

# CIC 2016

Canadian Immunization Conference

## PRELIMINARY PROGRAM

6-8 December 2016  
**OTTAWA, ONTARIO**

**Shaw Centre**



Public Health  
Agency of Canada

Agence de la santé  
publique du Canada



**09:00-9:30**      **Opening Ceremony**

**09:30-10:30**      **Plenary I: What have we accomplished in Canada's immunization programs in the past 25 years?**

**Monika Naus, 2016 Dr. John Waters Memorial Award Recipient**

Director, Immunization Programs & Vaccine Preventable Diseases Service, BC Centre for Disease Control; Associate Professor, School of Population and Public Health, University of British Columbia

In the past quarter century, vaccine programs have expanded to include protection against twice as many diseases. During this time, recommended vaccination schedules have grown rapidly and become more complicated as new vaccines are developed and implemented. As strategies for successful uptake in vaccine programs continue to be developed for both patients and immunizers, this session will explore what approaches and tools are available to us now that were not then, and which do we still need to strengthen our programs?

**10:30-11:00**      **NUTRITION BREAK**

**11:00-12:30**      **CONCURRENT SESSIONS**

**HPV Vaccination: New vs old!**

This session will discuss recent scientific knowledge regarding the new vaccine HPV-9, in comparison with the HPV-2 and HPV-4 and address the dosing regimen. Panelists will explore the options for HPV-9 use in current programs and for patients that have already received 1 or 2 doses of HPV-2 or HPV-4. The session will provide an overview of the use of HPV-9 vaccine in Canada and elsewhere in the world and the efficacy to protect against the 9 strains and its impact on the incidence of HPV infection, genital warts, cervical cancer and other related cancers. Evidence from jurisdictions that have implemented combined male and female vaccine programs will be presented and issues to consider in determining if one or both sexes should receive vaccine.

**Learning Objectives:**

- Review the public health impact of HPV vaccines to date.
- Summarize the advantages and disadvantages of the three HPV vaccines in Canada: HPV-9, HPV-2 & HPV-4.
- Describe the implications of vaccine programs for boys and girls, and various dosing approaches.
- Present the implication of HPV screening.

**Speakers:**

- Simon Dobson, Clinical Associate Professor & Head, Division of Infectious Diseases, Department of Pediatrics, University of British Columbia; Clinical Investigator, Vaccine Evaluation Centre, Child and Family Research Institute at BC Children's Hospital
- Gina Ogilvie, Senior Public Health Scientist, BC Centre for Disease Control; Professor, Faculty of Medicine, University of British Columbia; Canada Research Chair, Global control of HPV related cancer
- Chantal Sauvageau, Médecin-conseil, Institut national de santé publique du Québec; Professeure agrégée, Faculté de médecine, Université Laval; Chercheure, Centre de recherche du CHU de Québec-Université Laval

**Moderator:**

- Brian Ward, Professor of Medicine & Microbiology, Research Institute of the McGill University Health Centre Vaccine Study Centre; Interim Chair, CAIRE

## Immunizations in specific populations    Oral Abstracts 1 & 2

### Introduction of new vaccines and programs – Is it all just about value for money?

This session will enable participants to understand cost-effectiveness analyses as they pertain to new vaccines and programs implementation. As National Advisory Committees are moving toward a framework for implementation that includes cost-effectiveness parameters, policy makers need to understand the advantages and limit of such analyses.

#### Learning objectives:

- Discuss the basic principles and understand the terminology of cost-effectiveness analysis (CEA)
- Discuss how CEA can be used in the decision to introduce new vaccines or new vaccine programs
- Discuss the limits of CEA and other criteria that can oppose CEA in decision making

#### Speakers:

- Amanda Cohn, Senior Advisor for Vaccines, National Center for Immunization and Respiratory, Diseases Centers for Disease Control and Prevention
- Shelley Deeks, Medical Director, Immunization and Vaccine Preventable Diseases, Public Health Ontario; Associate Professor, Dalla Lana School of Public Health, University of Toronto
- Nisha Thampi, Medical Director, Infection Prevention and Control Program; Assistant Professor, Department of Pediatrics, Division of Infectious Diseases, Children's Hospital of Eastern Ontario

#### Moderator:

- Caroline Quach, Paediatric Infectious Disease Consultant & Medical Microbiologist, McGill University Health Centre; Associate Professor, Departments of Paediatrics & Epidemiology, Biostatistics & Occupational Health, McGill University

### Inventory Management

The growing number of domestic and international vaccine shortages which have underscored the need to strengthen the prevention and mitigation of vaccine supply issues in Canada. With the introduction of newer and more expensive vaccines in the publicly funded programs, both the cost and the volume of vaccines are growing rapidly, making the need for effective vaccine tracking and inventory management critical for reducing vaccine waste, cost-containment, and sustainability.

