizations to government-assisted refugees arriving in Kitchener-Waterloo
3. Creating an Immunization Documentation Reference Sheet that the eHealth Centre of Excellence has adopted and distributed among other users throughout Ontario
4. Systematically training the nurses of the Centre for Family Medicine to provide up-to-date primary care immunizations to its 27,000 patients
5. Developing an approach to promoting pertussis vaccination during pregnancy

The Centre for Family Medicine
Family Health Team

2018 DR. JOHN WATERS MEMORIAL AWARD

The Dr. John Waters Memorial Award was initiated in 2002 in recognition of his outstanding leadership in support of immunization programs and policy. The purpose of the Award is to recognize other outstanding contributors to public health and immunization programs.

DR. GASTON DE SERRES

Dr. Gaston De Serres is an epidemiologist and physician at the Institut national de santé publique du Québec. His career of over 25 years in the field of immunization has been devoted to improving immunization programs: applying a critical lens, insisting on a population perspective, and quantifying benefits, costs and risks to inform recommendations. Dr. De Serres has been involved at all levels of decision-making, including the Quebec Immunization Committee, the National Advisory Committee on Immunization, and as a consultant to the World Health Organization. His astute analyses of immunization programs, based on strong epidemiological principles, ensure recommendations are evidence-based and use resources wisely to protect the greatest number of people at the greatest risk.

Dr. De Serres has published more than 250 peer-reviewed articles and book chapters, has been an invited speaker to 75 national and international venues, and has conducted hundreds of media interviews. His research is embedded in his daily work, blending basic science and public health – a rare talent. We often aim to have research from bench to bedside; in Dr. De Serres' case, it is from bench to population and back to bench when necessary. His understanding of immunization is thorough and encompasses its entire scope. Dr. De Serres has improved our understanding of the expected epidemiology after elimination of diseases such as measles, has developed the area of vaccine safety research, and he has been a real innovator in pushing for modified vaccine schedules using fewer doses but providing similar protection, and in vaccine effectiveness monitoring through the co-development, with Dr. Danuta Skowronski, of the test-negative design, a methodology now used worldwide. But more than anything else, having Dr. De Serres on a committee or a working group ensures due diligence occurs: no rock remains unturned.

DR. GASTON DE SERRES

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Canadian Immunization Conference