

Corinne Aileen Riddell, PhD

1020 Pine Avenue West
Montréal, QC H3A 1A2
Canada
✉ corinne.riddell@mail.mcgill.ca
🌐 corinne-riddell.github.io

Education

- 2016 - 2017 **Post-doctoral Researcher in Social Epidemiology**, McGill University
Area: Inequalities in health between black and white Americans
Supervisor: Dr. Jay Kaufman
- 2011 - 2016 **PhD, Epidemiology**, McGill University
Thesis: Hospital variation and cesarean delivery: studies of contemporary practice patterns in Canada and the United States
Joint supervision: Dr. Jay Kaufman and Dr. Jennifer Hutcheon
- 2009 - 2011 **MSc Statistics, Biostatistics Option**, University of British Columbia
Thesis: An adaptive clinical trial design for a sensitive subgroup examined in the multiple sclerosis context
Joint supervision: Dr. John Petkau and Dr. Yinshan Zhao
Winner of the Marshall Prize for achieving great distinction in statistics
- 2004 - 2009 **BMath, Honours Statistics**, Co-operative Program, University of Waterloo
Graduated with Distinction
- 2004 - 2009 **BBA, Honours Business Administration**, Wilfrid Laurier University

Honours & Awards

Research Fellowships

- 2013 - 2015 Canadian Institutes of Health Research (CIHR) Doctoral Research Award \$35,000 per annum
2013 Health Disparities: Inter-generational Dynamics and Empirical Assessment Strategies Studentship Award \$6,000
2011 McGill University Doctoral Fellowship \$6,823
2011 Natural Sciences and Engineering Research Council (NSERC) Doctoral Research Award \$35,000

Merit-Based Awards

- 2016 RStudio::conf Diversity Award (RStudio) \$1100
2015 Centre on Population Dynamics Student Travel Award (McGill) \$200
2013 Graduate Research Enhancement and Travel Award (McGill) \$500
2011 Killam Graduate Teaching Assistant Award (UBC) \$1,000
2011 Statistics Department Graduate Teaching Assistant Award (UBC) \$500
2011 Statistics Department Marshall Prize Winner (UBC) \$500
2011 European Committee for Treatment and Research in Multiple Sclerosis Travel Grant €800
2010 European Committee for Treatment and Research in Multiple Sclerosis Travel Grant €800

Publications

Peer-Reviewed Journal Articles

11. **Riddell CA**, Hutcheon JA, Strumpf EC, Abenhaim HA, Kaufman JS. Inter-institutional variation in use of cesarean delivery for labour dystocia. *Journal of Obstetrics and Gynaecology Canada*. September 12: 10.1016/j.jogc.2017.05.003 [Epub ahead of print].
10. **Riddell CA**, Kaufman JS, Harper S. Understanding the recent increase in black infant mortality in the US [Letter]. *JAMA Pediatrics*. 2017; 171(9):911-913.
9. **Riddell CA**, Platt RW, Bodnar LM, Hutcheon JA. Classifying gestational weight gain trajectories using the SITAR growth model. *Paediatric and Perinatal Epidemiology*. 2017; 31(2):116-125.
8. Hutcheon JA, **Riddell CA**, Strumpf EC, Lee L, Harper S. Safety of labour and delivery following obstetrical services closures in small community hospitals in British Columbia, Canada. *Canadian Medical Association Journal*. 2017; 189(11):E431-E436.
7. **Riddell CA**, Kaufman JS, Strumpf EC, Abenhaim HA, Hutcheon JA. Cervical dilation at time of cesarean delivery in nulliparous women: a population-based cohort study. *British Journal of Obstetrics and Gynaecology*. 2016 Aug 26: 10.1111/1471-0528.14275 [Epub ahead of print]
6. **Riddell CA**, Hutcheon JA, Dahlgren LS. Differences in obstetric care among nulliparous First Nations and non-First Nations women in British Columbia, Canada. *Canadian Medical Association Journal*. 2015; 188(2): E36-43.
5. **Riddell CA**, Kaufman JS, Hutcheon JA, Strumpf EC, Teunissen PW, Abenhaim HA. Effect of uterine rupture on a hospital's future rate of vaginal birth after cesarean delivery. *Obstetrics & Gynecology*. 2014; 124(6): 1175-1181.
4. Shrier I, Steele RJ, Verhagen E, Herbert R, **Riddell CA**, Kaufman JS. Beyond Intention-to-Treat: what is the right question? *Clinical Trials*. 2014; 11(1): 28-37.
3. **Riddell CA**, Zhao Y, Petkau J. An adaptive clinical trial design for a sensitive subgroup examined in the multiple sclerosis context. *Statistical Methods in Medical Research*. 2016; 25(4): 1330-1345.
2. Walter SD, **Riddell CA**, Rabachini T, Villa LL, Franco EL. Accuracy of p53 Codon 72 Polymorphism Status Determined by Multiple Laboratory Methods: A Latent Class Model Analysis. *PLoS One*. 2013; 8(2): e56430.
1. **Riddell CA**, Zhao Y, Li DK, Petkau J, Riddehough A, Cutter GR, Traboulsee A. Evaluation of safety monitoring guidelines based on MRI lesion activity in multiple sclerosis. *Neurology*. 2011; 77(24): 2089-2096.