This session will discuss measures for establishing efficiencies in supply management. Recommendations from the Task Group on Vaccine Supply Risk Management and measures to strengthen the security of vaccine supply in Canada will be discussed. As vaccine management includes two integral features - cold chain and inventory management, the Alberta Vaccine Cold Chain policy and the Alberta Vaccine Inventory System will be outlined as best practice for vaccine management. The integral role of national vaccine procurement in Canada to ensure that vaccine supply is optimized will be explored.

#### Learning Objectives:

- Identify recommendations from the Task Group on Vaccine Supply Risk Management and measures to strengthen the security of vaccine supply in Canada.
- Describe the vaccine management system in Alberta that includes the Alberta Vaccine Cold Chain Policy and the Alberta Vaccine Inventory System.
- Explore the role of national vaccine procurement coordination and the process of planning for and mitigating vaccine shortages.

**Speakers:**

- Martin Lavoie, Deputy Chief Medical Officer of Health, Alberta
- Kari Bergstrom, Manager, Immunization Business, Alberta Health
- Susan Smith, Nurse Consultant, Immunization, Alberta Health

**Moderator:**

- Brenda Bastarache, Senior Program Advisor, Communicable Disease Control Branch, Office of the Chief Medical Officer of Health, Government of New Brunswick

**Steve Jobs vs. the measles: Using digital tools to enhance immunization**

Individuals are increasingly using the internet to access health information, yet the digital world is rife with misinformation and fear mongering - and vaccines have long been a target. This session will explore how health organizations can engage in the online discourse and dilute the effects of anti-vax initiatives through effective use of mobile and social platforms. Participants will learn about a variety of tactics and tools they can use to find, verify, and cognize immunization content to help empower Canadians in making informed choices about immunization.

**Learning Objectives:**

- Assist public health organizations understand how immunization is being framed in the digital landscape and the tremendous influence that social media plays on immunization beliefs and behaviours
- Provide examples of effective digital tools and strategies to help improve vaccine coverage
- Discuss free, accessible digital tools to monitor the immunization narrative and help shift the discourse away from anti-vax sentiment

**Speakers:**

- Katherine Atkinson, Director, Research and Business Development, The Ottawa Hospital mHealth Research Team
- Mike Kujawski, Managing Partner and Senior Consultant, Centre of Excellence for Public Sector Marketing
- Kumanan Wilson, Senior Scientist, Ottawa Hospital Research Institute. Professor of Medicine, University of Ottawa

**Moderator:**

- Patricia Salsbury, Manager, Immunization Promotion and Education Unit, Public Health Agency of Canada

**Vaccine Hesitancy: Tools to address problems at the population, public and individual levels**

Vaccine hesitancy is a complex and perplexing problem for many health care providers and immunization program managers in Canada. In spite of the huge positive impact of immunization on fighting infectious diseases and improving health outcomes, acceptance of vaccines cannot be taken for granted. Sadly, vaccine hesitancy, refusal and denial persists.

Vocal vaccine deniers contribute to vaccine hesitancy and the potential damage they can cause through mass media as an amplifier of myths and misinformation is significant. The first part of this session will address lessons learned in the WHO European Region on how to target and address vaccine hesitancy in different populations and settings. The second part will present an evidence guided strategy for how to deal with vocal vaccine deniers in public. The third part will be on use of motivational interviewing to help move individual parents and patients to a yes for acceptance of a vaccine.

**Learning Objectives:**

- Summarize the key elements of vaccine hesitancy.
  - Identify lessons learned for addressing vaccine hesitancy in different populations and settings.
  - Review an evidence-based strategy to engage with vocal vaccine deniers in public.
- Describe the motivational interviewing tool and implementation approaches.

**Speakers:**

- Eve Dubé, Researcher, Institut national de santé publique du Québec, Laval University
- Noni MacDonald, Professor, Department of Pediatrics, IWK Health Centre, Dalhousie University

**Moderator:**

- Marie Adèle Davis, Executive Director, Canadian Paediatric Society

**12:30-14:30 LUNCH AND CO-DEVELOPED LEARNING OPPORTUNITIES****14:30-16:00 CONCURRENT SESSIONS****Brief training workshop on motivational interviewing adapted to immunization**

Given the reluctance of a number of parents and individuals toward immunization, it is sometimes difficult to provide suitable counselling. Health care professionals, trained according to a traditional model of knowledge sharing, sometimes feel powerless and “short of arguments.” Motivational interviewing is a helpful and promising way of dealing with this, because it uses various techniques to foster open and encouraging dialogue. In the end, those who are hesitant may not all necessarily or immediately accept immunization, but the health care professional’s openness could pave the way for future compliance. The workshop will introduce participants to the principles and techniques of motivational interviewing and enable them to practice some of these techniques through role-playing and situation simulations and discussions with other participants so they can apply them in their professional practices.

