



DAY 1: SUNDAY, SEPTEMBER 15, 2019

0800-0900 Registration & Breakfast

0900-0930 Welcome and Opening Address:

- First Nations Territorial Welcome: Syexwaliya Ann Whonnock, Squamish Nation
- BC Ministry of Health: Bonnie Henry
- Introduction to INMIS 2019: Co-Chairs: Tobi Kollmann & Manish Sadarangani

0930-1015 Opening Keynote

Session Chair: Dr. Manish Sadarangani

Protecting the next generation through neonatal and maternal immunization

Speaker: Dr. Shabir Madhi, University of the Witwatersrand, South Africa

Session Learning Objectives:

1. Understand how maternal and neonatal immunization fit into the WHO Sustainable Development Goals
2. Describe the role of maternal and neonatal immunization in a healthy life trajectory for the first 1000 days
3. Understand the challenges of coordinated and sustainable global implementation of maternal and neonatal immunization programs

1015-1115 Session 1 Protecting newborns and infants through maternal immunization

Session Chairs: Dr. Flor Munoz and Dr. Paul Heath

Session 1 Learning Objectives:

1. Update on the progress towards the implementation of maternal immunization as a public health strategy to protect newborns and infants against serious infections
2. Describe efforts to introduce maternal vaccines in LMICs: Are current antenatal care services an adequate platform?
3. Understand the challenges and opportunities for the assessment of safety and effectiveness of maternal immunization through EMR and data linkage, including specific challenges in LMICs

Maternal tetanus vaccination as a platform for the implementation of maternal immunization in LMICs

Speaker: Dr. Philipp Lambach, World Health Organization, Switzerland

Learning Objectives:

1. Acquire Insights into characteristics of health care delivery systems in Low and Middle Income countries
2. Deepen understanding of how several health system attributes correlate with performance in the delivery of vaccines to pregnant women
3. Discuss methods and international efforts to support countries assess/improve their maternal immunization systems

Linking mothers and infants to assess the safety and effectiveness of maternal immunization

Speaker: Deshayne Fell, University of Ottawa, Canada

Learning Objectives

1. Describe the types of electronic data that are used to perform large, population-based research on maternal immunization
2. Review the opportunities and challenges of using large linked databases for maternal immunization research
3. Highlight the major contributions to the evidence on safety and effectiveness of maternal immunization of studies using large linked databases

1115-1145 BREAK, POSTER VIEWING & NETWORKING



1145-1245 Session 1 Submitted abstracts

- **“Maternal pertussis vaccination during pregnancy and early childhood outcomes in Ontario, Canada”** Ms Megan Laverty University of Ottawa, Canada
- **“Effectiveness of inactivated influenza vaccination in pregnant women for prevention of influenza-associated hospitalization in their young infants: a case-control study”**. Dr. Marta Nunes University Of The Witwatersrand, South Africa
- **“A multi-country cohort study investigating adverse birth outcomes among women hospitalized with acute respiratory infection during pregnancy”**. Dr. Annette Regan Texas A&M University, USA
- **“A prospective study to evaluate the impact that method of gestational age determination has on the rates of key pharmacovigilance outcomes in The Gambia”**. Dr. Mustapha Bittaye MRC Unit The Gambia at the London School of Hygiene and Tropical Medicine, The Gambia

1245-1330 LUNCH, POSTER VIEWING & NETWORKING

1330-1430 Session 2 Multi-disciplinary approach to improve maternal vaccine uptake

Session Chairs: Dr. Ed Clarke and Dr. Pierre Van Damme

Session 2 Learning Objectives:

1. *Understand the potential impact of belief systems and cultural practices on vaccine uptake in pregnant women*
2. *Describe the hurdles and opportunities of translating research findings into government policy*
3. *Consider the role of maternal healthcare providers as advocates of maternal and neonatal vaccination: opportunities and challenges*

“How to keep your newborn alive: socio-cultural practices that may affect maternal and neonatal vaccination understanding and uptake in sub-Saharan Africa”

Speaker: Dr. Sarah O’Neill, Institute of Tropical Medicine, Belgium

Learning Objectives:

1. *To understand perceptions of disease aetiology and how they may affect health seeking behaviour in pregnant women and neonates.*
2. *To discuss socio-cultural concepts that may affect vaccine uptake in pregnancy and at birth*

Translating research findings into government policy on maternal and neonatal immunization

Speaker: Dr. Maria Avila-Aguero, Hospital Nacional de Niños, Costa Rica

Learning Objectives:

1. *To understand the opportunities and barriers to translating research findings into national policy recommendations – a country perspective*
2. *To describe the process for translating national policy into practice in maternal and neonatal immunization. What are the barriers and how can they be overcome.*

