

# **Publications and Presentations List**

"By Topics" List
October 16, 2023
NEW\*

# IMPACT PUBLICATIONS and PRESENTATIONS (By topic, with hyperlinks added where applicable)

- A. Surveillance General
- **B.** Vaccine Safety (Hypotonic- Hypo responsive episodes; Thrombocytopenia; Encephalopathy; Baccille Calmette-Guérin; Seizures; Infantile spasms; Injection site reactions)
- **C.** Vaccine Preventable Diseases (COVID-19, Haemophilus influenzae; Neisseria meningitides; Pertussis; Streptococcus pneumoniae; Varicella; Zoster; Influenza; Respiratory Syncytial virus; Rotavirus; Polio-Acute Flaccid Paralysis surveillance)
- **D.** Other Knowledge Translation Activities (new section added September 2012)

# A. Surveillance – General

# **Publications:**

- Morris R, Halperin SA, Déry P, Mills E, Lebel M, MacDonald N, Gold R, Law B, Jadavji T, Scheifele DW, Marchessault V, Duclos P. IMPACT monitoring network: a better mousetrap. Can J Infect Dis 1993; 4:194-5
- Scheifele DW, Halperin SA, Samson H, King A, Gold R, and members of the Canadian Paediatric Society/Health Canada Immunization Monitoring Program Active (IMPACT). Assuring Vaccine Safety: A celebration of 10 years of progress with the IMPACT project. Paediatrics & and Child Health. Vol 7, November 2002, 9:645-8 <a href="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=3758&isuKy=419&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=3758&isuKy=419&isArt=t&fromfold=</a>
- Scheifele DW, Halperin SA, and members of the Health Canada/CPS Immunization
   Monitoring Program, Active (IMPACT). A Model of Active Surveillance of Vaccine Safety.
   Seminars in Pediatric Infectious Diseases, Vol 14, No 3 July 2003: pp 213-219
   <a href="http://www.journals.elsevierhealth.com/periodicals/yspid/article/S1045-1870(03)00036-0/abstract">http://www.journals.elsevierhealth.com/periodicals/yspid/article/S1045-1870(03)00036-0/abstract</a>
- Scheifele DW. Paediatric Infectious Disease Notes. IMPACT after 17 years: Lessons learned about successful networking. Paediatrics & Child Health 2009; 14(1):40-3 <a href="http://www.cps.ca/english/statements/ID/impact17yr.htm">http://www.cps.ca/english/statements/ID/impact17yr.htm</a>
- (IMPACT Highlights) Parents who reject immunizations: losing life's lottery. Paediatrics
   & Child Health 1999; 4:117
- 6. (IMPACT Highlights) Invasive Haemophilus influenzae type b cases 2004
  Autistic children get serious infections, too. Paediatrics & Child Health 2005; 10-6; 314
  <a href="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=6407&isuKy=446&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=6407&isuKy=446&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=6407&isuKy=446&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=6407&isuKy

- 7. (Upshots) Vaccination site reaction or bacterial cellulitis? Paediatric Child Health 2009; 14-4, 245
  <a href="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=8737&isuKy=848&isArt=t&fromfold">http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=8737&isuKy=848&isArt=t&fromfold</a>
- 8. Bettinger JA. Halperin SA, Vaudry W, Law BJ, Scheifele DW. The Canadian Immunization Program ACTive (IMPACT): Active surveillance for vaccine adverse events and vaccine preventable diseases. Canada Communicable Disease Report CCDR: Volume 40 S-3, December 4, 2014 <a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/14vol40/dr-rm40s-3/comment-d-eng.php">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/14vol40/dr-rm40s-3/comment-d-eng.php</a>
- 9. Karina A Top, Kristine Macartney, Julie A Bettinger, Ben Tan, Christopher C Blyth, Helen S Marshall, Wendy Vaudry, Scott A Halperin, Peter McIntyre, on behalf of the IMPACT and PAEDS investigators. Active surveillance of acute paediatric hospitalisations demonstrates the impact of vaccination programmes and informs vaccine policy in Canada and Australia. Eurosurveillance, Volume 25, Issue 25, 25/Jun/2020. <a href="https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2020.25.25.1900562">https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2020.25.25.1900562</a>

- Duclos P, Marchessault V, Gold R, Scheifele DW, Déry P, Halperin SA, Law B. Sentinel paediatric hospital network - IMPACT immunization monitoring program. Childhood Immunization in Canada. CPHA Second National Conference on Immunization, Toronto, Canada, May 4-6, 1992 (Poster)
- 2. Scheifele DW, Gold R, Duclos P, and members of the Canadian Pediatric Society's Immunization Monitoring Program, Active (IMPACT). An innovative hospital-based national network for active surveillance of vaccine-associated adverse events, vaccine failures and selected infections in children. Proceedings of the 33<sup>rd</sup> ICAAC, New Orleans, 1993 (Abstract # 1649)
- 3. Scheifele DW and Members of the CPS/LCDC IMPACT Surveillance Network. IMPACT-a pediatric hospital-based active surveillance system for vaccine-associated adverse events. Proceedings of the National Immunization Conference "Immunization in the 90s: Challenges and Solutions", Quebec City, October 7, 1994
- 4. Ahmadipour N, Walop W, Law B, and members of the Public Health Agency of Canada (PHAC)/Canadian Paediatric Society (CPS) Immunization Monitoring Program Active (IMPACT) Network. A Comparison Of Childhood Adverse Events Following Immunization (AEFI) As Detected Through Active Versus Passive Surveillance in Canada From 1997 to 2004. Poster 100, Proceedings of the 82<sup>nd</sup> Annual Conference of the Canadian Pediatric Society. Vancouver, BC June 21-25, 2005

- 5. S Bouchard, D Cote, M Lebel, J Embree, J. Bettinger for members of the Canadian Immunization Monitoring Program ACTive (IMPACT). Identifying reportable cases of adverse events following immunization (AEFI) in the paediatric population admitted to Canadian tertiary care hospitals by IMPACT monitors (Immunization Monitoring Program ACTive): A Challenging Endeavor. Poster presentation at the 11<sup>th</sup> Canadian Immunization Conference December 2-4, 2014 in Ottawa, Ontario.
- 6. Sophie Bouchard. Adverse event following immunization active paediatric surveillance: From case identification to reporting. Recent experience in an IMPACT hospital –Poster presentation # 72 at the 12<sup>th</sup> Canadian Immunization Conference Ottawa, Ontario Wednesday Dec 7, 2016
- 7. Myriam Maude Verly, Julie A. Bettinger, Nicole Le Saux, Scott A. Halperin, Ben Tan, Manish Sadarangani. 14 Years of National Vaccine Surveillance: Analysis of Vaccine-Preventable Disease Outcomes in Canada from 2005-2018. Oral abstract presentation at the Healthy Starts Research day in Vancouver, British Colombia, on February 3, 2021
- 8. Myriam M. Verly, Emily Mason, Hennady Shulha, Julie A. Bettinger, Nicole Le Saux, Scott Halperin, Ben Tan, Manish Sadarangani, for the members of IMPACT. Analysis of vaccine preventable disease outcomes in Canada from 2005-2018: a study from the Canadian Immunization Monitoring Program Active (IMPACT). Poster at the Canadian Immunization Conference (CIC), Ottawa, Canada April 25-27 2023

# **B.** Vaccine Safety

# **Bacille Calmette-Guérin**

# **Publications:**

 Scheifele DW, Law B, Jadavji T and Members of IMPACT. Disseminated Bacille Calmette-Guérin infection: three recent Canadian cases. Can Commun Dis Rep (CCDR) 1998; 24:69-72

http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/98vol24/dr2409ea.html

Deeks SL, Clark M, Scheifele DW, Law BJ, Dawar M, Ahmadipour N, Walop W, Ellis EC, King A. Serious adverse events associated with Bacille Calmette-Guerin vaccine in Canada. Pediatr Infect Dis J 2005; 24:538-541
 <a href="http://journals.lww.com/pidj/Abstract/2005/06000/Serious Adverse Events Associated">http://journals.lww.com/pidj/Abstract/2005/06000/Serious Adverse Events Associated</a> with Bacille.12.aspx

#### **Presentations:**

 Hutmacher M., Scheifele D., Law B., Halperin S., and Members of the CPS/ Health Canada Immunization Monitoring Program, Active (IMPACT). Hospital Admissions for BCG Vaccine Complications: IMPACT Hospitals, 1993-2001. Presented, 5<sup>th</sup> Canadian

- National Immunization Conference, Victoria, BC. December 2002. Abstract P20
- 2. Deeks SL, Clark M, Scheifele DW, Law BJ, Dawar M., Ahmadipour N, Walop W, King A. A Review of Adverse Events Associated with BCG Vaccine in Canada. Poster presentation at the 6<sup>th</sup> Canadian National Immunization Conference, December 5-8, 2004, Montreal P2

# **Encephalopathy**

#### **Publications:**

- Moore DL, Le Saux N, Scheifele D, Halperin SA, and members of the Health Canada/CPS Immunization Monitoring Program, Active (IMPACT). Lack of evidence of Encephalopathy Related to Pertussis Vaccine: Active Surveillance by IMPACT, Canada, 1993-2002. Pediatr Infect Dis J 2004:23; 568-570 <a href="http://journals.lww.com/pidj/Abstract/2004/06000/Lack">http://journals.lww.com/pidj/Abstract/2004/06000/Lack</a> of Evidence of Encephalopat hy Related to.18.aspx
- Jennifer Tam, Dat Tran, Julie A. Bettinger, Dorothy Moore, Laura Sauvé, Taj Jadavji, Ben Tan, Wendy Vaudry, Scott A. Halperin, Karina A. Top, for the Canadian Immunization Monitoring Program Active Investigators. Review of pediatric encephalitis and encephalopathy cases following immunization reported to the Canadian Immunization Monitoring Program Active (IMPACT) from 1992 to 2012. Vaccine, volume 38, issue 28, 9 June 2020, pages 4457-4463 https://doi.org/10.1016/j.vaccine.2020.04.035

- 1. Mills E, Silver K and Members of IMPACT. Acute encephalitis/encephalopathy in children: a multicenter study. Proceedings of the Annual Meeting of the Canadian Paediatric Society. Hamilton, Ontario, June 24-28, 1998 (Abstract # 45)
- Moore D.L., Le Saux N., Scheifele D., Halperin S., and Members of the CPS/ Health Canada Immunization Monitoring Program, Active (IMPACT). Lack of Evidence of Encephalopathy Related to Pertussis Vaccine: Active Surveillance, Canada, 1993-2001. Presented at the 5<sup>th</sup> Canadian National Immunization Conference, Victoria, BC December 2002. (Abstract P31)
- 3. Le Saux N., Scheifele D., Halperin SA., Mozel M., Tam T. Reports of Encephalopathy/Encephalitis 5 to 30 Days Following Measles, Mumps, Rubella vaccine 1993-2004. Oral presentation at the 6<sup>th</sup> Canadian National Immunization Conference, Breakout session #8, Tuesday December 7<sup>th</sup>, 2004, Montreal

Jennifer Tam. Review of encephalitis and encephalopathy cases following immunization reported to the Canadian Immunization Monitoring Program ACTive (IMPACT) from 1992-2012 –Poster presentation # 77 at the 12<sup>th</sup> Canadian Immunization Conference Ottawa, Ontario Wednesday Dec 7, 2016

# **Guillain Barré Syndrome**

#### **Publications**

 Karina A. Top, Shalini Desai, Dorothy Moore, Barbara J. Law, Wendy Vaudry, Scott A. Halperin, Julie A. Bettinger, for members of the Canadian Immunization Monitoring Program ACTive (IMPACT). Guillain-Barré Syndrome after Immunization in Canadian Children (1996-2012). The Pediatric Infectious Disease Journal 2015; 34 (12) 1411-1413 <a href="http://journals.lww.com/pidj/Abstract/2015/12000/Guillain Barr Syndrome After Immunization">http://journals.lww.com/pidj/Abstract/2015/12000/Guillain Barr Syndrome After Immunization</a> in.31.aspx

#### **Presentations**

Karina A. Top, Shalini Desai, Dorothy Moore, Barbara J. Law, Wendy Vaudry, Scott A. Halperin, Julie A. Bettinger, for members of the Canadian Immunization Monitoring Program ACTive (IMPACT). Guillain-Barré Syndrome after Immunization in Canadian Children (1996-2012). Poster presentations:

- a) 8<sup>th</sup> International Vaccine and ISV Congress October 26-28, 2014 in Philadelphia, IJSA
- b) 11<sup>th</sup> Canadian Immunization Conference December 2-4, 2014 in Ottawa, Ontario

# Hypotonic-Hypo responsive episodes

# **Publications:**

- 1. Gold R, Scheifele DW, Halperin SA, Déry P, Law B, Lebel M, MacDonald N, Mills E, Morris R, Jadavji T, Marchessault V, Duclos P. Hypotonic-hypo responsive episodes in children hospitalized at 10 Canadian pediatric tertiary-care centers, 1991-1994. Can. Comm. Dis Rep (CCDR) 1997; 23:73-76
  - http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/97vol23/dr2310ea.html
- 2. Le Saux N, Barrowman NJ, Moore D, Whiting S, Scheifele D, Halperin S, for members of the Health Canada/CPS Immunization Monitoring Program Active (IMPACT). Decrease in Hospital Admissions for Febrile Seizures and Reports of Hypotonic Hypo responsive Episodes Presenting to Hospital Emergency Departments since Switching to Acellular Pertussis Vaccine in Canada: A Report from IMPACT. Pediatrics Vol. 112 No.5, November 2003, pp.348-353

http://pediatrics.aappublications.org/cgi/content/full/112/5/e348

# **Presentations:**

- Scheifele DW, Halperin SA, Pless R, Delage G, Jadavji T, Vaudry, W, Law B, MacDonald N, Wang E, Lebel M, Mills E, Dery, P. Marked reduction in febrile seizures and hypotonichypo responsive episodes with acellular pertussis-based vaccines: results of Canadawide surveillance, 1995-1998. 37<sup>th</sup> Annual meeting of the Infectious Diseases Society of America, Philadelphia, November 18-21, 1999 (Abstract # 31)
- Scheifele D, Halperin SA, Waters J, McDermot C and Members of CPS/LCDC Immunization Monitoring Program Active (IMPACT), Ottawa, Ontario and Alberta Health, Edmonton, Alberta, Canada. Marked reduction in febrile seizures and hypotonic-hypo responsive episodes with acellular pertussis-based vaccines: results of Canada-wide surveillance, 1995-1998. Presented at "Acellular Pertussis vaccine Conference" by invitation November 12-14, 2000, Bethesda, MD