**Learning Objectives**

- Describe the principles of motivational interviewing;
- Recognize the steps of motivational interviewing;
- Apply certain motivational interviewing techniques (e.g., open-ended questions, exploring ambivalence during immunization counselling).

**It Takes a Village: Implementation of Best Practices in Pain Mitigation at the Time of Vaccination**

Successful implementation of evidence based pain mitigation practices at the time of vaccination requires consideration and input of the different stakeholders involved. The HELPinKIDS&Adults team and project will be used as a model for discussion. The team published an updated clinical practice guideline on vaccination pain management in the Canadian Medical Association Journal in August 2015 and this guideline formed the basis for global recommendations on vaccination pain management recently announced by the World Health Organization later in 2015. We will share how we have approached and successfully engaged a range of stakeholders including policy makers, immunizers and consumers in this work, our guideline recommendations, and some of our successes, challenges, and future directions. The results of guideline implementation studies will also be presented.

**Learning Objectives**

- Understand the importance of targeting different groups of stakeholders involved in vaccination in pain management practice change.
- Identify potential opportunities and challenges in incorporating pain management interventions in the vaccination process in different clinical settings.
- Describe the impact of implementation efforts directed to different stakeholder groups.

**Making and implementing policy    Oral Abstracts 1 & 2****New Vaccines on the Horizon**

This forward-looking session will focus on recent scientific advances contributing to the development of new herpes family (CMV, EBV and VZV) and RSV vaccines and present the need for a new acellular pertussis vaccine.

**Learning Objectives:**

- Review the impact of herpes family viral infections and the progress of vaccines to prevent them.
- Summarize the impact of RSV disease in Canada, the progress on RSV vaccine development and the outcomes of Canadian clinical trials.
- Describe the changing epidemiology of pertussis, the shortcomings of the current acellular pertussis vaccine and what is needed to provide an improved vaccine.

**Speakers:**

- Soren Gantt, Associate Professor, Department of Infectious and Immunological Diseases (Pediatrics), Faculty of Medicine, University of British Columbia; Investigator, BC Children's Hospital
- Scott Halperin, Professor of Pediatrics and Microbiology & Immunology, Director, Canadian Center for Vaccinology, IWK Health Centre, Dalhousie University
- Joanne Langley, Scientific Co-Chair, Conference Organizing Committee; Professor, Departments of Pediatrics and Community Health and Epidemiology; CIHR-GSK Chair in Pediatric Vaccinology, Dalhousie University

**Moderator:**

- Manish Sadarangani, Director, Vaccine Evaluation Center, Research Institute, BC Children's Hospital; Assistant Professor, Division of Infectious Diseases, Department of Pediatrics, University of British Columbia

**Optimizing Immunization in Indigenous populations**

The incidence and burden of certain vaccine preventable diseases (VPD's) is disproportionately higher in some Indigenous populations compared to the overall Canadian population. This symposium will review the epidemiology of VPDs in Indigenous populations, and explore whether the current vaccine schedule for Invasive Pneumococcal Disease in one jurisdiction is addressing the epidemiology of disease in First Nations. The session will also describe successes and challenges in producing national level immunization coverage data for on-reserve populations, review successful interventions used to support front line immunization providers and strategies to increase immunization uptake in First Nations communities.

**Learning Objectives:**

- Review the epidemiology of vaccine-preventable diseases with a specific focus on invasive bacterial diseases in Indigenous populations compared to the overall Canadian population. Discuss how the burden of Invasive Pneumococcal Disease (IPD) has impacted Immunization programming for First Nations communities in one region.
- Discuss the successes, challenges and strategies to improve the assessment of overall reported immunization coverage for First Nations living on-reserve.
- Discuss successful initiatives for supporting immunization programming and optimizing vaccine uptake in First Nations communities.