1430-1530 Session 2 Submitted abstracts

- **“Motives for Maternal Immunisation Uptake in Urban and Rural Gambia”**. Ms. Penda Johm MRC Unit The Gambia at the London School of Hygiene and Tropical Medicine, The Gambia
- **“Healthcare provider interpretations of vaccine product monograph information regarding use in pregnancy”**. Dr. Karina Top Dalhousie University, Canada
- **“Beyond individual decision-making: The importance of policy and provider recommendation for maternal vaccine acceptance in a low- and middle-income setting”**. Dr. Neisha Sundaram London School of Hygiene and Tropical Medicine, UK



- “Lessons learned, knowledge and perceptions of maternal and neonatal immunization in Latin America”.
Dr. Alba Vilajeliu Pan American Health Organization (PAHO)/WHO

1530-1600 BREAK, POSTER VIEWING & NETWORKING

1600-1700 Panel & audience discussion: Overcoming hurdles to increase maternal vaccination uptake

Session Chairs: Dr. Flor Munoz and Dr. Pierre Van Damme

Panelist – Serese Marotta, Sarah O’Neill, Philipp Lambach, Deshayne Fell, Shabir Madhi, Maria Avila-Aguero

1700-1830 OPENING RECEPTION, POSTER VIEWING & NETWORKING

DAY 2: MONDAY, SEPTEMBER 16, 2019

0700-0830 Trainees’ Meet the Expert Breakfast (registration required)

0730-0830 Breakfast & Networking for conference delegates

0830-0930 Session 3 The mechanistic underpinnings of maternal and neonatal immunization

Session Chairs: Dr. Arnaud Marchant and Dr. Ofer Levy

Session 3 Learning Objectives:

1. Illustrate the potential of systems immunology for the understanding of the immunobiology of the mother-infant dyad
2. Provide an update on the immunobiology of pregnancy and its relevance for vaccine responses
3. Provide an update on the rules and mechanisms underlying transplacental transfer of maternal antibodies

Systems immunology of the mother-infant dyad

Speaker: Dr. John Tsang, National Institutes of Health, USA

Learning Objectives:

1. Principles of systems immunology analysis of vaccine responses
2. Overview of immune changes associated with pregnancy and possible consequences for infant immunity and vaccine responses
3. Perspectives of systems immunology analyses of the mother-infant dyad

Molecular and cellular basis of maternal antibody transfer

Speaker: Madeleine Jennewein, Harvard University, USA

Learning Objectives:

1. Classical model of maternal antibody transfer and its limitations
2. Novel cellular and molecular players in maternal antibody transfer
3. Perspectives of systems immunology analyses of the mother-infant dyad

0930-1030 Session 3 Submitted abstracts

- “Dissecting the Antibody-OME of Preterm and Term Newborns using Systems Serology”. Dr. Sepideh Dolatshahi Massachusetts General Hospital, Ragon Institute of MGH, MIT and Harvard, USA
- “Functionality of antibody against B. pertussis in acellular versus whole cell pertussis-vaccinated infants born to mothers who received Tdap during pregnancy: a randomised trial”. Dr. Nasamon Wanlapakorn Chulalonglorn University, Thailand
- “The effect of pertussis vaccination during pregnancy on the cellular immune response after primary and booster infant vaccination”. Ms. Marjolein Orije University of Antwerp; Center for the Evaluation of



Vaccination, Belgium

- “Pregnancy-induced changes in antibody glycosylation and non-neutralizing functions”. Dr. Marcela Passetti University of Maryland, USA

1030-1100 BREAK, POSTER VIEWING & NETWORKING

1100-1200 Panel & audience discussion: How does the maternal-newborn immune dyad communicate?

Panel Chairs: Dr. Arnaud Marchant

Panelists: John Tsang, Madeleine Jennewein, Tobi Kollmann, SingSing Way

1200 -1330 LUNCH, POSTER VIEWING & NETWORKING

1330-1430 Rapid Fire Student/Trainee oral abstracts

Session Chair: Manish Sadarangani

1430-1530 Session 4 Promoting healthy infant life through optimizing neonatal immunization

Session Chairs: Dr. Elke Leuridan and Dr. Ener Dinleyici

Session Learning objectives:

1. Overview on role of current vaccines in the prevention of neonatal morbidity and mortality
2. Optimizing existing neonatal immunization strategies, including opportunities to protect preterm born infants
3. New neonatal vaccines and the role for infant health promotion

Neonatal immunization: well begun is half done

Speaker: Dr. David Goldblatt, University College London, United Kingdom

Learning Objectives:

1. Provide update on current status of neonatal vaccination/neonatal immunisation research in HIC and LMIC settings
2. Explore the potential benefits of early life immunisation and the settings in which this would be advantageous
3. Explore the possible disadvantages of neonatal immunisation, with a focus on the immunology of early life immunisation and the use of neonatal immunisation in the face of maternal immunisation

Importance of neonatal Hepatitis B immunization

Speaker: Dr. Pierre Van Damme, University of Antwerp, Belgium

Learning Objectives:

1. Overview of the role of hepatitis B vaccines in the prevention of perinatal transmission of hepatitis B
2. Emphasize the importance of timely administration of hepatitis B vaccines in the context of perinatal transmission of hepatitis B
3. Identify barriers for optimal and timely hepatitis B birth dose coverage and how to address these barriers