## **Kawasaki Diseases**

#### **Publications:**

 Khaled Alsager, Nirma Khatri Vadlamudi, Taj Jadavji, Julie A. Bettinger, Cora Constantinescu, Wendry Vaudry, Ben Tan, Laura Sauvé, Manish Sadarangani, Scott A. Halperin & Karina A. Top (2022): Kawasaki disease following immunization reported to the Canadian Immunization Monitoring Program ACTive (IMPACT) from 2013 to 2018, Human Vaccines & Immunotherapeutics, DOI: 10.1080/21645515.2022.2088215, https://doi.org/10.1080/21645515.2022.2088215

# Presentations:

 Khaled AlSager, Taj Jadavji, Julie Bettinger, Wendy Vaudry, Laura Sauvé, Ben Tan, Manish Sadarangani, Scott Halperin, Karina A. Top, Cora Constantinescu, for the IMPACT investigators. Review of Kawasaki Diseases cases following immunization reported to the Canadian Immunization Monitoring Program ACTive (IMPACT) for 2013-2018. Oral abstract presentation at the Canadian Immunization Conference, December 1-3, 2020 (virtual conference)

#### **Infantile Spasms**

# **Presentations:**

1. Silver K, Mills E and Members of IMPACT. Infantile spasms: an active surveillance multicenter study. American Association of Neurology Annual Meeting, 1998 (Abstract # P01.018)

# **Injection Site Reactions**

#### **Presentations:**

1. Scheifele DW, Halperin SA, for Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). A perspective on severe immunization site reactions in

children. Proceedings of the Annual Meeting of the Canadian Pediatric Society. Hamilton, Ontario, June 24-28, 1998 (Abstract # 53)

2. Binder F, Scheifele DW, Halperin SA, for Members of IMPACT. Perspective on severe immunization site reactions in children. 3<sup>rd</sup> National Immunization Conference, Calgary, 1998. (Abstract P37)

# Intussusception

# **Presentations**

 L. Sauve, J. Bettinger, D. Scheifele, J. Kalil, W. Vaudry, S. Halperin, N. Le Saux, B. Law, for the members of the Immunization Monitoring Program Active (IMPACT) Immunization Monitoring Program Active Surveillance For Intussusception in Canada Poster presentation at the 7<sup>th</sup> World Congress for Pediatric Infectious Diseases, November 16-19<sup>th</sup>, 2011 Melbourne, Australia

# Seizures

#### **Publications**

Karina A. Top, Cora M. Constantinescu, Julie Laflèche, Julie A. Bettinger
David W. Scheifele, Wendy Vaudry, Scott A. Halperin, Barbara J. Law
Applicability of the Brighton Collaboration Case Definition for seizure after immunization
in active and passive surveillance in Canada
Vaccine. 2013; 31 (48) 5700-5705 Available online -5 October 2013
<a href="http://www.sciencedirect.com/science/article/pii/S0264410X13013029">http://www.sciencedirect.com/science/article/pii/S0264410X13013029</a>

- 1. Halperin SA, Scheifele DW. for Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). A perspective on seizures following childhood immunization. Proceedings of the Annual Meeting of the Canadian Pediatric Society. Hamilton, Ontario, June 24-28, 1998 (Abstract # 46)
- 2. Halperin SA, Scheifele DW, for Members of IMPACT. A perspective on seizures following childhood immunizations.3<sup>rd</sup> National Immunization Conference, Calgary, 1998. (Abstract P36)
- 3. Hutmacher M, Scheifele DW, Halperin SA, for Members of IMPACT. Marked decline in febrile seizures associated with the use of acellular pertussis-containing vaccines.

  Annual meeting of the Canadian Paediatric Society, Winnipeg, June, 1999. (Abstract P62)
- 4. K.A. Top, J. Laflèche, C.M. Constantinescu, J.A. Bettinger, B.J. Law, W. Vaudry, S.A. Halperin for members of the Canadian Immunization Monitoring Program Active

Seizures after Pneumococcal Conjugate and Meningococcal Serogroup C Conjugate Vaccines in Canadian Children. Poster presentation at the 90<sup>th</sup> Canadian Paediatric Conference June 19-22, 2013 in Edmonton, Alberta.

5. K.A. Top, J. Laflèche, C.M. Constantinescu, J.A. Bettinger, B.J. Law, W. Vaudry, S.A. Halperin for members of the Canadian Immunization Monitoring Program Active. Applicability of the Brighton Collaboration Case Definition for seizure in active and enhanced passive post-licensure surveillance in Canada. Poster presentation at the 29<sup>th</sup> International Conference on Pharmacoepidemiology & Therapeutic Risk Management, August 25-28, 2013 in Montréal, Québec

# Thrombocytopenia

#### **Publications:**

- Jadavji T, Scheifele DW, Halperin SA and members of the Canadian Paediatric Society/ Health Canada Immunization Monitoring Program Active (IMPACT). Thrombocytopenia after immunization of Canadian children, 1992 to 2001. Pediatr Infect Dis J 2003; 22:119-122 <a href="http://journals.lww.com/pidj/Abstract/2003/02000/Thrombocytopenia">http://journals.lww.com/pidj/Abstract/2003/02000/Thrombocytopenia</a> after immuniz ation of Canadian.6.aspx
- Sauvé, Laura J. MD, MPH; Bettinger, Julie PhD; Scheifele, David MD; Halperin, Scott MD; Vaudry, Wendy MD; Law, Barbara MD; the members of the Canadian Immunization Monitoring Program, and Active (IMPACT). Post Vaccination Thrombocytopenia in Canada. The Pediatric Infectious Disease Journal; Brief Reports June 2010; Volume 29: Issue 6, pp 559-561
   http://journals.lww.com/pidj/Abstract/2010/06000/Postvaccination Thrombocytopenia in Canada.19.aspx

- 1. Scheifele DW, Halperin SA, for Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). Thrombocytopenia following immunization: 30 cases in Canadian children, 1992-1997. Proceedings of the Annual Meeting of the Canadian Pediatric Society. Hamilton, Ontario, June 24-28, 1998 (Abstract # 54)
- 2. Binder F, Scheifele DW, Halperin SA, for Members of IMPACT. Thrombocytopenia following immunization: 30 cases in Canadian children.3<sup>rd</sup> National Immunization Conference, Calgary, 1998. (Abstract P38)

- 3. Jadavji, T, Scheifele, DW, Halperin SA, for members of the CPS/LCDC Immunization Monitoring Program Active (IMPACT). Thrombocytopenia following immunization: 37 cases in Canadian children, 1992-1999. Pediatr Child Hlth 2000; 5 (Suppl A), Abstract 28, p15A
- 4. Sauvé L, Bettinger J, Scheifele D, Halperin S, Bortolussi R, Law B, Canadian Immunization Monitoring Program, Active (IMPACT). Post-Immunization Thrombocytopenia in Canadian Children, 1992-2007. Poster presentation (abstract 130) June 24-28, 2008, 85<sup>th</sup> Annual Conference of the Canadian Paediatric Society, Victoria, BC

# **Adverse Event Other:**

- 1. S Balakrishnan, LJ Sauve, W Vaudry, D Scheifele, S Halperin, B Law. Could HSP Be An Adverse Event Following Immunization? A Report From The Canadian Pediatric Society Immunization Monitoring Program, Active (IMPACT). Abstract 84 Poster presentation at the 87<sup>th</sup> Annual Conference of the Canadian Paediatric Society, Ottawa, June 25, 2010 Paediatr *Child Health* Vol 15 Suppl A May/June 2010 page35A <a href="http://www.pulsus.com/journals/JnlSupToc.jsp?sCurrPg=journal&jnlKy=5&supKy=475">http://www.pulsus.com/journals/JnlSupToc.jsp?sCurrPg=journal&jnlKy=5&supKy=475</a>
- L.J. Sauvé, J. Bettinger, W. Vaudry, D. Moore, D. Scheifele, S. Halperin, and B. Law for Members of the Canadian Immunization Monitoring Program, Active (IMPACT).
   Reported Adverse Events Following Adjuvanted Pandemic Influenza Vaccine. Poster (1362) presented at the 48<sup>th</sup> Annual Meeting of the Infectious Diseases Society of America, October 21-24, 2010 Vancouver, BC
- 3. LJ Sauve, J Bettinger, W Vaudry, D Moore, D Scheifele, S Halperin, B Law, and the Canadian Immunization Monitoring Program, Active (IMPACT). IMPACT Network Active Surveillance For Adverse Events Following Adjuvanted Pandemic Influenza Vaccine In Canadian Children. Oral presentation (O14) at the 9<sup>th</sup> Canadian Immunization Conference, December 5-8<sup>th</sup>, 2010 Québec City. Abstract published in Can J Infect Dis Med Microbiol Vol 21 No 4 page 180 Winter 2010

# C. Vaccine Preventable Diseases

#### Presentations:

#### COVID-19

- 1. Myriam M. Verly, Emily Mason, Hennady Shulha, Julie A. Bettinger, Nicole Le Saux, Scott Halperin, Ben Tan, Manish Sadarangani, for the members of IMPACT. Analysis of vaccine preventable disease outcomes in Canada from 2005-2018: a study from the Canadian Immunization Monitoring Program Active (IMPACT). Poster at the Canadian Immunization Conference (CIC), Ottawa, Canada April 25-27 2023
- 2. Fahima Hassan, Julie A Bettinger, Laura Sauve, Manish Sadarangani, Taj Jadavji, Cora Constantinescu, Scott A Halperin, Shaun K Morris, Karina A. Top for the Canadian Immunization Monitoring Program Active Investigators. Estimating the association between acute SARS-COV-2 infection and febrile seizure in children using the Canadian Immunization Monitoring Program-ACTIVE (IMPACT). Abstract and poster at the Canadian Immunization Research Network (CIRN) Annual General Meeting, Ottawa, Canada, April 24, 2023
- 3. Daniel S. Farrar, Julie A. Bettinger, Annick Audet, Aaron Campigotto, Shelley L. Deeks, Olivier Drouin, Joanne E. Embree, Elie Haddad, Scott A. Halperin, Tajdin Jadavji, Kescha Kazmi, Melanie Laffin Thibodeau, Charlotte Moore Hepburn, Jesse Papenburg, Rupeena Purewal, Manish Sadarangani, Sarah E. Wilson, Rae S. M. Yeung, Karina A. Top, Fatima Kakkar, Shaun K. Morris for members of the Canadian Immunization Monitoring Program, Active (IMPACT) COVID-19 Study. Comparison of severity outcomes among hospitalized children with COVID-19 in Canada by SARS-CoV-2 lineage: An IMPACT surveillance network analysis. Oral presentation at the European Society for Paediatric Infectious Diseases (ESPID) Annual Meeting, Lisbon, Portugal, May 8–12, 2023
- 4. Costanza Di Chiara, Daniel S. Farrar, Julie A Bettinger, Aaron Campigotto, Shelley L. Deeks, Olivier Drouin, Joanne Embree, Scott Halperin, Charlotte M. Hepburn, Taj Jadavji, Kescha Kazmi, Jesse Papenburg, Rupeena Purewal, Manish Sadarangani, Laura Sauvé, Sarah E. Wilson, Karina A. Top, Fatima Kakkar, Shaun K. Morris, for the Canadian Immunization Monitoring Program Active (IMPACT) COVID-19 Investigators. Clinical features and severity of COVID-19 with respiratory viral coinfections versus SARS-COV-2 monoinfection in hospitalized children: A Canadian national surveillance study. Poster at the European Society for Paediatric Infectious Diseases (ESPID) Annual Meeting, Lisbon, Portugal, May 8–12, 2023
- 5. Daniel S. Farrar, Julie A. Bettinger, Annick Audet, Aaron Campigotto, Shelley L. Deeks, Olivier Drouin, Joanne E. Embree, Elie Haddad, Scott A. Halperin, Tajdin Jadavji, Kescha Kazmi, Melanie Laffin Thibodeau, Charlotte Moore Hepburn, Jesse Papenburg, Rupeena Purewal, Manish Sadarangani, Sarah E. Wilson, Rae S. M. Yeung, Karina A. Top, Fatima Kakkar, Shaun K. Morris for members of the Canadian Immunization Monitoring

Program, Active (IMPACT) COVID-19 Study. Characteristics and outcomes of hospitalized children by SARS-CoV-2 lineage: An IMPACT surveillance network analysis. Poster at the Canadian Paediatric Society (CPS) Annual Meeting, Halifax, Canada, May 25-27 2023

#### **Publications:**

# Haemophilus influenzae

- Scheifele DW, Gold R, Law B, Déry P, Halperin SA, Marchessault V, Duclos P. Decline in Haemophilus influenzae type b invasive infections at five Canadian pediatric centers. Can. Comm. Dis Report (CCDR) 1993; 19: 88-91
- 2. D. Scheifele, L. Mitchell, J. Ochnio J. Hailey. Haemophilus b conjugate vaccine failure. Can Commun Dis Rep (CCDR) 1994; 20:37-39
- 3. Scheifele DW, Gold R, Marchessault V, Duclos P and Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). Missed opportunities to prevent infections caused by *Haemophilus influenzae* type b. Can J Pediatr 1995; 2:318-20
- 4. Scheifele DW. Recent trends in pediatric *Haemophilus influenzae* type b infections in Canada. Immunization Monitoring Program, Active (IMPACT) of the Canadian Paediatric Society and the Laboratory Centre for Disease Control. Can Med Assoc J 1996; 154 (7):1041-1047 http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1487572&blobtype=pdf
- 5. Scheifele DW, Gold R, Marchessault V, Duclos P and Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). Failures after immunization with *Haemophilus influenzae* type b vaccines, 1991-195. Can Commun Dis Rep (CCDR) 1996; 22:17-23 http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/96vol22/dr2203ea-eng.php
- 6. Grewal S, Scheifele DW and Members of the CPS/LCDC IMPACT Surveillance Network. Haemophilus influenzae type b disease at eleven pediatric centers: 1996-1997. Can Commun Dis Rep 1998; 24:105-108 http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/98vol24/dr2413ea.html
- 7. Scheifele DW and Members of the CPS/LCDC Immunization Monitoring Program Active (IMPACT). Haemophilus Influenzae type b disease control using Pentacel®, Canada 1998-99. Canadian Comm. Dis. Report (CCDR) 2000; 26:93-96 http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/00vol26/dr2611ea.html