Clinical Guidelines

Lee L, Dy J, Azzam H, Clinical Practice Obstetrics Committee, **Special Contributors**. Society of Obstetricians and Gynaecologists of Canada Clinical Practice Guideline No. 336. Management of Labour at Term in Healthy Women. *Journal of Obstetrics and Gynaecology Canada*. 2016; 38(9):843-864.

Submitted

Riddell CA, Morrison KT, Harper S, Kaufman JS. Historical trends in the contribution of six major causes of death to the black-white life expectancy gap by US state. Submitted to *Health & Place*. JHAP_2017_614.

Presentations

Conference Presentations

Riddell CA, Morrison KT, Harper S, Kaufman JS. Exploring how changes in cause of deaths have narrowed the black-white life expectancy gap in the United States. Working paper presented at the *4th Human Mortality Database Symposium 'Similarities and peculiarities on the way to longer life'*. Berlin, Germany. May 2017.

Riddell CA, Morrison KT, Harper S, Kaufman JS. An interactive exploration of how changes in cause of death have narrowed the black-white life expectancy gap in the United States. Keynote student speaker at the *McGill University Department of Epidemiology, Biostatistics, and Occupational Health Research Day*. Montreal, QC. April 2017.

Riddell CA, Kaufman JS, Strumpf E, Abenhaim HA, Hutcheon JA. The effect of uterine rupture on obstetrical management in U.S. hospitals. Paper presented at the *47th Annual Meeting of the Society for Epidemiologic Research*. Seattle, WA. June 2014.

Walter SD, Jiang H, **Riddell CA**. 100 years on: a new look at survivorship on the Titanic. Presentation at the *International Biometric Society: Eastern North American Region Annual Meeting*. Washington DC. April 2012.

Riddell CA, Zhao Y, Petkau AJ. An adaptive clinical trial design for a sensitive subgroup examined in the multiple sclerosis context. *Multiple Sclerosis*. October 2011; 17 (Suppl 10); p S35.

Conference Posters

Riddell CA, Hutcheon JA, Dahlgren LS. Differences in the use of obstetrical interventions and procedures by First Nations status in British Columbia. Poster presented at the *48th Annual Meeting of the Society for Epidemiologic Research*. Denver, CO. June 2015.

Riddell CA, Hutcheon JA, Kaufman JS. Variation in hospital-level management of labour dystocia across three Canadian provinces. Poster presented at the *28th Annual Meeting of the Society for Perinatal and Pediatric Epidemiologic Research*. Denver, CO. June 2015.

Riddell CA, Hutcheon JA, Dahlgren LS. Differences in the use of obstetrical interventions and procedures by First Nations status in British Columbia. Poster presented at the *3rd Annual Canadian National Perinatal Research Meeting*. Montebello, QC. Feb 2015.