**Speakers:**

- Cheryl Chisholm, Communicable Disease Co-ordinator, First Nations and Inuit Health Branch, Atlantic Region
- Shalini Desai, Medical Specialist, Vaccine Preventable Diseases, Public Health Agency of Canada
- Catherine Langlois, Public Health Nurse, Communicable Disease Prevention and Control, Nova Scotia Health Authority-Northern Zone
- Kathleen Lydon-Hassen, Senior Policy Analyst, First Nations and Inuit Health Branch, Health Canada
- Ruth Richardson, Regional CDC Nurse Manager, First Nations and Inuit Health Branch, Health Canada

**Moderator:**

- Erin Henry, Director, Communicable Disease Control Division, First Nations and Inuit Health Branch, Health Canada

**What's New with NACI?**

This session will have three focussed sections, beginning with a review of the new NACI publications and recommendations that have been released since the 2014 Canadian Immunization Conference. To navigate these items, release dates and the online location of publications will be highlighted for participants. The next portion of the session will review the various types of publications from NACI, including Advisory Committee statements and chapters of the Canadian Immunization Guide, and others, such as the literature reviews that provide the evidence base for recommendations.

Participants will gain insight into the intended audience for these products and how to use them effectively. The session will end with details on the future direction of NACI, including a description of its expanded mandate and the additional analyses that will be required to provide more comprehensive guidance on vaccine use in Canada.

**Learning Objectives:**

- Describe new products and recommendations since the 2014 Canadian Immunization Conference.
- Explore the various guidance products and how to use them effectively.
- Identify the future direction of NACI.

**16:00-17:30****Welcome Reception in the Exhibit Hall**

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

**07:00-08:45 Co-developed Learning Opportunity****09:00-10:30 PLENARY II - Popular Culture, Vaccination and Our Bunk-Filled World**

Timothy Caulfield, Professor, Faculty of Law and School of Public Health & Research Director, Health Law Institute, University of Alberta; Canada Research Chair in Health Law and Policy

There is a ridiculous amount of science-free health and wellness advice floating around in popular culture. And much of this information is conflicting, misleading or just plain crazy. Indeed, these are strange times. Vaccination myths won't die. Bizarre celebrity health recommendations remain ridiculously popular. There is a growing market for unproven therapies. In this presentation Professor Caulfield will explore why and how health information gets so twisted – especially in the context of vaccinations. This will include a consideration of the role of celebrity culture, social media, the erosion of public trust, our cognitive biases and the embrace of pseudoscience by some research institutions. He will conclude by reviewing what the best available evidence says about how to counter this trend.

**Learning Objectives:**

- Describe the social forces that create and dissemination misinformation about health & vaccine.
- Explore what evidence says about how best to counter health myths.

**10:30-11:00 NUTRITION BREAK****11:00-12:30 CONCURRENT SESSIONS****A Case Study: Assessing Mumps Vaccine Effectiveness during an Outbreak Investigation**

After a brief overview on AVALON and VE assessments, participants will work their way through a case study and will calculate mumps VE by dose and birth cohort using data from a 2009-2010 mumps outbreak. Participants will determine the appropriate methodology after assessing the available data, identify limitations of the analysis and also determine whether conducting a sensitivity analysis is appropriate. Finally participants will identify why conducting VE assessments are important despite their limitations. The workshop is appropriate for conference participants with basic epidemiologic knowledge (e.g. an understanding of incidence, prevalence and the difference between vaccine efficacy and vaccine effectiveness) and an ability to calculate incidence and prevalence rates. A calculator or lap top (with excel) is required.

**Learning Objectives:**

- Describe why determination of VE is important.
- Explore data requirements and limitations of different approaches to assessing VE.
- Identify and apply formulas used to calculate VE.

**Diseases 101: Do you know what you are preventing?**

In the pre-vaccine era, life-threatening diseases struck thousands of people in Canada each year, most of these children. Today, they are all but forgotten because of the success of immunization programs in the 20th century. Many of today's parents and health practitioners have never seen these diseases, although recent outbreaks of vaccine preventable diseases such as measles and mumps have demonstrated what can happen when a disease is introduced into an under vaccinated population. As these diseases become increasingly uncommon, it is challenging for health practitioners to be able to recognize the clinical features when they do occur or to communicate the value of vaccination with parents who have not seen first-hand the tragic consequences of these diseases.



This session will present descriptions and photos of vaccine-preventable diseases affecting children, adolescents and adults and show how the risk of contracting these diseases still exists.