- 8. Scheifele DW, Bell A, Jadavji T, Vaudry W, Waters, J, Naus M, Sciberras J. Population-based surveillance of Hib invasive infections in children in British Colombia, Alberta and Ontario- 1995-1997. Can J Infect Dis 2000; 11-3:135-140

  <a href="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=5916&isuKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?scurrPg=abstract&jnlKy=676&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?scurrPg=abstract&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt=t&jnlKy=676&isArt
- Scheifele D, Halperin S, Vaudry W, Jadavji T, Tan B, Law B, Le Saux N, Ford-Jones L Lebel M, Moore D, Dery P, Morris R, Waters J, Embree J, Walop W. Historic Low Haemophilus Influenzae Type b case tally- Canada 2000. Can Comm. Dis Report (CCDR) 2001; 27:149-150 <a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/01vol27/dr2718ea.html">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/01vol27/dr2718ea.html</a>
- 10. Scheifele DW, Halperin SA, Law B, King A, for the Canadian Paediatric Society/Health Canada Immunization Monitoring Program, Active (IMPACT). Invasive *Haemophilus influenzae* type b infections in vaccinated and unvaccinated children in Canada, 2001-2003 Can Med Assoc J 2005;172(1):53-6 <a href="http://www.cmaj.ca/cgi/content/full/172/1/53">http://www.cmaj.ca/cgi/content/full/172/1/53</a>
- McConnell A, Tan B, Scheifele D, Halperin S, Vaudry W, Law B, Embree J of the Canadian Immunization Monitoring Program Active (IMPACT). Invasive Infections Caused by *Haemophilus influenzae* Serotypes in Twelve Canadian IMPACT Centers, 1996-2001. The Pediatric Infectious Disease Journal; November 2007; 26 (11): 1025-31 <a href="http://journals.lww.com/pidi/Abstract/2007/11000/Invasive Infections Caused by Haemophilus.11.aspx">http://journals.lww.com/pidi/Abstract/2007/11000/Invasive Infections Caused by Haemophilus.11.aspx</a>
- 12. Scheifele DW, Bettinger JA, Halperin SA, Law B, Bortolussi R for Members of the Canadian Immunization Monitoring Program, Active (IMPACT). Ongoing control of *Haemophilus influenzae* Type B Infections in Canadian Children: 2004-2007. The Pediatric Infectious Disease Journal; August 2008; 27(8): 755-757

  <a href="http://journals.lww.com/pidj/Abstract/2008/08000/Ongoing Control of Haemophilus influenzae Type B.16.aspx">http://journals.lww.com/pidj/Abstract/2008/08000/Ongoing Control of Haemophilus influenzae Type B.16.aspx</a>
- 13. (IMPACT Highlights) Invasive Haemophilus influenzae type b cases-2004. Paediatrics & Child Health 2005; 10-6; 314
- 14. (IMPACT Highlights) Haemophilus Influenzae type b disease control using Pentacel®. Paediatrics & Child Health. 2000; 5-3; 155
- 15. (IMPACT Highlights) Historic low Haemophilus influenzae type b case total in 2000. Paediatrics & Child Health. 2001; 6-6; 318

16. Joanne McNair, BSc Pharm; Alyssa Smith, MD; Julie A. Bettinger, PhD, MPH; Wendy Vaudry, MD; Ben Tan, MD; Shalini Desai, MD, MSc, Scott A. Halperin, MD; Karina A. Top, MD, MS for the Canadian Immunization Monitoring Program Active (IMPACT) Investigators. Invasive *Haemophilus influenzae* type b (Hib) infections in children with cancer in the era of infant Hib immunization programs (1991–2014): A report from the Canadian Immunization Monitoring Program Active. The Pediatric Infectious Disease Journal Published: Volume 37, number 7, July 2018

- D. Scheifele, R. Gold, V. Marchessault, P. Duclos and Members of CPS/LCDC Immunization Monitoring Program, Active (IMPACT). Control of Haemophilus influenzae type b infections across Canada: results of active surveillance at ten pediatric centers. Poster presented at "Immunization in the 90s: Challenges and Solutions", Quebec City, October 7, 1994
- 2. Scheifele DW, Gold R, Marchessault V, Duclos P and Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). Evidence for the control of *Haemophilus influenzae* type b (Hib) infections in Canadian children (1985-1994). Child Health 2000, Vancouver, May 30 June 3, 1995
- 3. Scheifele DW, Jadavji T, Vaudry W, Naus M, Bell A, Waters J. Population-based surveillance of invasive *Haemophilus influenzae* type b invasive infections. 3<sup>rd</sup> National Immunization Conference, Calgary, 1998. (Abstract A1)
- 4. McConnell A, Tan B, Scheifele D, Halperin SA and members of the CPS/Health Canada Immunization Monitoring Program, Active (IMPACT). Invasive Disease caused by *Haemophilus influenzae* species in 12 IMPACT centers, 1996-2001. Oral presentation #118 at the 81<sup>st</sup> Annual Meeting of the Canadian Pediatric Society, June 18, 2004
- 5. Greenberg DP, Doemland ML, Lavigne P, Galanis E, Kandola K and Bettinger JA, Halperin SA, Scheifele DW on behalf of the Immunization Monitoring Program Active (IMPACT). Impact of Pentacel™ (DtaP-IPV/PRP-T) on the Epidemiology of Invasive Hib Disease and Pertussis in Canada. Poster presentation at the Fifth Pediatric Infectious Disease Society Conference, October 10-11, 2005, Napa, California. Abstract # 10
- 6. Scheifele D, Marty K, Halperin S, Tam T. Invasive *Haemophilus Influenza* Type B (HIB) Infections in the Post-vaccine era: Data From the Canadian IMPACT Surveillance Network, 2001-2005. Platform presentation # 20 at the 83<sup>rd</sup> Annual Conference of the Canadian Paediatric Society, June 14, 2006, St. John's, NL
- 7. Scheifele DW, Bettinger JA, Halperin SA, Law B, Bortolussi R for Members of the Canadian Immunization Monitoring Program, Active (IMPACT). Ongoing control of *Haemophilus influenzae* b infections in Canadian children: 2004-2007. Presented at the AMMI Canada CACMID 2008 Annual Conference, Vancouver, February 27 March 2, 2008 (abstract P45). Can J Infect Dis Med Microbiol 2008; 19:129

- 8. Shuel M, Tan B, Scheifele D, Law D, Vaudry W, Halperin S, Tsang R for members of the Canadian Immunization Monitoring Program Active (IMPACT). Laboratory characterization of invasive *Haemophilus influenzae* isolates collected from IMPACT centres from January 2007 to January 2008. Poster presentation (P88) at the 8<sup>th</sup> Canadian Immunization Conference, December 1-3, 2008, Toronto, Ontario. Abstract published in Can J Infect Dis Med Microbiol 2008 (19) 5:361
- 9. M Shuel, B Tan, D Scheifele, B Law, W Vaudry, S Halperin, K Grimsrud, B Bortolussi, R Pless, R Tsang. Update on IMPACT Surveillance of *Haemophilus Influenzae* Isolates in Canada. Poster (P056) presented at 9<sup>th</sup> Canadian Immunization Conference, December 5-8<sup>th</sup>, 2010 Québec City. Abstract published in Can J Infect Dis Med Microbiol Vol 21 No 4 page 199, Winter 2010
- 10. The epidemiology of invasive diseases caused by Haemophilus influenzae type a (Hia): A report from the Canadian Immunization Monitoring Program ACTive (IMPACT) Ben Tan Co-authors: Athena McConnell, Julie Bettinger, David Scheifele, Joanne Embree, Laura Sauve, Natalie Bridger, Wendy Vaudry, Scott Halperin, Shalini Desai, Raymond Tsang. Oral presentation at the 12<sup>th</sup> Canadian Immunization Conference Ottawa, Ontario -Thursday December 8, 2016
- 11. Damon Dhillon, Hana Mitchell, Ben Tan, Joanne Embree, Wendy Vaudry, Anita Li, Raymond Tsang, Shaun K. Morris, Laura Sauvé, Julie A. Bettinger, Scott Halperin, Manish Sadarangani for the members of IMPACT. Haemophilus Influenzae Clinical Features and Outcomes in Children in Canada, 2007 to 2018. 39<sup>th</sup> Annual Meeting of the European Society for Paediatric Infectious (ESPID), Geneva, Switzerland (virtual), May 24-29, 2021 (abstract 292, Pre-Recorded Oral Presentation and Live Q&A)

# Influenza

# **Publications:**

 Wootton S, Scheifele D, Mozel M, Moore D, Vaudry W, Halperin S, Tam T, for the Canadian Immunization Monitoring Program Active (IMPACT). The Epidemiology of Influenza in Children Hospitalized in Canada, 2004-2005, in Immunization Monitoring Program Active (IMPACT) Centres. Can Comm Dis Rep (CCDR) April 1, 2006; Volume 32, Number 7, pp 77-86 http://www.phac-aspc.gc.ca/publicat/ccdrrmtc/06vol32/dr3207a-eng.php

- 2. Moore DL, Vaudry W, Scheifele DW, Halperin SA, Dery P, Ford-Jones L, Arishi H, Law B, Lebel M, Le Saux N, Grimsrud K, Tam T. Surveillance for Influenza Admissions among Children Hospitalized in Canadian Immunization Monitoring Program Active Centers, 2003-2004. Pediatrics Volume 118, Number 3, September 2006, pp 610-619. http://pediatrics.aappublications.org/cgi/content/full/118/3/e610
- 3. C. Burton MD, W. Vaudry MD, D. Moore MD, D. Scheifele MD, J. Bettinger PhD, S. Halperin MD, T. Tam MD, B. Law MD, for the Canadian Immunization Monitoring Program, Active (IMPACT). Children hospitalized with influenza during the 2006-2007 season: A report from the Canadian Immunization Monitoring Program, Active (IMPACT). Can Comm Dis Rep (CCDR) December 2008; Volume 34, Number 12, pp 17-32. <a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/08vol34/dr-rm3412b-eng.php">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/08vol34/dr-rm3412b-eng.php</a>
- 4. Bettinger JA, Sauvé LJ, Scheifele DW, Moore D, Vaudry W, Tran D, Halperin SA, Pelletier L. Pandemic influenza in Canadian children: A summary of hospitalized pediatric cases Vaccine 2010; 28(18):3180–3184
  <a href="http://www.sciencedirect.com/science/article/B6TD4-4YGHCBD-3/2/343554a0bec2575e4d744367f0d0699e">http://www.sciencedirect.com/science/article/B6TD4-4YGHCBD-3/2/343554a0bec2575e4d744367f0d0699e</a>
- Dat Tran, Wendy Vaudry, Dorothy L. Moore, Julie A. Bettinger, Scott A. Halperin, David W. Scheifele and Samina Aziz for the IMPACT Investigators. Comparison of Children Hospitalized With Seasonal Versus Pandemic Influenza A, 2004-2009. *Pediatrics* 2012; 130; 397-406 <a href="http://pediatrics.aappublications.org/content/130/3/397.full.html">http://pediatrics.aappublications.org/content/130/3/397.full.html</a>
- 6. Catherine Burton, MD, Wendy Vaudry, MD, Dorothy Moore, MD, Julie A. Bettinger, PhD, MPH, Dat Tran MD, MSc, Scott A. Halperin, MD, and David W. Scheifele, MD, for the IMPACT investigators. Burden of Seasonal Influenza in Children With Neurodevelopmental Conditions. The Pediatric Infectious Disease Journal Volume 33, Number 7, July 2014, 710-714 <a href="http://journals.lww.com/pidj/Abstract/2014/07000/Burden of Seasonal Influenza in Children With.7.aspx">http://journals.lww.com/pidj/Abstract/2014/07000/Burden of Seasonal Influenza in Children With.7.aspx</a>
- 7. Dat Tran, Wendy Vaudry, Dorothy Moore, Julie A. Bettinger, Scott A. Halperin, David W.Scheifele, Taj Jadvji, Liza Lee, Teresa Mersereau, for the members of the Canadian Immunization Monitoring Program Active. Hospitalization for Influenza A Versus B

  Pediatrics Sep 2016, 138 (3) e20154643; **DOI:** 10.1542/peds.2015-4643

  <a href="https://pediatrics.aappublications.org/content/pediatrics/138/3/e20154643.full.pdf">https://pediatrics.aappublications.org/content/pediatrics/138/3/e20154643.full.pdf</a>

- 8. Mehta K, Morris SK, Bettinger JA, Vaudry W, Jadavji T, Halperin SA, Bancej C, Sadarangani M, Dendukuri N, Papenburg J; Canadian Immunization Monitoring Program Active (IMPACT) Investigators. Antiviral Use in Canadian Children Hospitalized for Influenza. Pediatrics, Volume 148, number 4, October 2021 doi:10.1542/peds.2020-049672
- 9. Helen E. Groves, Jesse Papenburg, Kayur Mehta, Julie A. Bettinger, Manish Sadarangani, Scott A. Halperin, Shaun K. Morris, for members of the Canadian Immunization Monitoring Program Active (IMPACT). The effect of the COVID-19 pandemic on influenza-related hospitalization, intensive care admission and mortality in children in Canada: A population-based study. The Lancet Regional Health-Americas, 2022;7:100132 <a href="https://doi.org/10.1016/j.lana.2021.100132">https://doi.org/10.1016/j.lana.2021.100132</a>
- NEW\* Tilmann Schober, Shaun K. Morris, Julie A. Bettinger, Christina Bancej, Catherine Burton, Cheryl Foo, Scott A. Halperin, Taj Jadavji, Kescha Kazmi, Jacqueline Modler, Manish Sadarangani, Jesse Papenburg on behalf of the Canadian Immunization Monitoring Program Active (IMPACT) Investigators. Outcomes of immunocompromised children hospitalized for influenza, 2010-2021, the Canadian Immunization Monitoring Program Active (IMPACT). Clinical Microbiology and Infection, Volume 29, Issue 7, 924-932, July 2023. <a href="https://doi.org/10.1016/j.cmi.2023.04.001">https://doi.org/10.1016/j.cmi.2023.04.001</a>