Riddell CA, Kaufman JS, Strumpf E, Abenhaim HA, Hutcheon JA. The effect of uterine rupture on obstetrical management in U.S. hospitals. Poster presented at the *2nd Annual Canadian National Perinatal Research Meeting*. Banff, Alberta. February 2014.

Auclair MH, Gagnon R, Snyder J, Basso O, Shrim A, **Riddell CA**. Relationship between maternal RBC folate levels and fetal growth. *JOGC*. May 2014; 36(5): p S28.

Zhao Y, **Riddell CA**, Li D, Petkau AJ, Riddehough A, Cutter G, Traboulsee A. Evaluation of safety monitoring rules based on monthly contrast enhancing lesion activity in secondary progressive multiple sclerosis. *Multiple Sclerosis*. October 2010; 16 (Suppl 10); p S261.

Riddell CA, Zhao Y, Li D, Petkau AJ, Riddehough A, Cutter G, Traboulsee A. Predicting the occurrence of relapse in SPMS patients — are rules based on CEL counts effective? *Multiple Sclerosis*. October 2010; 16 (Suppl 10); p S111.

EJ Cormier, Y Liang, **CA Riddell**. Metabolism Contribution of bradykinin and des-Arg⁹-BK on angioedema pathophysiology. Poster presented at the *Annual Meeting of the Statistical Society of Canada*. Quebec, QC. May 2010.

Gorter JW, **Riddell CA**, Walter SD, Bartlett D, Russell D. Mobility and self-care in adolescents with cerebral palsy: parent and adolescent perspectives. *Developmental Medicine and Child Neurology*. September 2009; 51 (Suppl 5); p 35.

Teaching

Guest Lecturer, EPIB604 (McGill): Epidemiologic Analysis: 1 Lecture on Bootstrap and Simulation Studies. Fall 2016.

Guest Lecturer, EPIB604 (McGill): Epidemiologic Analysis: 1 Lecture on Measures of Occurrence. Fall 2016.

Guest Lecturer, EPIB609 (McGill): Seminar on Advanced Methods in Epidemiology: 1 Lecture on Multiple Imputation using Chained Equations. Fall 2014.

Guest Lecturer, EPIB604 (McGill): Epidemiologic Analysis: 2 Lectures on Measures of Occurrence and Measures of Effect/Association. Fall 2014.

Guest Lecturer, Royal Victoria Hospital Residents teaching block: Limitations to before-and-after studies and ways forward. May 2014.

Guest Lecturer, EPIB672 (McGill): Estimating Causal Effects of Social Policy: An applied example of instrumental variable analysis. Spring 2013.

Guest Lecturer, EPIB604 (McGill): Epidemiologic Analysis: 2 Lectures on Measures of Occurrence and Measures of Effect/Association. Fall 2013.

Guest Lecturer, EPIB604 (McGill): Epidemiologic Analysis: 1 Lecture on Dose Response and Trend Analysis. Fall 2012.

Course Module Instructor, STAT100 (University of British Columbia): Statistical Thinking: Instructor of the Probability Module. Winter 2011.

Teaching Assistant, STAT200 (University of British Columbia): Elementary Statistics for Applications. Fall 2009 & Winter 2010.

Teaching Assistant, MATH128 (University of Waterloo): Calculus for the Sciences. Fall 2005.

