

DISCIPLINE OF OBSTETRICS & GYNECOLOGY

36th Annual
Resident
Research Day
May 30, 2025

Beyond the Scalpel:

The Resident's Path to Academic Leadership

PROGRAM



MEMORIAL
UNIVERSITY

MEDICINE

LAND ACKNOWLEDGEMENT

We acknowledge that the lands on which Memorial University's campuses are situated are in the traditional territories of diverse Indigenous groups, and we acknowledge with respect the diverse histories and cultures of the Beothuk, Mi'kmaq, Innu, and Inuit of this province.

This academic event is made possible through financial support from:



DISCIPLINE OF OBSTETRICS & GYNECOLOGY 36TH ANNUAL RESIDENT RESEARCH DAY

AGENDA

- 8:00 **Introduction and Welcome**
Dr. Joannie Neveu
- 8:05 **Opening Remarks**
Dr. Dolores McKeen, Dean of Medicine

PART 1: ORAL PRESENTATIONS

RESIDENT RESEARCH INCUBATOR: CONCEPT PRESENTATION

- 8:20 [Current Care Practices in Surgical Management of Pediatric Ovarian Lesions](#)
Dr. Naomi Gazendam
- 8:30 [Protect the Dolls: Barriers to Postoperative Care in a Remote Tertiary Centre following Gender-Affirming Vulvovaginoplasty](#)
Dr. Michael Hand
- 8:40 [Vaginal Estrogen for Improvement of Outcomes Following Pelvic Organ Prolapse Surgery: A Pilot Study](#)
Dr. Grace Power
- 8:50 [Cut, Core, Close: Advancing Myomectomy Skills Through a Novel Tissue-Based Simulation Model - A Multi-Institutional Validation Study in OBGYN Residency Training](#)
Dr. Roberta Dolling-Boreham
- 9:00 [Drivers of Increasing Cesarean Delivery Rates at the Health Sciences Centre: A Five-Year Analysis of Contributing Factors](#)
Dr. Rachel Sorensen
- 9:10 [Surgical Sexism – Does Sex Influence Time to Treatment in Patients Presenting with Acute Appendicitis?](#)
Dr. Sarah Herst
- 9:20 [Chemotherapy Infusion Reaction Before and After COVID-19 Vaccination: A Real-World Study](#)
Maria Saleeb
- 9:30 [Cervical Cancer Screening and Prevention amongst the new Canadian \(no abstract\)](#)
Dr. Rachel Sorensen
- 9:40 [Metformin: A New Frontier in Treating Disordered Proliferative Endometrium and Simple Hyperplasia – A Randomized-Controlled Clinical Study](#)
Dr. Gabrielle DiLorenzo

9:50 – 10:20 BREAK AND POSTER PRESENTATIONS

PART 2: ORAL PRESENTATIONS

IN TRANSIT: RESIDENT RESEARCH WITH EARLY RESULTS

- 10:20 [Uncovering Endometrial Abnormalities in Obese Women Awaiting Bariatric Surgery: A Case for Opportunistic Screening](#)
Dr. Gabrielle DiLorenzo
- 10:35 [Mortality Risk Factors in Newfoundland and Labrador in Women with Ovarian Cancer](#)
Dr. Ann Weber
- 10:50 [Effect of Postoperative Pedometer Use on Recovery Outcomes in Patients Undergoing Laparotomy for Major Gynecologic Surgery: A Pilot Study Randomized Controlled Trial](#)
Dr. Sarah Manning
- 11:05 [The Incision Decision: Triaging Caesarean Sections to Optimize Decision to Delivery Interval](#)
Dr. Sarah Benson
- 11:20 [The Biomechanical Analysis of Individuals Living With Symptoms of Female Pelvic Floor Disorders During Prolonged Standing: A Laboratory-Based Case-Series Study](#)
Ava McGrath

11:40 – 12:10 LUNCH

GUEST SPEAKER

- 12:10 [From Ideas to Impact: A Resident's Guide to a Life in Academic Medicine](#)
Dr. Pedro T. Ramirez, Houston Methodist