- Moore. D., Vaudry W., Scheifele D., Halperin SA., Dery P., Ford-Jones E., Law B., Lebel M., Le Saux N., Tam T. Canadian Children Hospitalized for Influenza at Immunization Monitoring Program Active (IMPACT) Centers, 2003-04. Oral presentation at the 6<sup>th</sup> Canadian National Immunization Conference, Breakout session # 8, Tuesday December 7<sup>th</sup>, 2004, Montreal. Awarded CAIRE Best Presentation Award
- Wootton S, Mozel M, Vaudry W, Moore D, Scheifele D, Halperin S, Tam T. The Epidemiology Of Children Hospitalized With Influenza In Canada, 2004-2005, In Immunization Monitoring Program - Active (IMPACT) Centers. Platform presentation # 21 at the 83<sup>rd</sup> Annual Conference of the Canadian Paediatric Society, June 14, 2006, St. John's, NL
- 3. Wootton S, Mozel M, Marty K, Vaudry W, Moore D, Scheifele DW, Halperin SA, Tam T. The Epidemiology of Children Hospitalized With Influenza, 2005-6, In Immunization Monitoring Program, Active (IMPACT) Centers. Poster presentation (P90) at the 7<sup>th</sup> Canadian Immunization Conference, Winnipeg, MB, December 3-6, 2006
- 4. De Serres G, Halperin SA, Skowronski D, Dery P, Vaudry W, Moore D, McGeer A, Duval B, Bettinger J, Tam, T, Scheifele DW. Effectiveness of Influenza Vaccine in Preventing Hospitalization of Children 6-23 Months of Age. Poster presentation (P96) at the 7<sup>th</sup>

- Canadian Immunization Conference, Winnipeg, MB, December 3-6, 2006
- 5. Wootton S, Vaudry W, Moore D, Scheifele D, Halperin S, Tam T, for IMPACT Investigators. Monitoring Influenza Infections in Children Using a Hospital-Based Surveillance System, Canadian Immunization Monitoring Program Active, and (IMPACT) Poster presentation at the Options for the Control of Influenza VI Conference; 2007; June 17-23; Toronto, ON Abstract P134
- 6. De Serres G, and the Canadian Immunization Monitoring Program Active. Effectiveness of Trivalent Inactivated Influenza Vaccine to Prevent Hospitalization in Children 6-23 months of Age during Two Influenza Seasons in Canada. Poster presentation at the Options for the Control of Influenza VI Conference; 2007; June 17-23; Toronto, ON. Abstract P723
- 7. Burton C, Vaudry W, Moore D, Scheifele D, Halperin S, Bettinger J, Law B, Tam T and the IMPACT Investigators Canadian Immunization Monitoring Program Active (IMPACT). Children Hospitalized with Influenza during the 2006-7 season: A Report from the Canadian Immunization Monitoring Program Active (IMPACT). Platform presentation (abstract 72), June 26, 2008, 85th Annual Conference of the Canadian Paediatric Society, Victoria, BC
- 8. De Serres G, Moore D, Vaudry W, Scheifele D, Halperin S, Dery P, McGeer A, Embree J, Lebel M, Le Saux N, Tan B, Ford Jones L, Law B, Li Y, Skowronski D. Trivalent influenza vaccine effectiveness against toddler hospitalization during three winters: A report from the Canadian Immunization Monitoring Program Active (IMPACT). Poster presentation (P01) at the 8<sup>th</sup> Canadian Immunization Conference, November 30-December 1, 2008, Toronto, Ontario Abstract published in Can J Infect Dis Med Microbiol 2008 (19) 5:336
- 9. Domingo FR, Aziz S, Winchester B, Li Y, Vaudry W, Bettinger J Pelletier L, Spika J. Influenza Surveillance in Canada: 2007-2008 Season. Poster presentation (P73) at the 8<sup>th</sup> Canadian Immunization Conference, November 30-December 3, 2008, Toronto, Ontario Abstract published in Can J Infect Dis Med Microbiol 2008 (19) 5:357
- 10. Sauvé, Laura J, Bettinger J, Vaudry W, Moore D, Halperin S, Bortolussi B, Law B. Bacterial Co-Infections in Canadian Children Hospitalized with Influenza, 2004-2008. Poster presentation (P50) at the Conference on Vaccine Research, National Foundation for Infectious Diseases, Baltimore. April 27-29, 2009
- 11. C. Burton, W. Vaudry, D. Moore, J. Bettinger, D. Scheifele, S. Halperin, B. Law, R. Bortolussi. Children Hospitalized with Influenza during the 2007-8 season: A Report from the Canadian Immunization Monitoring Program, Active (IMPACT) Oral

Presentation (Abstract 116) at the 86<sup>th</sup> Annual Conference of the Canadian Pediatric Society, Ottawa (June 25, 2009)

- 12. C Burton, W Vaudry, D Moore, J Bettinger, D Scheifele, S Halperin, B Law, R Bortolussi. Burden of Influenza in Children with Neurologic and Developmental Disorders over Four Years of Surveillance: A Report from the Canadian Immunization Monitoring Program, Active (IMPACT) Oral Presentation (Abstract 123) at the 86<sup>th</sup> Annual Conference of the Canadian Paediatric Society, Ottawa (June 26, 2009)
- 13. L. Piché, S Bouchard. Life of IMPACT (Canadian Immunization Monitoring Program, Active) Nurse Monitors During the Pandemic Influenza A H1N1. Poster (P113) presented at 9<sup>th</sup> Canadian Immunization Conference, December 5-8<sup>th</sup>, 2010 Québec City. Abstract published in Can J Infect Dis Med Microbiol Vol 21 No 4 page 217, Winter 2010
- 14. Kayur Mehta, Shaun K. Morris, Julie A. Bettinger, Wendy Vaudry, Taj Jadavji, Scott A. Halperin, Christina Bancej, Manish Sadarangani, Nandini Dendukuri, Jesse Papenburg, for the Canadian Immunization Monitoring Program Active (IMPACT) Investigators. Antiviral use among Canadian children hospitalized for influenza, 2010-2019. E-poster presentation at AMMI Canada-CACMID 2021 Annual Conference, April 25-30, 2021 (virtual conference). Poster presentation at the Pediatric Academic Societies (PAS) 2021 virtual meeting phase 1, on April 30-May 4, 2021. This E-poster was awarded the Canadian Association for Clinical Microbiology and Infectious Diseases (CACMID) Poster Award
- 15. **NEW\*** Costanza Di Chiara, Jesse Papenburg, Waison Wong, Christina Bancej, Julie A. Bettinger, Catherine Burton, Cheryl Foo, Scott Halperin, Taj Jadavji, Kescha Kazmi, Manish Sadarangani, Shaun K. Morris, for members of the Influenza Canadian Immunization Monitoring Program, Active (IMPACT). COMPARISON OF EPIDEMIOLOGIC, CLINICAL FEATURES, AND SEVERITY OF PEDIATRIC INFLUENZA-RELATED HOSPITALIZATIONS BETWEEN THE 2012-2020 PERIOD AND 2021-22 SEASON: CANADIAN IMMUNIZATION MONITORING PROGRAM, ACTIVE. Abstract presentation at the 41st Annual Meeting of the European Society for Paediatric Infectious Diseases (ESPID), Lisbon, Portugal & Online, May 8-12, 2023
- 16. **NEW\*** Jacqueline Modler, Shaun Morris, Julie Bettinger, Christina Bancej, Catherine Burton, Cheryl Foo, Scott Halperin, Taj Jadavji, Kescah Kazmi, Manish Sadarangani, Tilmann Schober and Jesse Papenburg. Bloodstream infections in children hospitalized for Influenza, the Canadian Immunization Monitoring Program Active (IMPACT). Oral

presentation at the 41<sup>st</sup> Annual Meeting of the European Society for Paediatric Infectious Diseases (ESPID), Lisbon, Portugal &Online, May 8-12, 2023

# Neisseria Meningitidis

#### **Publications:**

- R. Gold, P. Déry, S. Halperin, B. Law, N. MacDonald, D. Scheifele, V. Marchessault, P. Duclos. Meningococcal disease in children hospitalized at six Canadian pediatric tertiary care centers. Can Commun Dis Rep 1994; 20:9-11
  - Bettinger, J.A, Scheifele, D.W, Le Saux, N, Halperin, S.A, Vaudry, W, Tsang, R and the members of the Canadian Immunization Monitoring Program, Active (IMPACT). The Impact of Childhood Meningococcal Serogroup C Conjugate Vaccine Programs in Canada. The Pediatric Infectious Disease Journal; March 2009; 28(3): 220-224 <a href="https://journals.lww.com/pidj/Abstract/2009/03000/The\_Impact\_of\_Childhood\_Meningococcal\_Serogroup\_C.11.aspx">https://journals.lww.com/pidj/Abstract/2009/03000/The\_Impact\_of\_Childhood\_Meningococcal\_Serogroup\_C.11.aspx</a>
- 3. Nicole Le Saux MD, Julie A. Bettinger PhD, MPH, Susan Wootton, MD, Scott A Halperin MD, Wendy Vaudry MD, David W Scheifele MD, Raymond Tsang PhD for the members of the Canadian Immunization Monitoring Program, Active (IMPACT). Profile of serogroup Y meningococcal infections in Canada: Implications for vaccine selection. The Canadian Journal of Infectious Diseases and Medical Microbiology, 2009; 20(4): e130-e-134 <a href="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=9226&isuKy=891&isArt=t&fromfold">http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=9226&isuKy=891&isArt=t&fromfold</a>
- Julie A. Bettinger, PhD, David W. Scheifele, MD, Nicole Le Saux, MD, Scott A. Halperin, MD, Wendy Vaudry, MD and Raymond Tsang, PhD, for the Members of the Canadian Immunization Monitoring Program, Active (IMPACT) The Pediatric Infectious Disease Journal Volume 32, Number 1, January 2013, e20–e25. The Disease Burden of Invasive Meningococcal Serogroup B Disease in Canada <a href="http://journals.lww.com/pidj/Abstract/2013/01000/The Disease Burden of Invasive Meningococcal.11.aspx">http://journals.lww.com/pidj/Abstract/2013/01000/The Disease Burden of Invasive Meningococcal.11.aspx</a>
- 5. Julie A. Bettinger, PhD, David W. Scheifele, Scott A. Halperin, Wendy Vaudry, Jamie Findlow, Ray Borrow, Duccio Mendini, Raymond Tsang, for the members of the Canadian Immunization Monitoring Program, Active (IMPACT) Diversity of Canadian meningococcal serogroup B isolates and estimated coverage by an investigational meningococcal serogroup B vaccine (4CMenB). Vaccine 32 (2014) 124-130 http://dx.doi.org/10.1016/j.vaccine.2013.03.063

- 6. Manish Sadarangani, David W. Scheifele, Scott A. Halperin, Wendy Vaudry, Nicole Le Saux, Raymond Tsang, and Julie A. Bettinger, for the investigators of the Canadian Immunization Monitoring Program, ACTive (IMPACT). The Impact of Meningococcal Serogroup C Conjugate Vaccine in Canada Between 2002 and 2012, Clinical Infectious Diseases (2014) 59 (9): 1208-1215 <a href="http://cid.oxfordjournals.org/content/59/9/1208.abstract?sid=224916cd-b847-4b31-913e-5feb1849e4b9">http://cid.oxfordjournals.org/content/59/9/1208.abstract?sid=224916cd-b847-4b31-913e-5feb1849e4b9</a>
- 7. Manish Sadarangani; David W. Scheifele; Scott A. Halperin; Wendy Vaudry; Nicole Le Saux; Raymond Tsang; Julie A. *Bettinger* Outcomes of invasive meningococcal disease in adults and children in Canada between 2002 and 2011: a prospective cohort study Clinical Infectious Diseases (2015) 60 (15 April) e27-35

  <a href="http://cid.oxfordjournals.org/content/early/2015/01/19/cid.civ028.abstract?keytype=ref&ijkey=JXtuHJbZsXH95Me">http://cid.oxfordjournals.org/content/early/2015/01/19/cid.civ028.abstract?keytype=ref&ijkey=JXtuHJbZsXH95Me</a>
- 8. Bettinger JA, Liberator P, Halperin SA, Vaudry W, Sadarangani M, Hao L, Lambert N, Jansen KU, Anderson AS, Tsang R; members of the Canadian Immunization Monitoring Program, Active (IMPACT). Estimated susceptibility of Canadian meningococcal B isolates to a meningococcal serogroup B vaccine (MenB-FHbp). Vaccine, volume 38, Issue 8, 18 February 2020, pages 2026-2033. <a href="https://www.sciencedirect.com/science/article/pii/S0264410X19317037">https://www.sciencedirect.com/science/article/pii/S0264410X19317037</a>

- 1. Bettinger JA, Scheifele DW, Le Saux N, Halperin S for the Immunization Monitoring Program, ACTive (IMPACT). Age Distribution and Serogroups of Meningococcal Invasive Infections across Canada, 2002-2004. Platform presentation # 16 at the 83<sup>rd</sup> Annual Conference of the Canadian Paediatric Society, June 14, 2006, St. John's, NL
- 2. Bettinger J, Scheifele D, Le Saux N, Halperin S, Tsang R, for Members of the Canadian Immunization Monitoring Program, Active (IMPACT). Variability in meningococcal serogroups causing invasive infection in children in Canada, 2002-2005. Presented at the 15th International Pathogenic Neisseria Conference, Cairns, Australia, September 10-15, 2006, abstract P4.3.04
- 3. Bettinger J, Le Saux N, Scheifele DW, Halperin SA, Marty K, Tsang R. Meningococcal Infections in Adults across Canada, 2002-2005. Poster presentation (P1) at the 7<sup>th</sup> Canadian Immunization Conference, Winnipeg, MB, December 3-6, 2006
- 4. Le Saux N, Bettinger J, Halperin SA, Scheifele DW, Marty K, Tsang R. Morbidity and Mortality of Invasive Meningococcal Disease in Canada, 2002-2005. Poster presentation (P4) at the 7<sup>th</sup> Canadian Immunization Conference, Winnipeg, MB, December 3-6, 2006
- 5. Bettinger JA, Le Saux N, Scheifele D, Halperin S, Marty K, Tsang R on behalf of all *IMPACT (by topic) publications presentations list October 16, 2023*

- members of the Canadian Immunization Monitoring Program Active. Adult meningococcal infections, Canada 2002-2005. Presented at the 10<sup>th</sup> Annual Conference on Vaccine Research, Baltimore MD, April 30- May 2, 2007 Poster P31
- 6. Bettinger J, Le Saux N, Scheifele DW, Halperin SA, Vaudry W, Tsang R. Vaccinated children among hospitalized meningococcal cases across Canada, IMPACT 2002-2006. 11<sup>th</sup> Annual Conference on Vaccine Research, Baltimore, MD, May 5-7, 2008 (abstract S34)
- 7. Bettinger JA, Le Saux N, Scheifele DW, Halperin SA, Tsang R, and the IMPACT Investigators, Canadian Immunization Monitoring Program Active (IMPACT). The Changing Incidence of Meningococcal Invasive Infections across Canada, 2002-2006. Platform presentation (abstract 78), June 27, 2008, 85th Annual Conference of the Canadian Paediatric Society, Victoria, BC
- 8. Bettinger J, Le Saux N, Scheifele D, Halperin S, Vaudry W, Bortolussi B, Tsang R, and the IMPACT Investigators. The Changing Incidence of Meningococcal Invasive Infections across Canada, Immunization Monitoring Program, Active (IMPACT) 2002-2007. Poster presentation (P136) at the 16<sup>th</sup> International Pathogenic Neisseria Conference, September 7-12, 2008, Beurs-WTC, Rotterdam, The Netherlands
- 9. Bettinger J, Le Saux N, Scheifele DW, Halperin S, Vaudry W, Tsang R, for members of the Canadian Immunization Monitoring Program Active (IMPACT). Vaccinated Children Among Hospitalized Meningococcal Cases Across Canada, IMPACT 2002-2006. Poster presentation (P08) at the 8<sup>th</sup> Canadian Immunization Conference, November 30-December 1, 2008, Toronto, Ontario. Abstract published in Can J Infect Dis Med Microbiol 2008 (19) 5:339
- 10. Tsang R, Bettinger J, Wootton S, Scheifele Dm Le Saux N, Halperin S, Vaudry W, Zhou J, Cameron M, Law D, IMPACT Investigators. Genetic analysis of invasive meningitidis strains in Canada monitored by the IMPACT program from 2002-2006. Poster presentation (P89) at the 8<sup>th</sup> Canadian Immunization Conference, December 1-3, 2008, Toronto, Ontario. Abstract published in Can J Infect Dis Med Microbiol 2008 (19) 5:361
- 11. Bettinger J, Halperin S. Meningococcal infections across Canada. The burden of invasive Meningococcal disease in Canada. An oral presentation (breakfast symposium), Tuesday December 2, 2008 at the 8<sup>th</sup> Canadian Immunization Conference, Toronto, Ontario.