**Learning Objectives:**

- Provide information that will help health practitioners to recognize vaccine-preventable diseases.
- Discuss the risks associated with vaccine-preventable diseases and provide information that will assist with counselling patients and parents.
- Describe recent outbreaks of vaccine preventable diseases

**Speakers:**

- Simon Dobson, Clinical Associate Professor & Head, Division of Infectious Diseases, Department of Pediatrics, University of British Columbia; Clinical Investigator, Vaccine Evaluation Centre, Child and Family Research Institute at BC Children's Hospital.
- Noni MacDonald, Professor, Department of Pediatrics, IWK Health Centre, Dalhousie University

**Evaluating new vaccine programs in Canada: How do we decide which vaccines should be publicly funded?**

As new vaccines become available, decision-making authorities are in greater need for tools and processes to understand the public health value of new vaccine programs. It's been recognized that Canada needs and integrated, transparent and consistent processes to review and assess the findings of not only the clinical benefits of new vaccines but also the economic value of these new products. Other health technology assessment (HTA) processes have also adopted the patient perspective to inform funding and implementation recommendations. This workshop's goal seeks to understand the current decision-making processes in Canada and the needs related to improving the process to ensure Canadians have timely access to new vaccines.

**Learning Objectives:**

- Review the current status of decision-making for new vaccine programs in Canada.
- Describe the need for a health technology assessment process to evaluate the clinical, economic and patient impact of new vaccine programs in Canada in order to prioritize and allocate public health resources.
- Examine the HTA processes in Canada and other jurisdictions to identify best-practices that might be amenable to evaluating new vaccine programs in Canada.

**Influenza vaccine: Who should we be promoting it for and which vaccine should we give them?**

Across Canada, there has been a gradual shift from recommendation of influenza vaccine primarily for the elderly towards a universal recommendation. In this session, evidence will be presented on the efficacy and safety of influenza vaccine, the effect of previous doses on response to influenza vaccine in a given year, and the tricky issue of influenza immunization of vaccine hesitant health care workers.

**Learning Objectives:**

- Outline the pros and cons of implementing mandatory influenza vaccine for health care workers and the strategy of requiring masks for unimmunized health care workers during influenza season.
- Discuss the different influenza vaccines available in Canada and explain why specific vaccines might be recommended for various populations.
- Summarize the evidence that influenza vaccine given in previous years may alter the response to vaccine.

**Speakers:**

- Gaston De Serres, Medical Epidemiologist, Institut national de santé publique du Québec; Professor of Epidemiology, Faculty of Medicine, Laval University
- Danuta Skowronski, Epidemiology Lead, Influenza & Emerging Respiratory Pathogens, BC Centre for Disease Control

**Moderator:**

- Joan Robinson, Co-Chair, Conference Organizing Committee; University of Alberta

**New developments in vaccines & their use    Oral Abstracts 1 & 2****Vaccine uptake and communication strategies**

When faced with vaccine hesitancy, public health authorities are looking for effective strategies to address it. Research on vaccine acceptance has shown that individual decision-making regarding vaccination is complex and may involve emotional, cultural, social, spiritual or political factors as much as individual factors. In this session, strategies and innovative approaches to address vaccine hesitancy and, more broadly, to enhance vaccine acceptance will be presented.

**Learning Objectives:**

- Explore promising strategies to address vaccine hesitancy at the policy and population level.
- Identify promising strategies to communicate with vaccine hesitant parents.
- Describe adoptable interventions that can improve immunization acceptance and uptake in infants, children, adults and health care providers.

**Speakers:**

- Dianne Alexander, Manager, Immunization Policy and Programs, Population and Public Health Division, Ministry of Health and Long-Term Care
- Olivier Bernard, Pharmacist, author of [lepharmachien.com](http://lepharmachien.com) and [thepharmacist.com](http://thepharmacist.com)
- Elspeth Kirkman, Head, North America, The Behavioural Insights Team
- Andrea McLellan, Program Manager, Vaccine Preventable Diseases and Clinical Information, North Bay Parry Sound District Health Unit

**Moderator:**

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

**12:30-14:30    Lunch and Co-developed Learning Opportunities****14:30-16:00    CONCURRENT SESSIONS****Emerging infectious diseases Ebola, Zika, H. influenzae type A: Vaccine development on the frontlines**

This session will discuss recent progress in the development of vaccines against recent emerging pathogens (Ebola, Zika, *Haemophilus influenzae* type A). The effect of the 2014-2015 Ebola epidemic will be explored as panelists describe the potential impact of the new subunit varicella zoster vaccine and discuss what the impact on Canadian health would be when these vaccines are licensed and implemented into programs. The epidemiology and clinical impact of Zika infection will be described and is vaccine prevention feasible? The session will discuss the importance of if H. influenzae type A infection can be a vaccine-preventable disease.

**Learning Objectives:**

- Review the clinical impact of Ebola, Zika, *H. influenzae* type A.
- Summarize progress in the development of the vaccines against these infections.
- Review the changing epidemiology of non-type b *H. influenzae* infection in Canada.
- Describe research advances towards development of a vaccine to prevent invasive *H. influenzae* type A infection.