1530-1600 BREAK, POSTER VIEWING & NETWORKING

1600-1700 Session 4 Submitted abstracts

- “Early pneumococcal conjugate vaccination primes mucosal immune responses to subsequent pneumococcal polysaccharide vaccine in Papua New Guinean children”. Dr. Rebecca Ford Papua New Guinea Institute Of Medical Research, Papua New Guinea
- “The influence of maternal immunity on infant BCG vaccine response”. Dr. Lisa Cranmer Emory Children’s Pediatric Institute, USA
- “Maternal pertussis vaccination and its effect on opsonophagocytic activity of infant pertussis specific antibodies up to 24 months of age: a randomised controlled trial”. Ms Daan Barug Centre for Infectious



Disease Control, National Institute for Public Health and the Environment (RIVM), The Netherlands

- **“Licensed Bacille Calmette-Guérin (BCG) formulations differ markedly in bacterial viability, RNA content and innate immune activation”**. Dr. Kinga Smolen Boston Children’s Hospital, USA

1700-1730 Late breaker abstracts

- **“BCG vaccination protects from neonatal sepsis through induction of emergency granulopoiesis”**. Mr Byron Brook, University of British Columbia, Canada
- **“Malaria Antigen Shedding in Breastmilk of Mothers from a Region with Endemic Malaria”**. Dr. Lieke Van Den Elsen The University of Western Australia, Australia

1730-1930 EVENING RECEPTION, POSTER VIEWING & NETWORKING

DAY 3: TUESDAY, SEPTEMBER 17, 2019

0730-0830 Breakfast & Networking

0830-0930 Session 5 The next generation of neonatal and maternal immunization research

Session Chairs: Dr. Clare Cutland and Dr. Beate Kampmann

Session Learning Objectives:

1. Understand infections currently causing global maternal and neonatal deaths & disability
2. Understand the current burden of maternal and neonatal antimicrobial resistance (AMR) and the potential of maternal and neonatal immunization in tackling global AMR
3. Review the future challenges in development of future vaccines

Research needs for the next generation of maternal and neonatal vaccines: Lessons learned from the case study of maternal group B streptococcal disease

Speaker: Dr. Stephanie Schrag, Centers for Disease Control and Prevention, USA

Learning Objectives:

1. Understand the global burden of GBS and the rationale for a maternal vaccine
2. Understand the pathway and the challenges in developing in GBS vaccines

Tackling AMR through maternal and neonatal immunization

Speaker: Dr. Padmini Srikantiah, Bill & Melinda Gates Foundation, USA

Learning Objectives:

1. Understand the current burden of maternal and neonatal antimicrobial resistance (AMR)
2. Understand the potential of maternal and neonatal immunization in tackling global AMR

0930-1030 Session 5 Submitted abstracts

- **“Safety and Immunogenicity of a Hexavalent Group B Streptococcus Conjugate Vaccine in Healthy Nonpregnant Adults: A First-in-Human Study”**. Dr. Kimberly Center, Pfizer Inc, USA
- **“Safety and Immunogenicity and Efficacy of Third Trimester Immunization with an Respiratory Syncytial Virus F Protein Vaccine for the Protection of Infants Over the First 180 Days of Life”**. Dr. Louis Fries, Novavax, Inc, USA
- **“Maternal-infant transfer of naturally-acquired antibodies for protection against Shigella”**. Dr Esther Ndungo, University of Maryland School of Medicine, USA
- **“Use of minimal invasive tissue sampling for determining the burden of neonatal mortality that is potentially vaccine-preventable”**. Dr. Shabir Madhi, University of The Witwatersrand, South Africa



5th International Neonatal & Maternal Immunization Symposium
September 15-17, 2019
Vancouver (Canada)
www.inmis.org

1030-1100 BREAK & NETWORKING

1100-1145 Closing Keynote:

Session Chair: Dr. Tobias Kollmann

The presumption of inclusion: lessons learned from maternal immunization against emerging infectious diseases

Speaker: Dr. Ruth Karron, Johns Hopkins University, USA

Learning Objectives:

- 1. Consider how the interests of pregnant women and their offspring can be fairly and equitably addressed in the development, evaluation and deployment of vaccines against emerging pathogens*
- 2. Consider how lessons learned in the context of emerging threats might be more broadly applied to issues related to the inclusion of pregnant women in biomedical research*

1145-1245 Audience discussion: Is the field on the right path? What are we missing?

Session Chair: Dr. Beate Kampmann

1245-1300 Closing Remarks and Adjournment

INMIS Co-Chairs: Dr. Tobias Kollmann and Dr. Manish Sadarangani

1330-1700 IMPRINT (Immunising Pregnant Women & Infants Network) general meeting

This meeting is organized by IMPRINT and is open to IMPRINT members and anyone who would like to find out more about/join IMPRINT visit: <http://www.imprint-network.co.uk/>



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