- 12. Julie Bettinger, David Scheifele, Nicole Le Saux, Scott Halperin, Wendy Vaudry, Robert Bortolussi, Raymond Tsang. Update on the Incidence of Meningococcal Invasive Infections in Canada, IMPACT 2002-2009, Poster P036, Presented at the 17<sup>th</sup> International Pathogenic *Neisseria* Conference September 11-16<sup>th</sup>, 2010 Banff, Alberta
- 13. JA Bettinger, N Le Saux, DW Scheifele, W Vaudry, SA Halperin, R Bortolussi, R Tsang, The Epidemiology of Serogroup B Meningococcal Invasive Infections in Canada, IMPACT 2002-2009. Oral presentation (O10) at the 9<sup>th</sup> Canadian Immunization Conference, December 5-8<sup>th</sup>, 2010 Québec City. Abstract published in Can J Infect Dis Med Microbiol Vol 21 No 4 page 179, Winter 2010
- Julie A. Bettinger, David W. Scheifele, Scott A. Halperin, Nicole Le Saux, Wendy Vaudry, Jamie Findlow, Ray Borrow, Duccio Medini, Raymond Tsang. Estimated coverage of Canadian Meningococcal B isolates by a meningococcal sergroup B vaccine. Poster presentation at the 5<sup>th</sup> Vaccine and ISV Annual Global Congress, October 2-4<sup>th</sup>, 2011 Seattle, WA USA
- 15. Sadarangani, Manish; Halperin, Scott A.; Vaudry, Wendy; Le Saux, Nicole; Tsang, Raymond; Scheifele, David W; Bettinger, Julie A. Outcomes of Invasive Meningococcal Disease in Canadian Children and Adults between 2002 and 2010 E-Poster P008, Presented at the 10<sup>th</sup> Canadian Immunization Conference, Monday December 3, 2012 Vancouver BC.
- 16. Bettinger, Julie A.; Scheifele, David W.; Halperin, Scott A.; Le Saux, Nicole; Vaudry, Wendy; Findlow, Jamie; Borrow, Ray; Medini, Duccio; Tsang, Raymond. Estimated Coverage of Canadian Meningococcal Serogroup B Isolates by an Investigational Meningococcal Serogroup B Vaccine (4CMenB). E-Poster P009, Presented at the 10<sup>th</sup> Canadian Immunization Conference, December 3, 2012 Vancouver BC.
- 17. Sadarangani, Manish; Halperin, Scott A; Vaudry, Wendy; Le Saux, Nicole; Tsang, Raymond; Scheifele, David W.; Bettinger, Julie A. A Decade of Serogroup C Neisseria Meningitidis Surveillance in Canada Poster P156, Presented at the 10<sup>th</sup> Canadian Immunization Conference, December 3-5, 2012 Vancouver BC.
- 18. Bettinger JA, Scheifele DW, Halperin SA, Vaudry W, Liberator P, Hao L, Jansen KU, Anderson A and Tsang R for the members of IMPACT. Comparitive Analysis of Canadian *Neisseria meningitidis* Serogroup B Isolates. Poster presentation at the X1Xth International Pathogenic Neisseria Conference in Asheville, North Carolina on October 12-17, 2014.

19. Bettinger JA, Tsang R, Scheifele DW, Halperin SA, Vaudry W, Lambert N, Liberator P, Hao L, Jansen KU, Anderson A and for the members of IMPACT. fHBP Variant Diversity and Level of Surface Expression among Invasive *Neisseria meningitidis* Serogroup B Isolates from Canada.

Presented at:

- a) XX International Pathogenic Neisseria Conference, Manchester, England, September 5-9, 2016.
- b) Poster presentation # 18 at the 12<sup>th</sup> Canadian Immunization Conference Ottawa, Ontario Wednesday Dec 7, 2016
- 20. Julie A. Bettinger, Manish Sadarangani, Shaun K. Morris, Nicole Le Saux, Karina A. Top, Wendy Vaudry, Scott A. Halperin and Raymond Tsang on behalf of the members of the Canadian Immunization Monitoring Program, Active (IMPACT). The effect of quadrivalent vaccination program in Canada. Poster at the International Pathogenic Neisseria Conference (IPNC) Asilomar, USA September 23-28, 2018.
- 21. Manish Sadarangani, Morris Shaun K. Morris, Nicole Le Saux, Karina A. Top, Wendy Vaudry, Scott A. Halperin, Julie A. Bettinger, Raymond Tsang; for members of the Canadian Immunization Monitoring Program Active (IMPACT). Molecular epidemiology of Neisseria meningitidis in children and adults with invasive meningococcal disease in Canada between 2002 and 2017. Poster at the International Pathogenic Neisseria Conference (IPNC) Asilomar, USA September 23-28, 2018.
- 22. Nicole Le Saux, Julie A. Bettinger, Manish Sadarangani, Shaun K. Morris, Karina A. Top, Wendy Vaudry, Scott A. Halperin and Raymond Tsang on behalf of the members of the Canadian Immunization Monitoring Program, Active (IMPACT). The Epidemiology of Invasive Meningococcal Disease (IMD) over 16 years after start of Meningococcal Vaccine Programs in Canada. Oral abstract presentation at the Canadian Immunization Conference, Ottawa, Ontario, December 4, 2018
- 23. Julie A. Bettinger, Manish Sadarangani, Nicole Le Saux, Shaun K. Morris, Karina A. Top, Scott A. Halperin and Raymond Tsang on behalf of the members of the Canadian Immunization Monitoring Program, Active (IMPACT). Update of IMPACT Invasive Meningococcal Surveillance, 2016-2020. CPS Annual Conference 2022, Montreal, Quebec.

# **Pertussis**

# **Publications:**

1. R. Gold, Déry P, S. Halperin, B. Law, N. MacDonald, D. Scheifele, V. Marchessault, P. Duclos. Pertussis in children hospitalized at five Canadian pediatric tertiary care centers.

- Can Commun Dis Rep 1994; 20:31-34
- Halperin SA, Wang EL, Law B, Mills E, Morris R, Déry P, Lebel M, MacDonald N, Jadavji T, Vaudry W, Scheifele DW, Delage G, Duclos P. Epidemiological features of pertussis in hospitalized patients in Canada, 1991-1997: Report of the Immunization Monitoring Program - Active (IMPACT). Clin Infect Dis 1999;28:1238-43 <a href="http://www.journals.uchicago.edu/doi/pdf/10.1086/514792">http://www.journals.uchicago.edu/doi/pdf/10.1086/514792</a>
- 3. Mikelova LK, Halperin SA, Scheifele DW, Smith B, Ford-Jones E, Vaudry W, Jadavji T, Law B, Moore D, and members of the Immunization Monitoring Program Active, (IMPACT). Predictors of Death in Infants Hospitalized With Pertussis: A Case-Control Study of 16 Deaths in Canada. J Pediatr 2003:143:576-81 http://www.jpeds.com/article/S0022-3476(03)00365-2/abstract
- 4. Galanis E, King AS, Varughese P, Halperin SA (on behalf of the IMPACT Investigators). Analysis: Changing epidemiology and emerging risk groups for pertussis. CMAJ February 14, 2006: 174 (4): pp 451-452 http://www.cmaj.ca/content/174/4/451.full.pdf+html
- 5. Bettinger JA, Halperin SA, De Serres G, Scheifele DW, Tam T. The Effect of Changing From Whole-Cell to Acellular Pertussis Vaccine on the Epidemiology of Hospitalized Children with Pertussis in Canada. The Pediatric Infectious Disease Journal Volume 26, Number 1, January 2007, pp 31-35

  <a href="http://journals.lww.com/pidi/Abstract/2007/01000/The Effect of Changing From Whole Cell to.7.aspx">http://journals.lww.com/pidi/Abstract/2007/01000/The Effect of Changing From Whole Cell to.7.aspx</a>
- 6. (IMPACT Highlights) Safety Advantages of new pertussis vaccine are clearly evident across Canada. Paediatrics & Child Health 1999; 4:383.
- 7. Greenberg, David P. MD; Doemland, Martha Phd; Bettinger, Julie A. PhD, MPH; Scheifele, David W. MD; Halperin, Scott A. MD; Waters, Valerie MD; Kandola, Kami MD, MPH; for the IMPACT Investigators. Epidemiology of Pertussis and Haemophilus influenza type b Disease in Canada with Exclusive Use of Diptheria-Tetanus-Acellular Pertussis-Inactivated Poliovirus-Haemophilus influenza type b Pediatric Combination Vaccine and an Adolescent-Adult Tetanus-Diptheria-Acellular Pertussis Vaccine: Implications for Disease prevention in the United States. The Pediatric Infectious Disease Journal; June 2009; 28(6): 521-528

  http://journals.lww.com/pidj/Abstract/2009/06000/Epidemiology of Pertussis and Haemophilus.13.aspx

8. Bahaa Abu-Raya, Julie A Bettinger, Otto G Vanderkooi, Wendy Vaudry, Scott A Halperin, Manish Sadarangani, Members of the Canadian Immunization Monitoring Program, Active (IMPACT). Burden of Children Hospitalized with Pertussis in Canada in the Acellular Pertussis Vaccine Era, 1999-2015. Journal of the Pediatric Infectious Diseases Society; https://doi.org/10.1093/jpids/piy128/5236699#126652949, December 2018

#### **Presentations:**

- 1. Halperin SA, Mills E, Lebel M and Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). Hospital-based surveillance of pertussis in children < 2 years old. 35<sup>th</sup> ICAAC, San Francisco, September, 1995 (Abstract # K167)
- 2. Mikelova LK, Halperin SA, Scheifele DW, for members for the CPS/LCDC Immunization Monitoring Program Active (IMPACT). Clinical and epidemiological evaluation of ten fatal cases of pertussis in Canada: a case control study. Pediatr Child Hlth 2000; 5 (Suppl A), Abstract 40, p18A
- 3. Ambrose A, Samson H, Mikelova LK, Halperin SA, Scheifele DW, for Members for the CPS/LCDC Immunization Monitoring Program Active (IMPACT). Clinical and epidemiological evaluation of ten fatal cases of pertussis in Canada: a case control study. 4<sup>th</sup> Annual CNIC, December 3-6, 2000 Halifax, NS. (Abstract P2)
- 4. Bettinger JA., Halperin SA., DeSerres G., Scheifele D., Tam T. Epidemiology of Hospitalized Pertussis after Change from Whole Cell to Acellular Pertussis Vaccine. Oral presentation at the 6<sup>th</sup> Canadian National Immunization Conference, Breakout session # 4, Monday December 6<sup>th</sup>, 2004, Montreal
- 5. Bettinger JA, Halperin SA, De Serres G, Scheifele DW, Tam T for the Immunization Monitoring Program, Active. Appropriately Vaccinated Children among Hospitalized Pertussis Cases. Poster presentation at the Ninth Annual Conference on Vaccine Research; 2006 May 8-10; Baltimore, MD. Abstract Poster P73
- 6. Bettinger J, Halperin SA, De Serres G, Scheifele DW, Tam T. Appropriately Vaccinate Children Among Hospitalized Pertussis Cases. Poster presentation (P2) at the 7<sup>th</sup> Canadian Immunization Conference, Winnipeg, MB, December 3-6, 2006

# Polio – Acute Flaccid Paralysis Surveillance

- 1. Mills E, Silver K, and Members of IMPACT. Acute flaccid paralysis in children: active surveillance for poliomyelitis. Annual Meeting of the American Pediatric Society and the Society for Pediatric Research, 1998 (Abstract # 701078h)
- 3. Mills E, Silver K and Members of IMPACT. Acute flaccid paralysis: an active surveillance *IMPACT (by topic) publications presentations list October 16, 2023*

multicenter study. American Association of Neurology Annual Meeting, 1998 (Abstract # P01.015)