**Speakers:**

- David Safronetz, Chief, Viral Zoonoses, National Microbiology Laboratory, Public Health Agency of Canada
- Marina Ulanova, Immunologist, Division of Medical Sciences, Northern Ontario School of Medicine

**Moderator:**

- Joanne Langley, Scientific Co-Chair, Conference Organizing Committee; Professor, Departments of Pediatrics and Community Health and Epidemiology; CIHR-GSK Chair in Pediatric Vaccinology, Dalhousie University

**Immunocompromised patients: Keeping their unique immunization needs in mind (or straight)**

A growing proportion of the Canadian population has a weakened immune system, either due to aging (immunosenescence) or secondary to medication used to treat various conditions (chemotherapy, biological agents, or steroids). How should we keep those most at risk for vaccine-preventable diseases protected? This session will aim to review immunology concepts that impact vaccine response, but also tools that exist to help practitioners know what to do to optimize vaccine protection.

**Learning objectives:**

- Highlight how biologics and aging impact the immune response to vaccines
- Discuss the best approaches to overcome immunosenescence and decreased response to vaccines in immunocompromised
- Discuss tools that exist for practitioners working with immunosuppressed populations to ensure optimal immunization

**Speakers:**

- Christine McCusker, Associate Professor of Pediatrics, Division Director, Allergy and Immunology, Faculty of Medicine, McGill University
- Karina Top, Assistant Professor of Pediatrics, Division of Pediatric Infectious Diseases, IWK Health Centre, Dalhousie University,
- Donald Vinh, Clinician-Scientist; Director, Infectious Disease Susceptibility Program; Assistant Professor, Department of Medicine, Division of Infectious Diseases, Faculty of Medicine, McGill University

**Pre-event Vaccination for Biological Threats**

Few people in Canada are aware of the potential biological threats and what work is currently being undertaken to address these threats. The World Health Organization (WHO) identified ten emerging pathogens as risks to global public security, several of which do not currently have approved vaccines. Exponential increases in global mobility and reduced detection times of so called eradicated or controlled diseases have called into question the effectiveness of Ring Containment without pre-event vaccination.

In February 2016, the WHO solicited ideas for platform technology solutions to develop and manufacture candidate products for clinical trials in a timely manner (months rather than years) for a variety of infectious disease threats. This session will present the complex infectious disease threats that could cause public health emergencies and understand how nations including Canada are dealing with the potential risks.

**Learning Objectives:**

- Review the Public Health Agency Canada (PHAC) activities in this area, specifically through the National Emergency Stockpile System (NESS).
- Describe the six Bio-terrorism/ Biological Threats the Department of National Defence is Canada is pursuing.
- Summarize where paramedics and other first responders/critical infrastructure personnel fit in this global picture, i.e. training and equipment

**Reviewing Ontario's Universal Influenza immunization Program – The application of research to practice, programs and policy**

The Universal Influenza Immunization Program (UIIP) has been in place in Ontario since 2000. A review of specific questions related to the UIIP was recently completed. The following three questions were addressed:

1. Is influenza vaccine being given at the optimal time?
2. What is the impact of repeated influenza vaccinations on vaccine effectiveness?
3. What are the indirect / herd effects of influenza vaccination?

The clinical practice, program delivery and policy development implications of these questions will be explored during this session. Participants will be provided with an overview of the research questions and findings and then asked to consider how these findings can be applied within their provincial influenza immunization programs. Implications of the findings on the timing of delivery of influenza vaccine by providers, vaccination recommendations, and professional and public promotional and educational materials will be examined.

**Learning Objectives:**

- Identify and discuss the research questions addressed as part of the UIIP review.
- Explore the implications of these findings from clinical practice, program delivery, and policy development perspectives.
- Recommend practice, program, and policy approaches to improve the UIIP, with a focus on the three research questions.

**Optimal Practice: Oral Abstracts 1 & 2**

**Vaccine Hesitancy and the Health Care Professional**

Health care professionals (HCP) have a critical role to play in immunization. Those that are fully immunized and up-to-date, model good practices. Their attitude is very influential in the decision to immunize; their advice and information can counter anti-vaccine information received from friends, family, and websites. Alternatively health care providers who are themselves vaccine hesitant may reinforce the opinions of those that are unsure of immunizations' effectiveness and safety, resulting in refusal of some or all vaccines. This session will look at the impact of the use of effective counselling techniques by HCP on vaccine hesitancy; explore the opinions and attitudes of alternative health care providers on immunization decisions; and discuss how to address vaccine hesitancy among HCP.



**Learning Objectives:**

- Explain basic principles of motivational interviewing techniques as an approach to address vaccine hesitancy.
- Recognize how alternate health providers can influence immunization decisions.
- Describe effective approaches to address vaccine hesitancy among health care professionals.