Research Experience

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| Mar 2016 - Jun 2016 | <p>Research Assistant, Department of Obstetrics & Gynaecology (UBC).</p> <ul style="list-style-type: none">• Investigated differences in care between First Nations women and the general population within British Columbia (published in <i>CMAJ</i>, first author).• Applied novel methods to examine trajectories of maternal weight gain during pregnancy (published in <i>Paediatric and Perinatal Epidemiology</i>, first author). |
| Feb 2010 - May 2011 | <p>Research Assistant, MS/MRI Research Group (UBC).</p> <ul style="list-style-type: none">• Investigated safety rules and clinical trial design in multiple sclerosis.• Work based on this research is published in <i>Neurology</i> and <i>Statistical Methods for Medical Research</i> (both first author). |
| Sep 2008 - Dec 2008
(paid internship) | <p>Research Assistant, Clinical Epidemiology and Biostatistics (McMaster University).</p> <ul style="list-style-type: none">• Performed a latent class analysis to estimate a patient's true genotype using the results of several genotyping methods (published in <i>PLoS ONE</i>, second author).• Used hierarchical models to explore changes in perception of mobility of children with cerebral palsy. |
| Jan 2007 - Apr 2007
(paid internship) | <p>Junior Statistician, Statistics Canada.</p> <ul style="list-style-type: none">• Performed sample size calculations, determined sample allocation, and examined repeatability of measurements across multiple survey tools. |

Short-term consulting

- Developed a sample size calculator to determine sample sizes from clinical trials necessary to demonstrate maternal immunization efficacy against several vaccine/outcome pairs. Summer 2017 (Ongoing).
- Drafted summaries of studies and assessed measurement bias for a WHO taskforce evaluating burden of influenza disease during pregnancy. Winter 2014.
- Performed statistical analysis for a Maternal Fetal Medicine resident on her research project. Winter 2014.
- Assisted a physician/epidemiologist with R code development and substantial manuscript revision on a project using causal inference techniques. Aug 2012 - Aug 2013.
- Provided statistical consulting services to UBC graduate students as part of the Statistics Department Short Term Consulting Service. Jun 2010 - May 2011.

Technical Skills

Software and Programming

Proficient	R, Stata
Competent	R markdown, R shiny apps, github, \LaTeX , QGIS
Familiar	HTML/CSS, SAS, SPSS

Analysis and Theory

- Data wrangling (dplyr), data visualization (ggplot2, plotly), interactive web applications (shiny)
- Epidemiological study design and theory, causal inference theory
- Linear models, generalized linear models, multi-level models
- Econometric approaches to causal inference (fixed effects regression, difference-in-differences designs)
- Miscellaneous skills: data linkage, multiple imputation, bootstrapping, statistical simulations

Professional Development

Peer Review

Paediatric & Perinatal Epidemiology
Canadian Medical Association Journal
Epidemiology
Journal of Clinical Epidemiology

Canadian Journal of Public Health
Medical Care
BMC Health Services Research

Memberships

Society for Epidemiological Research (2013 - Present)
Society for Pediatric and Perinatal Epidemiologic Research (2013 - Present)

Workshops

Applied Spatial Analysis in Perinatal and Pediatric Epidemiology and Analyzing Multiple Exposures, SPER Advanced Methods Workshop. Denver. Jun 15, 2015.

Indigenous Health and Human Rights Conference, McGill University. Montréal. Feb 21, 2015.

Instrumental Variables, Statistical Horizons. Philadelphia. Nov 7-8, 2014.

Simulation Methods and Prediction Modeling, SPER Advanced Methods Workshop. Seattle. Jun 23, 2014.

Honouring Partnership: Promoting Engagement & Sensitivity in Aboriginal Health Research, McGill University. Montréal. Oct 4, 2013.

Biomarker Measurement Error and Propensity Scores, SPER Advanced Methods Workshop. Boston. Jun 17, 2013.

Bayesian Adaptive Methods for Clinical Trials, Joint Statistical Meeting. Vancouver. Aug 3, 2010.

Service

Workshop on When, Where, and Why to do a PhD/Post-Doc (McGill): Nov 2016

Coordinator for the Causal Reading Group (McGill): Coordinator: Sept 2013 - Mar 2014

Workshop on how to choose your supervisor (McGill): Nov 2013

Student Comprehensive Examination Representative (McGill): Sept 2012 - June 2013

Web archivist for Internal Introductory Statistics Meetings (UBC): 2011

Course monitor for Bayesian Inference for Surveys (Joint Statistical Meeting): Aug 2010

Assistant TA Trainer (UBC): Fall 2010

Graduate Trip Organizer (UBC): Sept 2010

References

Available upon request.