# **Respiratory Syncytial Virus**

#### **Publications:**

 NEW\* Malou Bourdeau, Nirma Khatri Vadlamudi, Nathalie Bastien, Joanne Embree, Scott A. Halperin, Taj Jadavji, Kescha Kazmi, Joanne M. Langley, Marc H. Lebel, Nicole Le Saux, Dorothy Moore, Shaun K. Morris, Jeffrey M. Pernica, Joan Robinson, Manish Sadarangani, Julie A. Bettinger, Jesse Papenburg, for the Canadian Immunization Monitoring Program Active (IMPACT) Investigators. Pediatric RSV-Associated Hospitalizations Before and During the COVID-19 Pandemic. JAMA Network Open. 2023; 6(10):e2336863

https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2810133

- Simran Sandhu, Amanda Shane, Christina Bancej, Wendy Vaudry, Joanne Embree, April Killikelly, Matthew Tunis, Althea House, Julie Bettinger, Nicole Le Saux, Joanne Langley, Marc Lebel, Dorothy Moore, Shaun Morris, Jesse Papenburg, Joan Robinson, Manish Sadarangani, Dorothy Moore, Taj Jadavji, Dat Tran, Scott Halperin on behalf of the Public Health Agency of Canada and the Canadian Immunization Monitoring Program ACTive. The Epidemiology of Respiratory Syncytial Virus (RSV) Amongst the Hospitalized Paediatric Population in Canada, 2017-2018. Poster presentation at the 5th International Neonatal and Maternal Immunization Symposium (INMIS) in Vancouver, British Colombia, on September 15-17, 2019
- 2. Nirma Khatri Vadlamudi, Malou Bourdeau, Manish Sadarangani, Julie Bettinger, Scott Halperin, Shaun Morris, Jeffery Pernica, Christina Bancej, Joanne Embree, Joanne Langley, Dorothy Moore, Joan Robinson, Nicole Le Saux, Taj Jadhavji and Jesse Papenburg on behalf of the members of the Canadian Immunization Monitoring Program, Active (IMPACT). Characterizing Respiratory Syncytial Virus-related pediatric disease severity in Canada. Poster at the BC Immunization Forum 2023, Vancouver, British Columbia, March 1, 2023
- 3. **NEW\*** Malou Bourdeau, Nirma Khatri Vadlamudi, Nathalie Bastien, Joanne Embree, Scott A. Halperin, Taj Jadavji, Kescha Kazmi, Joanne M. Langley, Marc H. Lebel, Nicole Le Saux, Dorothy Moore, Shaun K. Morris, Jeffrey M. Pernica, Joan Robinson, Manish Sadarangani, Julie A. Bettinger, Jesse Papenburg, for the Canadian Immunization

Monitoring Program Active (IMPACT) Investigators. Pediatric respiratory syncytial virus hospitalizations, 2017 to 2022, the Canadian Immunization Monitoring Program Active (IMPACT). Poster presentation at the ID Week 2023, Boston, MA, October 11-15, 2023

#### **Rotavirus**

# **Publications:**

- Le Saux, Nicole MD; Bettinger, Julie A. PhD; Halperin, Scott A. MD; Vaudry, Wendy MD; Scheifele, David W. MD; for Members of the Canadian Immunization Monitoring Program, Active (IMPACT) Substantial Morbidity for Hospitalized Children With Community Acquired Rotavirus Infections: 2005-2007 Impact Surveillance in Canadian Hospitals. The Pediatric Infectious Disease Journal; 29(9):879-882, September 2010. <a href="http://journals.lww.com/pidj/Abstract/publishahead/Substantial Morbidity for Hospit alized Children.99295.aspx">http://journals.lww.com/pidj/Abstract/publishahead/Substantial Morbidity for Hospit alized Children.99295.aspx</a>
- JA Bettinger, K Wills, N Le Saux, DW Scheifele, SA Halperin, W Vaudry for members of the Canadian Immunization Monitoring Program Active (IMPACT). Heterogeneity of rotavirus testing and admitting practices for gastroenteritis among 12 tertiary care pediatric hospitals: Implications for surveillance. The Canadian Journal of Infectious Diseases and Medical Microbiology, 2011; 22(1):15-18
  <a href="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=10006&isuKy=969&isArt=t&fromfold">http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=10006&isuKy=969&isArt=t&fromfold</a>
- 3. Nicole Le Saux, Julie Bettinger, Scott Halperin, Wendy Vaudry and David Scheifele for the members of the Canadian Immunization Monitoring Program, Active (IMPACT). Hospital acquired rotavirus infections: burden in Canadian paediatric hospitals. Journal of Infection Prevention. Volume 12 Issue 4 July 2011 pp.159-162

  (<a href="http://bji.sagepub.com/content/early/2011/03/30/1757177411402409.abstract">http://bji.sagepub.com/content/early/2011/03/30/1757177411402409.abstract</a>
- 4. Le Saux, Nicole MD; Bettinger, Julie PhD; Déry, Pierre MD; Embree, Joanne MD; Vaudry, Wendy MD; Halperin, Scott A. MD; McDermid, Andrew BSc; Booth, Timothy F. PhD; Coyle, Doug PhD The Hidden Costs and Characteristics of Childhood Emergency Visits in Canada. The Pediatric Infectious Disease Journal, Volume 31
  Issue 2 February 2012 pp 159-163
  <a href="http://journals.lww.com/pidj/Abstract/publishahead/The Hidden Costs and Characteristics of Childhood.98895.aspx">http://journals.lww.com/pidj/Abstract/publishahead/The Hidden Costs and Characteristics of Childhood.98895.aspx</a>
- 5. Doug Coyle MA MSc PhD, Kathryn Coyle BSc Pharm MSc, Julie A Bettinger MPH PhD, Scott A Halperin MC FRCPC, Wendy Vaudry MD FRCPC, David W Scheifele MD FRCPC, Nicole Le Saux MD FRCPC. Cost Effectiveness of infant vaccination for rotavirus in Canada. Canadian Journal of Infectious Diseases and Medical Microbiology 2012; 23(2):71-77
  http://www.pulsus.com/journals/abstract.jsp?sCurrPg=journal&jnlKy=3&atlKy=10634&isuKy=1027&spage=1&isArt=t

6. Andrew McDermid, Nicole Le Saux, Elsie Grudeski, Julie A Bettinger, Kathy Manguiat, Scott A Halperin, Lily MacDonald, Pierre Déry, Joanne Embree, Wendy Vaudry and Timothy F Booth for Members of the Canadian Immunization Monitoring Program, Active (IMPACT) Molecular characterization of rotavirus isolates from select Canadian pediatric hospitals *BMC Infectious Diseases* 2012, 12:306 <a href="http://www.biomedcentral.com/1471-2334/12/306">http://www.biomedcentral.com/1471-2334/12/306</a>

- Cook N, MacDonald NE, Sockett P for Members of IMPACT, Canadian Paediatric Society, Laboratory Centre for Disease Control. Ottawa, Ontario, Canada. Prospective study of rotavirus (RV) hospitalizations in infants < 24mo in 11 pediatric hospitals in Canada. Poster, 36<sup>th</sup> Infectious Diseases Society of America, Nov 1998
- 2. Cook N, MacDonald N, Sockett P, for Members of IMPACT. Prospective study of rotavirus hospitalizations in infants less than 24 months in 11 pediatric hospitals in Canada. 3<sup>rd</sup> National Immunization Conference, Calgary, 1998. (Abstract P56)
- N. LeSaux, J. Bettinger, S. Halperin, W. Vaudry, D. Scheifele. Rotavirus gastroenteritis hospitalizations in Canada, IMPACT 2005-2007. Oral Presentation (Abstract 011) at the 26<sup>th</sup> International Congress of Chemotherapy and Infection. Toronto, June 18-21, 2009. Abstract published in *International Journal of Antimicrobial Agents*, Volume 34, Supplement 2, July 2009, Page S4 <a href="http://www.sciencedirect.com/science/article/B6T7H-4WM1TNM">http://www.sciencedirect.com/science/article/B6T7H-4WM1TNM</a>
  D/2/a44d387c93bb9d263a227325168d5a1c
- 4. N. Le Saux, J. Bettinger, S. Halperin, W. Vaudry and D. Scheifele Hospital acquired rotavirus infections: Substantial disease burden in Canadian Pediatric hospitals. Oral presentation (Abstract OP08) at the Excellence in Paediatrics conference, 3-6 December 2009, Florence, Italy. Abstract published in *Child: care, health and development*, 36 (Suppl. 1), page 45 <a href="http://www3.interscience.wiley.com/cgi-bin/fulltext/123197982/PDFSTART">http://www3.interscience.wiley.com/cgi-bin/fulltext/123197982/PDFSTART</a>
- Julie A. Bettinger. PhD, MPH, Kathryn Wills, Nicole Le Saux, MD, David W. Scheifele, MD, Scott A. Halperin, MD, Wendy Vaudry, MD for Members of the Canadian Immunization Monitoring Program, Active (IMPACT) Rotavirus Testing and Admitting Practices in 12 Pediatric Hospitals: Implications For Surveillance Abstract published in Am J Epidemiol 2010;171Suppl 11:S137. Abstract 548. Presented at the 43<sup>rd</sup> Annual Society for Epidemiologic Research Seattle, Washington, June 23 26, 2010

- 6. AK McDermid, NM Le Saux, J Bettinger, P Dery, J Embree, W Vaudry, S Halperin, T Booth. Rotavirus Serotypes: Results from an IMPACT Emergency Department Study. Poster (P055) presented at 9<sup>th</sup> Canadian Immunization Conference, December 5-8<sup>th</sup>, 2010 Québec City. Abstract published in Can J Infect Dis Med Microbiol Vol 21 No 4 page 198, Winter 2010
- 7. Le Saux, N., Bettinger, J., Dery P, Embree J, Vaudry W, Halperin S., McDermid A, Booth T, Coyle D, Scheifele D. The Hidden Costs and Characteristics of Childhood Rotavirus Emergency Visits in Canada. Poster presentation at the Canadian Paediatric Conference June 15-18<sup>th</sup>, 2011 Québec City, Quebec.
- 8. N. Le Saux, S Halperin, D. Scheifele, W. Vaudry, JA Bettinger on behalf of Immunization Monitoring Program Active IMPACT Investigators Surveillance for Decreases in hospitalizations: Effects of Rotavirus vaccine programs. Oral Presentation at the 11<sup>th</sup> Canadian Immunization Conference December 2-4, 2014 in Ottawa, Ontario
- 9. N Le Saux, S Halperin, W Vaudry, D Scheifele, J Bettinger for members of the Canadian Immunization Monitoring Program Active (IMPACT). Decreases in Rotavirus hospitalizations: IMPACT Data Pre and 3 years Post-First publicly funded programs. Oral presentation (3 minutes-3 slides): 93<sup>rd</sup> Canadian Paediatric Society Annual Conference June 22-25, 2016 Charlottetown, PEI.
- 10. Rotavirus Hospitalizations: A decade (2005 to 2015) of Surveillance Documenting Vaccine Success Nicole Le Saux Co-authors: Scott Halperin, Wendy Vaudry, David Scheifele, Julie Bettinger Oral presentation at the 12<sup>th</sup> Canadian Immunization Conference Ottawa, Ontario Tuesday December 6, 2016
- 11. Nirma Khatri Vadlamudi, Manish Sadarangani, Nicole LeSaux, Scott A. Halperin, Tim Booth, Julie A. Bettinger for Members of the Canadian Immunization Monitoring Program, Active (IMPACT). Molecular epidemiology of rotavirus isolates following the widespread use of rotavirus vaccines from the Canadian Immunization Monitoring Program, Active (IMPACT). Poster at Canadian Immunization Conference, Ottawa, Ontario, 25-27 April, 2023

# Streptococcus Pneumoniae

# **Publications:**

1. Scheifele DW, Gold R, Marchessault V, Talbot J and Members of the LCDC/CPS IMPACT Group. Penicillin resistance among invasive pneumococcal isolates at ten children's hospitals, 1991-4. Can Commun Dis Rep (CCDR) 1996; 22:157-162

<a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/96vol22/dr2219ea-eng.php">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/96vol22/dr2219ea-eng.php</a>

- 2. Scheifele DW, Halperin SA, Pelletier L, Talbot J and Members of the CPS/LCDC Immunization Monitoring Program Active (IMPACT). Invasive pneumococcal infections in Canadian children, 1991-1998: Implications for new vaccination strategies. Clin Infect Dis: 2000;31:58-64http://www.journals.uchicago.edu/doi/full/10.1086/313923
- 3. Bjornson G, Scheifele D, Binder F, Talling D. Population-based incidence rate of invasive pneumococcal infection in children: Vancouver, 1994-1998 Can Comm. Dis Report (CCDR) 2000:26-18

  http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/00vol26/dr2618ea.html
- 4. Scheifele D, Halperin S, Pelletier L, Talbot J, Lovgren M, Vaudry W, Jadavji T, Law B, MacDonald N, Gold R, Wang E, Mills E, Lebel M, Dery P, Morris R. Reduced susceptibility to penicillin among pneumococci causing invasive infection in children Canada, 1991-1998. Can J Infect Dis 2001:12:241-6 <a href="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=4876&isuKy=683&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=4876&isuKy=683&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=3&atlKy=4876&isuKy=683&isArt=t&fromfold=</a>
- 5. Greenberg D, Speert D.P, Mahenthiralingham, D. A Henry, Campbell, M.E, Scheifele D W, and the CPS/LCDC IMPACT Monitoring network. Emergence of Penicillin Non-susceptible *Streptococcus pneumoniae* Invasive clones in Canada. J Clin Microbiol 2002; 40:68-74 http://jcm.asm.org/cgi/content/full/40/1/68
- Kellner J, Scheifele D, Halperin S, Lebel M, Moore D, Le Saux N, Ford-Jones L, Law B Vaudry W, and members of the Canadian Pediatric Society/ Centre for Infectious Disease Prevention and Control Immunization Monitoring Program Active (IMPACT). Outcome of penicillin-nonsusceptible Streptococcus pneumoniae meningitis: a nested case-control study. Pediatr Infect Dis J, 2002; 21:903-9 Note: This was highlighted in Journal Watch (Infectious Diseases) Vol 5, Dec 2002, p 92-3 and in Pediatric Notes Vol 26, Dec 2002, p 207 <a href="http://journals.lww.com/pidj/Abstract/2002/10000/Outcome\_of\_penicillin\_nonsuscept\_ible\_Streptococcus.4.aspx">http://journals.lww.com/pidj/Abstract/2002/10000/Outcome\_of\_penicillin\_nonsuscept\_ible\_Streptococcus.4.aspx</a>
- 7. Bjornson GL, Scheifele DW, Halperin SA, and members of the Canadian Pediatric Society/Health Canada Immunization Monitoring Program, Active (IMPACT). Population-based epidemiology of invasive pneumococcal infection in children in nine urban centers in Canada, 1994 through 1998. Pediatr Infect Dis J 2002; 21:947-950 Note: This was highlighted in Pediatric Notes Vol 26, Dec 2002, p 205 <a href="http://journals.lww.com/pidi/Abstract/2002/10000/Population\_based\_epidemiology\_ofinvasive.12.aspx">http://journals.lww.com/pidi/Abstract/2002/10000/Population\_based\_epidemiology\_ofinvasive.12.aspx</a>