**Speakers:**

- Arnaud Gagneur, Investigator, Centre de recherche du CHUS; Assistant Professor, Department of Pediatrics, Faculty of Medicine and Health Sciences, Université de Sherbrooke
- Kumanan Wilson, Senior Scientist, Ottawa Hospital Research Institute. Professor of Medicine, University of Ottawa
- Eve Dubé, Researcher, Institut national de santé publique du Québec, Laval University

**16:00-17:30    Networking Event with Poster Presenters**

The dedicated poster session and networking event will enable presenters to engage with delegates and present research, program, best practices or policy innovation in a more dynamic setting. The goal of the poster presentation session is to allow delegates to network, and exchange innovative ideas, while facilitating productive discussion and feedback

**07:00-08:45****Co-developed Learning Opportunity****09:00-10:30    PLENARY III – Preventing Cancer by vaccination: The HPV story**

John Schiller, NIH Distinguished Investigator, Center for Cancer Research, National Cancer Institute

In the 1980s and 90s, laboratory and epidemiological studies determined that a select group of human papilloma virus (HPV) types are responsible for the development of most cervical cancers. As the link between HPV and cervical cancer became evident, Dr. John Schiller, with his colleague Dr. Douglas Lowy, explored the potential to develop a vaccine to prevent HPV infection. Their research led to the development of Gardasil and Cervarix that were licensed by the Food and Drug Administration for prevention of cervical cancer in 2006-2007.

The development of the HPV vaccines, which are based on virus-like particles, is one of this Century's notable biomedical success stories and widespread vaccination has the potential to reduce the incidence of cervical and other HPV-induced cancers around the world. As 2016 marks the tenth anniversary of the vaccines becoming widely available, we celebrate their remarkable success, while acknowledging the efforts that are still required for them to fully realize their potential impact.

This session will review the history of the HPV vaccine development, their efficacy in clinical trials and emerging effectiveness in national immunization programs, the unique immunological and virological features that explain their remarkable effectiveness, and the efforts being made to increase uptake, particularly in low-resource settings where they are most needed.

**Learning Objectives:**

- Describe what led the development of the HPV vaccines and lessons learned throughout the research.
- Summarize the potential future for HPV vaccinations to reduce the incidence of cervical and other HPV-induced cancers.
- Discuss innovative ways to increase uptake particularly in low-resource settings.

**10:30-11:00    NUTRITION BREAK****11:00-12:30    CONCURRENT SESSIONS****Facilitating interoperable immunization records in Canada**

The workshop will begin with an update on how the model of interoperable records has replaced the concept of a national immunization registry as a means to provide access to accurate, complete and timely immunization records. This will be followed by the hands-on portion of the workshop, which will include an opportunity to access the tools to support interoperability (e.g., mobile technologies, including the ImmunizeCA consumer App, bar code scanning, and immunization record sharing between systems).

The goal of interoperable immunization records is to improve health outcomes by making standardized, comprehensive immunization health information accessible in real-time. This supports healthcare providers during clinical practice and engages members of the public as active partners in the management of their own health. This will improve timeliness and accuracy in immunization coverage and adverse event following immunization (AEFI) surveillance, at both the jurisdictional and national levels, which in turn supports the advancement of immunization research.

Participants will be able to evaluate the benefits of the Pan-Canadian immunization terminology and messaging standards, and learn how to access them; they will be able to make informed choices regarding the use of tools and solutions that can be used in their jurisdiction and / or clinical practice. Participants will be provided with resources to facilitate alignment with standardized record keeping to support interoperable systems.

**Learning Objectives:**

- Learn how to access and utilize Pan-Canadian terminology and messaging standards
- Analyze the tools available to advance immunization interoperability in Canada and assess relevance for use in their setting.
- Formulate priorities for advancing interoperability in their setting and provide input to priority setting for national initiatives.

**Increasing access to immunization services: An integrated, interprofessional approach**

All health care providers play an important role in providing a safe and effective immunization program. PHAC's Immunization Competencies for Health Professionals present a comprehensive framework that supports health care professionals to develop the required knowledge, skills and abilities to be able to deliver high quality immunization services. This session will review the national immunization competencies, discuss how they have supported the development of an integrated and Interprofessional team of immunizers in Canada and provided a framework for education and training. Participants will also hear from jurisdictions that have integrated new groups of immunizers into their programs and will have an opportunity to discuss successes, challenges and next steps.