- 8. Scheifele D, Law B, Vaudry W, Halperin S, Kellner J, King A, Dawar M, and members of the Canadian Paediatric Society/Health Canada Immunization Monitoring Program Active (IMPACT). Invasive Pneumococcal Infections among Canadian Aboriginal Children. Can Comm. Dis Report (CCDR) 2003; 29:37-42 http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/03vol29/dr2905ea.html
- 9. Bettinger JA, Scheifele DW, Halperin SA, Kellner JD, Tyrrell, G and members of the Canadian Immunization Monitoring Program Active (IMPACT). Invasive Pneumococcal Infections in Canadian Children, 1998-2003. Implications for New Vaccination Programs. Canadian Journal of Public Health; March-April 2007; 98, 2; pp 111-115 <a href="http://journal.cpha.ca/index.php/cjph/article/view/828/828">http://journal.cpha.ca/index.php/cjph/article/view/828/828</a>
- Julie A. Bettinger, David W. Scheifele, James D. Kellner, Scott A. Halperin, Wendy Vaudry, Barbara Law, Gregory Tyrrell and for Members of the Canadian Immunization Monitoring Program Active (IMPACT). The effect of routine vaccination on invasive pneumococcal infections in Canadian children, Immunization Monitoring Program, Active 2000–2007 Vaccine. 2010; 28 (9):2130-2136
   <a href="http://www.sciencedirect.com/science/article/B6TD4-4Y1VXG4-2/2/389e2db874e001bc95b35cb5209b3746">http://www.sciencedirect.com/science/article/B6TD4-4Y1VXG4-2/2/389e2db874e001bc95b35cb5209b3746</a>
- 11. Murad Y, Hung TY, Sadarangani M, Morris SK, LeSaux N, Vanderkooi OG, Kellner JD, Tyrrell GJ, Martin I, Demczuk W, Halperin SA, Bettinger JA; Members of IMPACT. Clinical Presentations and Outcomes of Children in Canada with Recurrent Invasive Pneumococcal Disease from the IMPACT Surveillance Network. Pediatr Infect Dis J. 2022; doi: 10.1097/INF. 00000000000003454
- 12. Leah J.Ricketson, Julie A.Bettinger, ManishSadarangani, Scott A.Halperin, James D.Kellner, for the Canadian Immunization Monitoring Program, Active (IMPACT) Investigators, Vaccine effectiveness of the 7-valent and 13-valent pneumococcal conjugate vaccines in Canada: An IMPACT study, Vaccine, Volume 40, Issue 19, 26 April 2022, https://doi.org/10.1016/j.vaccine.2022.03.048

#### **Presentations:**

 Scheifele DW, Gold R, Talbot J and Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). A national survey of invasive pneumococcal infections in children, 1991-1994. Infectious Diseases Society of America Annual Meeting, San Francisco, September, 1995. Clin Infect Dis 1995; 21:788 (Abstract # 410)

- 2. Scheifele DW, Halperin SA, Talbot J, Kertesz D, for Members of IMPACT. Invasive pneumococcal infections in Canadian children, 1991-8: Implications for new vaccination strategies. Second Conference on Vaccine Research, National Foundation for Infectious Diseases, Bethesda, MD. March 1999 (Abstract P11)
- 3. Greenberg D, Speert D, Mahenthiralingham E, Henry DA, Campbell ME, Scheifele DW, and Members of the CPS/ LCDC IMPACT Monitoring Network. Emergence of penicillin-nonsusceptible Streptococcus pneumoniae invasive clones in Canada. 39<sup>th</sup> Interscience Conference on antimicrobial agents and Chemotherapy, San Francisco, September 1999 (Abstract #1030)
- 4. Kellner JD, Scheifele, DW, Halperin SA, for Members of CPS/LCDC Immunization Monitoring Program Active (IMPACT). Outcome of Penicillin-nonsusceptible Streptococcus Pneumoniae (PNSP) meningitis: a nested case-control study. Pediatric Research 2000; 47 (4, part 2): 266. A poster presentation at the Pediatric Academic Societies and American Academy of Pediatrics Combined Annual Meeting, Boston, May 2000.
- 5. Scheifele, DW, Halperin SA, Pelletier L, Talbot J, Vaudry, W, Jadavji T, Law B, MacDonald N, Wang E, Mills E, Level MH, Déry P, Morris R, Delage G. Update on penicillin resistance rates among pneumococci causing invasive infection in children Canada 1998. Pediatr Child Health 2000; 5 (Suppl A), Abstract 102, p37A
- 6. Greenberg D, Mahenthiralingham E, Speert D, Scheifele D. Spread of an International multi-drug resistant invasive Streptococcus pneumoniae 23F/14 Clone in Canadian children. Proceedings of the Interscience Conference on Antimicrobial Agents and Chemotherapy, Sept 17-20, 2000, Toronto, Ontario, # 1811
- 7. Bjornson G, Scheifele D, Binder F, Talling D. Population-based incidence Rate of invasive pneumococcal infection in children: Vancouver, 1994-1998. 4<sup>th</sup> Annual CNIC, December 3-6, 2000 Halifax, NS. (Abstract P8)
- 8. Bjornson G, Scheifele D, Halperin S for Members for the CPS/LCDC Immunization Monitoring Program Active (IMPACT). Population Based Incidence Rates of Invasive Pneumococcal Infection in Children in 7 centers across Canada, 1994-1998. 4<sup>th</sup> Annual Conference on Vaccine research April 23-25, 2001 Arlington, VA (Abstract P1)
- 9. Bjornson G, Scheifele D, Talling D, Halperin S, Dery P. Population Based Incidence Rates of Invasive Pneumococcal Infection in Children: Vancouver, Halifax, Quebec City, 1994-1998. Vaccine Evaluation Center, BC's Children's Hospital, Vancouver, BC, IWK Health Centre, Halifax, NS, Centre Hospitalier de l'Universite Laval, Quebec City, QC. Presented at the Canadian Paediatric Society Annual Meeting June 13-17th, 2001

## Vancouver, BC

- 10. Kellner JD, McGeer AJ, Greenberg D, Willey B, Koscianski A, Low DE, Scheifele DW. Molecular epidemiology of invasive Streptococcus pneumoniae (SP) in Canadian children from 1991-1999. Poster presentation at 3<sup>rd</sup> International Pediatric Infectious Diseases Conference, Monterey, California, October 2001
- 11. Bjornson G., Scheifele D., Halperin S., and Members of the CPS/ Health Canada Immunization Monitoring Program, Active (IMPACT). Population-Based Epidemiology of Invasive Pneumococcal Infection in Children in Nine Urban Centres Across Canada, 1994-1998. Presented at the 5<sup>th</sup> Canadian National Immunization Conference, Victoria, BC. December 2002. Abstract P2
- 12. Scheifele D., Law B., Halperin S., King A., Dawar M., and Members of the CPS/ Health Canada Immunization Monitoring Program, Active (IMPACT). Invasive Pneumococcal Infections among Aboriginal Children in Canada, 1991-2001. Presented 5<sup>th</sup> Canadian National Immunization Conference, Victoria, BC. December 2002. Abstract P28
- 13. Bettinger JA., Scheifele D., Bjornson G., Halperin SA. Invasive Pneumococcal Infections in Canadian children, 1998-2004. Poster presentation at the 6<sup>th</sup> Canadian National Immunization Conference, December 5-8, 2004, Montreal P14
- 14. Bettinger J for the IMPACT Investigators. The Effect of Routine Vaccination on Invasive Pneumococcal Infection in Canadian Children: 2000-2007, A Report from the IMPACT Network. Oral presentation, November 30, 2008 at the 8<sup>th</sup> Canadian Immunization Conference, Toronto, Ontario Abstract published in Can J Infect Dis Med Microbiol 2008 (19) 5:331
- D Rajakumar, B Tan, A McConnell, B Andreychuk, IMPACT University of Saskatchewan, Saskatoon. Effects of Heptavalent Pneumococcal Conjugate Vaccine (PCV7) on Invasive Pneumococcal Disease (IPD) in Central and Northern Saskatchewan, 2000-2008 Abstract 88 Poster presentation at the 87<sup>th</sup> Annual Conference of the Canadian Paediatric Society, Ottawa, June 25, 2010 Abstract published in *Paediatr Child Health* Vol 15 Suppl A May/June 2010 page 37A <a href="http://www.pulsus.com/journals/JnlSupToc.jsp?sCurrPg=journal&jnlKy=5&supKy=475">http://www.pulsus.com/journals/JnlSupToc.jsp?sCurrPg=journal&jnlKy=5&supKy=475</a>
- 16. Julie A. Bettinger, PhD, MPH, David W. Scheifele, MD, James D. Kellner, Scott A. Halperin, Wendy Vaudry, MD, Robert Pless, and Gregory Tyrrell for Members of the Canadian Immunization Monitoring Program, Active. Emergence of pneumococcal serotype 19A in Canadian Children: 2000-2009. Poster (1374) presented at the 48<sup>th</sup>

- Annual Meeting of the Infectious Diseases Society of America, October 21-24, 2010, Vancouver, BC
- 17. JA Bettinger, DW Scheifele, JD Kellner, W Vaudry, SA Halperin, B Law, G Tyrrell, and The Canadian Immunization Monitoring Program Active. Emergence of Pneumococcal Serotype 19A in Canadian Children: IMPACT 2000-2009 Tsang. The Epidemiology of Serogroup B Meningococcal Invasive Infections in Canada 2002-2009. Oral presentation (007) at the 9<sup>th</sup> Canadian Immunization Conference, December 5-8<sup>th</sup>, 2010 Québec City. Abstract published in Can J Infect Dis Med Microbiol Vol 21 No 4 page 178 Winter 2010
- 18. JA Bettinger, DW Scheifele, J Kellner, SA Halperin, W Vaudry, H Deehan, G Tyrell for the Canadian Immunization Monitoring Program Active. Pneumococcal Vaccine Failures and Missed Opportunities IMPACT 2002-2010 Oral presentation at the Canadian Paediatric Conference June 15-18<sup>th</sup>, 2011 Québec City, Quebec. Abstract published in Paediatrics & Child Health June/July 2011 Volume 16 Supplement A, page 13A
- 19. J Bettinger, D Scheifele, N le Saux, J Kellner, N Le Saux, J Embree, O Vanderkooi, I Martin, G Tyrell, W Vaudry, S Halperin for members of the Canadian Immunization Monitoring Program Active (IMPACT). Invasive Pneumococcal Disease in Canadian Children, 2000-2014. Oral presentation (3 minutes-3 slides): 93<sup>rd</sup> Canadian Paediatric Society Annual Conference June 22-25, 2016 Charlottetown, PEI.
- 20. Joanne McNair. Impact of conjugate vaccines on *Haemophilus influenzae* type b (Hib) and *Streptococcus pneumoniae* in children with cancer: A report from the Canadian Immunization Monitoring Program Active (IMPACT) Poster presentation # 40 at the 12<sup>th</sup> Canadian Immunization Conference Ottawa, Ontario Wednesday Dec 7, 2016
- 21. Julie Bettinger, Manish Sadarangani, Shaun K. Morris, James D. Kellner, Nicole Le Saux, Joanne Embree, Otto G. Vanderkooi, Irene Martin, Walter Demczuk, Gregory J. Tyrrell, Wendy Vaudry and Scott Halperin on behalf of the members of the Canadian Immunization Monitoring Program, Active. Twenty-Six years of Invasive Pneumococcal Disease in Canadian Children, 1991-2016, the Canadian Immunization Monitoring Program, Active. Oral presentation at the 11<sup>th</sup> International Symposium on Pneumococci and Pneumococcal Diseases, Melbourne, Australia, April 1-19, 2018. Poster at the Canadian Immunization Conference, Ottawa, Ontario, December 5, 2018
- 22. Manish Sadarangani, Shaun K. Morris, James D. Kellner, Nicole Le Saux, Joanne Embree, Otto G. Vanderkooi, Irene Martin, Walter Demczuk, Gregory J. Tyrrell, Wendy Vaudry, Scott Halperin and Julie Bettinger, on behalf of the members of the Canadian Immunization Monitoring Program, Active. Clinical features and Outcomes of Invasive Pneumococcal Disease in Canada Between 1991 and 2015. Poster presentation at the

- 11<sup>th</sup> International Symposium on Pneumococcci and Pneumococcal Diseases, Melbourne, Australia, April 1-19, 2018. Poster at the Canadian Immunization Conference, Ottawa, Ontario, December 5, 2018
- 23. Alyssa Smith, Joanne McNair, Julie Bettinger, Wendy Vaudry, Otto G. Vanderkooi, Shalini Desai, Scott Halperin, Karina Top, for the members of IMPACT. Impact of pneumococcal conjugate vaccination programs on Streptococcus pneumonia disease in children with cancer: A report from the Canadian Immunization Monitoring Program Active. Oral abstract presentation at the Pediatric Academic Societies (PAS) 2018 Meeting, May 5-8, in Toronto, Canada.
- Y. Murad, T.-Y. Hung, M. Sadarangani, J.D. Kellner, O.G. Vanderkooi, N. Le Saux, G. Tyrrell, I. Martin, W. Demczuk, S.K. Morris, S.A. Halperin, J. Bettinger. Retrospective analysis of clinical presentations and outcome of Canadian Children with recurrent Invasive Pneumococcal Disease: from IMPACT surveillance network. 39th Annual Meeting of the European Society for Paediatric Infectious Diseases (ESPID), Geneva, Switzerland (online), May 24-29, 2021 (Abstract #592, poster)
- 25. James E. A. Zlosnik, Julie A. Bettinger, Walter Demczuk, Corey Nislow, Scott A. Halperin, Wendy Vaudry, Otto G. Vanderkooi, Irene Martin, Gregory J. Tyrrell, James D. Kellner, Manish Sadarangani, for the members of IMPACT. Whole genome sequencing of Streptococcus pneumoniae from children with pneumonia in Canada between 1991 and 2016 from the Canadian Immunization Monitoring Program ACTive (IMPACT). 39th Annual Meeting of the European Society for Paediatric Infectious Diseases (ESPID), Geneva, Switzerland (online), May 24-29, 2021 (Abstract #441, Pre-Recorded Oral Presentation and Live Q&A)
- 26. Lee LD, Yu K, Sadarangani M, Kellner JD, Le Saux N, Embree J, Halperin SA, Morris SK, Demczuk W, Martina I, Li YA, Bettinger JA for the members of IMPACT. Vaccine Histories and Serotypes of Streptococcus Pneumoniae-Associated Hemolytic Uremic Syndrome in Canadian Children: Immunization Monitoring Program ACTive (IMPACT). 39<sup>th</sup> Annual Meeting of the European Society of Paediatric Infectious Diseases, Virtual, May 24-29, 2021 (Abstract 82, Pre-Recorded Oral Presentation and Live Q&A)
- 27. Lee LD, Sadarangani M, Le Saux N, Reyes Domingo F, Kellner JD, Embree J, Vaudry W, Morris SK, Halperin SA, Bettinger JA for the members of IMPACT. Streptococcus Pneumoniae-Associated Hemolytic Uremic Syndrome in Canadian Children with Invasive Pneumococcal Disease: From IMPACT National Surveillance Network. International Society of Nephrology World Congress of Nephrology 2021, hosted by the Canadian Society of Nephrology and la Société Québécoise de Néphrologie, Virtual, April 15-19, 2021 (Abstract WCN21-0380, Pre-Recorded Poster Presentation). Canadian Society of

Nephrology Annual General Meeting, Virtual, May 10-13, 2021 (Poster P-002, Pre-Recorded Oral Presentation and Live Q&A). Kidney International Reports, Volume 6, Issue 4, S84 (Abstract POS-199)(Accepted abstracts published electronically in Kidney International Reports, an official International Society of Nephrology Journal (https://www.kireports.org/issue/S2468-0249(21)X0004-6))

28. Murad Y, Hung TY, Sadarangani M, Morris SK, Le Saux N, Vanderkooi OG, Kellner JD, Tyrrell GJ, Martin I, Demczuk W, Halperin SA, Bettinger JA; Members of IMPACT. Clinical Presentations and Outcomes of Children in Canada with Recurrent Invasive Pneumococcal Disease from the IMPACT Surveillance Network. Pediatr Infect Dis J. 2022; doi: 10.1097/INF.0000000000003454

#### Varicella

# **Publications:**

- Law B, Fitzsimon C, Ford-Jones L, MacDonald N, Dery P, Vaudry W, Mills E, Halperin S, Michalszyn A and Riviere M. Cost of chickenpox in Canada: Part 1. Cost of Uncomplicated Cases. Pediatrics 1999; 104:1-6 <a href="http://pediatrics.aappublications.org/cgi/content/abstract/104/1/1">http://pediatrics.aappublications.org/cgi/content/abstract/104/1/1</a>
- 2. Law B, Fitzsimon C, Ford-Jones L, McCormick J, Riviere M and Members of the Immunization Monitoring Program, Active (IMPACT). Cost of chickenpox in Canada: Part 11. Cost of Complicated Cases and Total Economic Impact. Pediatrics 1999; 104:1-7 <a href="http://pediatrics.aappublications.org/cgi/content/abstract/104/1/7">http://pediatrics.aappublications.org/cgi/content/abstract/104/1/7</a>
- 3. Law, B and Members of the CPS/LCDC Immunization Monitoring program Active (IMPACT). Prospective Surveillance of Varicella Zoster Infections among hospitalized Canadian Children: 1991-1996. Can. Comm. Dis. Report (CCDR) 2000; 26-15 <a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/00vol26/dr2615ea.html">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/00vol26/dr2615ea.html</a>
- 4. Law B, MacDonald N, Halperin S, Scheifele D, Dery P, Jadavji T, Lebel M, Mills E, Morris R, Vaudry W, Gold, R, Marchessault V, and Duclos P. The Immunization Monitoring Program Active (IMPACT) prospective five-year study of Canadian children Hospitalized for chickenpox or as an associated complication. PIDJ, 2000; 19:1053-9

  <a href="http://journals.lww.com/pidj/Abstract/2000/11000/The Immunization Monitoring Program Active.5.aspx">http://journals.lww.com/pidj/Abstract/2000/11000/The Immunization Monitoring Program Active.5.aspx</a>
- 5. Scheifele DW, Law B, Halperin SA, Tam T, for members of the Immunization Monitoring Program, ACTive (IMPACT). Seven fatal varicella infections in children were potentially avoidable: A report from IMPACT centres from 2000 to 2005. Paediatrics & Child Health; 11(7) September 2006, pp 413-415

  <a href="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isuKy=457&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?sCurrPg=abstract&jnlKy=5&atlKy=7082&isArt=t&fromfold="http://www.pulsus.com/journals/abstract.jsp?scurrPg=abstract&jnlKy=5&atlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&isArt=t&jnlKy=7082&is

6. Tan, Ben MD, Bettinger, Julie PhD, McConnell, Athena MD, MSc, Scheifele, David MD, Halperin, Scott MD, Vaudry, Wendy MD, Law, Barbara MD, for Members of the Canadian Immunization Monitoring Program, Active (IMPACT). The Effect of Funded Varicella Immunization Programs on Varicella-related Hospitalizations in IMPACT Centers, Canada, 2000–2008. Pediatric Infectious Disease Journal: September 2012 - Volume 31 - Issue 9 - p 956–963 <a href="http://journals.lww.com/pidj/Abstract/2012/09000/The Effect of Funded Varicella Immunization.23.aspx">http://journals.lww.com/pidj/Abstract/2012/09000/The Effect of Funded Varicella Immunization.23.aspx</a>

- Law BJ, Scheifele DW and Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). Prospective hospital-based surveillance of varicella zoster virus infections in Canada: January 1991 - October 1994. Society for Pediatric Research Annual Meeting, San Diego, May, 1995. Pediatric Research 1995; 37:110A (Abstract # 644)
- 2. Law BJ, Scheifele DW and Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). Impact of varicella zoster immune globulin on hospital course of chickenpox among immunocompromised children. 35<sup>th</sup> ICAAC, San Francisco, September, 1995 (Abstract # H141)
- 3. Law B, Fitzsimon C, Michaliszyn A, McCormick J, Ford-Jones E, Members of the CPS/LCDC Immunization Monitoring Program, Active (IMPACT). The cost of care of chickenpox in Canada. 1998 Interscience Conference on Antimicrobial Agents and Chemotherapy, San Diego CA
- 4. Law B, Fitzsimon C, McCormick J, Michaliszn A, Ford-Jones E and Members of IMPACT. The cost of care of chickenpox in Canada. 3<sup>rd</sup> National Immunization Conference, Calgary, 1998. (Abstract P19)
- 5. Law B and Members of IMPACT. Pediatric hospital-based surveillance for chickenpox in Canada, 1991-1996. 3<sup>rd</sup> National Immunization Conference, Calgary, 1998. (Abstract P21)
- 6. Law B, Scheifele D, Halperin SA for Members of the CPS/Health Canada Immunization Monitoring Program, Active (IMPACT), Ottawa, ON, Canada. Missed Opportunities for Varicella Prevention 2000-2002. Oral Presentation # 120 at the 81<sup>st</sup> Annual Meeting of the Canadian Pediatric Society, June 18, 2004

- 7. B Tan, J Bettinger, D Scheifele, S Halperin, W Vaudry, S Fan, B Law, R Bortolussi, other IMPACT members. The Effect of Provincially-Funded Varicella Immunization Programs on Varicella Related Hospitalizations in IMPACT Centers, 1999-2007 Oral Presentation (Abstract 121) at the 86<sup>th</sup> Annual Conference of the Canadian Paediatric Society, Ottawa, June 26, 2009
- 8. Ben Tan, Julie Bettinger, Athena McConnell, Roseline Thibeault, Taj Jadavij, Francesca Reyes Domingo, Heather Samson, Alberto Severini, Wendy Vaudry, Scott Halperin, for the members of IMPACT, Surveillance and Epidemiology Division, National Microbiology Laboratory, Varicella hospitalizations in IMPACT (Immunization Monitoring Program, Active) centers after introduction of 1- and 2-dose varicella vaccination programs between 2000 and 2015. Poster presentation at the 95<sup>th</sup> Canadian Paediatric Society Annual Conference, May 30-June 2, 2018, Quebec City, Quebec. Oral abstract presentation at the Canadian Immunization Conference, Ottawa, Ontario, December 4, 2018

#### Zoster

#### **Publications:**

 Wootton SH, Law B, Tan B, Mozel M, Scheifele D, Halperin S. The epidemiology of children hospitalized with herpes zoster in Canada: Immunization Monitoring Program, Active (IMPACT) 1991-2005. The Pediatric Infectious Disease Journal; February 2008; 27 (2): 112-16 http://journals.lww.com/pidj/Abstract/2008/02000/The\_Epidemiology\_of\_Children\_Ho spitalized With.4.aspx

# **Presentations:**

 Wootton S, Law B, Tan B, Scheifele D. The Epidemiology of herpes Zoster Among Children Hospitalized In Canadian Immunization Monitoring Program Active (IMPACT) Centers. Poster presentation # 112 at the 83<sup>rd</sup> Annual Conference of the Canadian Paediatric Society, June 15, 2006, St. John's, NL. (Judged best Fellows' poster

# D. Other Knowledge Translation activities

This new section, added in September 2012, will include activities that are notable contributions to the greater good. There have been many KT activities in the past but only 2012 onwards will be added.

Lecturing and Coaching:
 June 2012: A plenary lecture was given by Dr. David Scheifele at the 13<sup>th</sup> National Immunization Conference in Darwin, Australia. "Canada's Immunization Monitorina

*Program, Active (IMPACT): Looking back, looking forward".* This lecture invitation then enabled "coaching" with the faculty of the PAEDS surveillance network (Australia's IMPACT equivalent).

# • Federal/Provincial/Territorial Information sharing:

Quebec Provincial Advisory committee - provided a summary of the Quebec IMPACT influenza surveillance from 2009-2012 including fatalities.

# • International Information sharing:

FDA requested some copies of already presented abstracts and posters with respect to surveillance of meningococcal invasive infections.

#### • Liaison with other networks:

A new liaison member of ISARIC - International Severe Acute Respiratory Infection Consortium. ISARIC is a multi-regional collaboration of research networks with a focus on Investigator-led clinical studies in adults and children. ISARIC's mission is both to conduct world-class clinical research in the inter-pandemic influenza period and to provide a collaborative platform through which clinical studies could be undertaken rapidly in response to the emergence of a novel respiratory pathogen or other new infectious disease outbreak. <a href="http://isaric.tghn.org/about/">http://isaric.tghn.org/about/</a>

- Collaborated with the PRIDE (Post-pandemic Review of anti-Influenza Drug Effectiveness) study group which is conducting a patient-level global meta-analysis on the effectiveness of antiviral use on outcomes of public health importance during the 2009/10 (swine) influenza A/H1N1v. <a href="http://www.nottingham.ac.uk/research/groups/healthprotection/projects/pride.aspx">http://www.nottingham.ac.uk/research/groups/healthprotection/projects/pride.aspx</a>
- IMPACT collaborates with Global Research in Paediatrics Project (GRiP), funded by the European commission. The aim of GRiP is to stimulate and facilitate the development of and safe use of medicines and vaccines in children. Databases are not linked but nonnominal data common to multiple databases are extracted and merged. S. Halperin participated on behalf of IMPACT. <a href="http://www.grip-network.org/index.php/cms/en/home">http://www.grip-network.org/index.php/cms/en/home</a>
- IMPACT collaborates with the Brighton Collaboration as part of Canada's national AEFI reporting system. <a href="https://brightoncollaboration.org/public">https://brightoncollaboration.org/public</a>
- Acknowledged by Paul Adamiak et al. Effectiveness of the standard and an alternative set of Streptococcus pneumonia multi locus sequence typing primers BMC Microbiology 2014, 14:143 http://www.biomedcentral.com/1471-2180/14/143

- Collaboration with pertussis data for CCDR publication <a href="http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/14vol40/dr-rm40-03/index-eng.php">http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/14vol40/dr-rm40-03/index-eng.php</a>
- Data requests from PHAC epidemiologists for updating sections of the Canadian Immunization Guide
- (Upshots) How best to describe the risk of meningococcal B infection? Paediatric Child Health 2013; 18-10; 543
- Acknowledged by Crawford et al. Active surveillance for adverse events following immunization Expert Review of Vaccines 2014 13(2) 265-276 describing active surveillance and mentioning IMPACT.
   http://informahealthcare.com/doi/abs/10.1586/14760584.2014.866895
- Acknowledged by Thoon et al. Active surveillance of adverse events following childhood immunization in Singapore Vaccine 32 (2014) 5000-5005 (Page 5001: "The hospital-based active surveillance program was loosely adapted from the Canadian Immunization Monitoring Programme, Active (IMPACT).")
   www.sciencedirect.com/science/article/pii/S0264410X14009463
- Hospital Pediatric Resident Research day presentations on various IMPACT data: Sick kids – Toronto 2014; Stollery- Edmonton 2014: Wendy Vaudry on previously published data -PIDJ Volume 33, Number 7, July 2014, 710-714; at the University of Alberta, Department of Pediatrics Research day; May 30, 2014 Burden of Seasonal Influenza in Children With Neurodevelopmental Conditions
- Influenza Surveillance Expert Working Group (SEWG) December 9, 2015 Julie Bettinger
- CIRN/CCfV Research Education Series IMPACT presentation on May 8, 2015 and January 8, 2016: Heather Samson
- Dr. Karina Top. Canadian Immunization Monitoring Program, Active (IMPACT): 25 years of surveillance presented at the 10<sup>th</sup> Anniversary Showcase of PAEDS – Paediatric Active Enhanced Disease Surveillance, Melbourne Australia July 26, 2017
- Dr. Nicole Le Saux. IMPACT: A Model of Active Surveillance presented at the Vaccine Sciences Symposium, Toronto Ontario November 15, 2017
- Dr Julie Bettinger presented "Overview of IMPACT and IMPACT's Influenza Surveillance" at the National Centre for Immunisation Research and Surveillance, April 23, 2018, Sydney, Australia

- Dr Scott Halperin. Overview of IMPACT, Canada's Immunization Monitoring Program
   ACTive, presented to the Canadian Immunization Registries network on September 25,
   2018
- Dr Wendy Vaudry: "The Immunization Monitoring Program, Active: The IMPACT of a generation of surveillance in Canada" presented at the University of Alberta Infectious Diseases academic rounds, November 2018, Edmonton, Alberta
- Dr Wendy Vaudry: IMPACT presented in the Department of Pediatrics Working Wonders annual review, April 2019, Edmonton, Alberta. https://issuu.com/ualbertadepartmentofpediatrics/docs/ww prepress 2up/26
- Dr. Karina Top and Dr. Julie Bettinger presented at Centre for Vaccine Preventable Diseases, University of Toronto. "COVID-19 Vaccine Safety Surveillance in Canada." (Virtual). February 8, 2021.