**Learning Objectives:**

- Describe PHAC Immunization Competencies for Health Professionals, explain how they can improve the quality of immunization practice from a systems level and apply them to their practice.
- Describe how access to immunization services can be improved through an interdisciplinary approach, particularly through the involvement of a variety of health care professionals as immunizers and evaluate the potential impact on immunization rates.
- Develop a framework for Interprofessional collaboration and development of integrated immunization services in order to increase access and ensure patient safety

**Speakers:**

- Ian Gemmill, Medical Officer of Health, Kingston, Frontenac and Lennox & Addington Public Health
- Shaila Jiwa, Vaccine Educator, Immunization Programs and Vaccine Preventable Diseases Service, BC Centre for Disease Control
- John Papastergiou, Pharmacist/Owner; Collaborator, Pharmacists as immunizers project, Ontario Pharmacy Research Collaboration; Assistant Professor, Leslie Dan Faculty of Pharmacy, University of Toronto; School of Pharmacy, University of Waterloo

**Moderator:**

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

### Maternal immunization against pertussis in Canada – considerations for implementation and evaluation

In this workshop public health researchers, immunization policy makers, front line providers and clinical researchers will come together to learn about and discuss potential maternal pertussis immunization programs in Canada, including objectives, recent evidence, program feasibility and challenges. Maternal immunization is a rapidly expanding area of immunization but faces many challenges. Maternal immunization has been very effective in controlling infant pertussis recently in a number of countries. Given the cyclical nature of recurring pertussis peaks, the immunization community in Canada must consider how maternal pertussis immunization programs will be implemented and evaluated.

Workshop delegates will specifically have the opportunity to review and discuss evidence pertinent to the risk-benefit and cost-effectiveness analyses relating to maternal pertussis immunization. Experience from other countries, both practical and scientific, and how Canada might appropriately consider such programs during an outbreak or for routine use will be covered.

#### Learning Objectives

- Review the considerations, conditions and thresholds for maternal pertussis immunization, including experience elsewhere and applicability within Canada;
- Explore challenges in Canada and how these can be mitigated;
- Discuss infrastructure and evaluation needed to monitor the program in relation to objectives and with respect to acceptance, risk-benefit and cost-effectiveness analyses.

### Making and implementing policy: Working Together!

When implementing policy, various stakeholders have different views. This session will discuss systematic approaches that have been used, but also how opportunities exist to work together in innovative ways. What factors influence decisions?

#### Learning Objectives:

- Analyze the Immunization 2020 strategy developed by Ontario and identify elements that may be useful in other jurisdictions
- Consider the range of evidence needed to inform provincial and territorial decision-making related to immunization programs
- Discuss possible ways of interacting with industry in the policy making process, yet limiting bias: the pros and cons.

#### Speakers:

- Dianne Alexander, Manager, Immunization Policy and Programs, Population and Public Health Division, Ministry of Health and Long-Term Care
- Caroline Quach, Paediatric Infectious Disease Consultant & Medical Microbiologist, McGill University Health Centre; Associate Professor, Departments of Paediatrics & Epidemiology, Biostatistics & Occupational Health, McGill University
- Terry Gunter, General Manager, Vaccines Business Unit, Pfizer Canada; Chair, Vaccines Industry Committee

#### Moderator:

- Nina Arron, Director of Public Health Policy and Programs Branch, Population and Public Health Division, Ministry of Health and Long-Term Care



**Optimizing immunization in immigrants and refugees**

Many new arrived immigrants and refugees are at increased risk for several vaccine preventable diseases because they may not be part of the routine vaccination programs in their countries of origin or due to several barriers of accessing these vaccines after arrival in Canada. Vaccines are not updated during the immigration screening exam and there are no routine targeted vaccination programs for immigrants after arrival. This symposium will review the vaccination status, coverage and barriers to uptake of vaccines for routine childhood vaccines in adults and children, hepatitis B and HPV vaccines in immigrants and refugees.

**Learning objectives:**

- Identify barriers to vaccine uptake in children and adults new to Canada.
- Discuss ways to optimize vaccine programs for children and adults new to Canada.
- Discuss the role of HPV vaccine in addressing this health disparity.

**Speakers:**

- Christina Greenaway, Associate Professor, Jewish General Hospital, McGill University
- Charles Hui, Associate Professor of Paediatrics, Faculty of Medicine, University of Ottawa; Chief of Infectious Diseases, Children's Hospital of Eastern Ontario
- Marc Steben, Medical advisor, STI unit, Institut national de santé publique du Québec

**Moderator:**

- Marie Adèle Davis, Executive Director, Canadian Paediatric Society

**Vaccine uptake and acceptance    Oral Abstracts 1 & 2****12:30-14:30    Lunch & Plenary IV**