PART 3: ORAL PRESENTATIONS

COMPLETED PROJECT

- 1:20 [Association Between Elevated Pre-Pregnancy Body Mass Index and Outcomes of Labour Induction: A Retrospective Cohort Study](#)
Dr. Erin Marshall/Dr. Kaija Kaarid
- 1:35 [Early Prenatal Care Providers and Prenatal Screening: Perceptions and Practice Patterns of Prenatal Counselling in Newfoundland and Labrador](#)
Dr. Nicole MacEachren/Dr. Michaela Ryan
- 1:50 [The Association Between Episiotomy and Obstetrical Anal Sphincter Injuries Among Vacuum - Assisted Vaginal Deliveries: A population-based retrospective Canadian cohort study](#)
Dr. Chelsea Harris (Dalhousie)
- 2:05 [Laparoscopic Bariatric Surgery with Hysterectomy for Endometrial Cancer to Improve Long-Term Outcomes: A Prospective Cohort Study](#)
Dr. Emma Goddard

VIDEO PRESENTATION

2:20 [Intraureteral Indocyanine Green for Intraoperative Localization of the Ureters: A Video Presentation](#)
Dr. Kaija Kaarid/Dr. Emma Goddard

2:30 Acknowledgements
Dr. Joannie Neveu

2:40 Closing Remarks
Dr. Deanna Murphy

6:30 AWARDS PRESENTATION DINNER AND DANCE
YELLOWBELLY BREWERY

PART 1: ORAL PRESENTATIONS

Gazendam N, Kielly M

Memorial University

Research Supervisor: Dr. Maria Kielly

Objectives: Determine the percentage of pediatric ovarian lesions managed with ovarian sparing surgery (ie. cystectomy, ovarian detorsion, exploratory laparoscopy) vs oophorectomy at the Health Sciences Centre or the Janeway between 2003-2023. Determine the percentage of pathological diagnosis of benign vs malignant pediatric ovarian lesions managed with surgical intervention. Analyze factors that impacted surgical decision making for type of surgical intervention and provide research to bolster future advocacy for ovarian sparing surgical intervention.

Methods: This project will be a retrospective cohort study at a single academic hospital centre. Data will be obtained retrospectively using standardized codes for surgical interventions performed at the Health Sciences Centre or the Janeway for pediatric ovarian lesions between January 2003 to December 2023. Patients included in the study will be less than or equal to 18 years old at time of the surgical intervention.

Codes for procedures including exploratory laparoscopy, ovarian detorsion, ovarian cystectomy and oophorectomy will be utilized to determine which patient charts to review. Combined data sets and data derived from a structured chart review of medical records in which patient's age, symptoms at presentation, healthcare location at time of presentation, size and ultrasonographic features of the lesion, tumour markers, surgical intervention and final pathological diagnosis will be recorded. A logistic regression will be used to analyze predictors of OSS vs oophorectomy.

Results: Pending

Conclusion: Pending

PROTECT THE DOLLS: BARRIERS TO POSTOPERATIVE CARE IN A REMOTE TERTIARY CENTRE FOLLOWING GENDER-AFFIRMING VULVOVAGINOPLASTY

Hand M, Kielly M, Sinnott ML

Memorial University

Research Supervisor: Dr. Maria Kielly

Objectives: To identify the post-operative complications that arise following gender affirming vulvovaginoplasty in transgender patients. To identify possible patient characteristics and demographics that increase the risk of complications post-vulvovaginoplasty. To identify barriers and limitations to management of postoperative complications following vulvovaginoplasty in a remote tertiary care centre, separate from where the initial procedure was performed.

Methods: We will complete a mixed methods study, including a retrospective chart review and individual qualitative interviews of transgender and gender diverse patients followed by Dr Mari-Lynne Sinnott post-vulvovaginoplasty between 2015-2025. For our chart review, patients that required further follow-up beyond a standard post-operative appointment, or those that required referral to another specialist regarding a post-operative concern will be considered to have a postoperative complication. Patient demographics and other factors will also be collected, when available, and correlated to the prevalence of specific post-operative complications. These characteristics include but are not limited to, age, BMI, race, location, date and type of vaginoplasty, insurance, employment/education status, HRT type, medical comorbidities, psychiatric history, smoking and other drug use history, previous pelvic surgery history, management recommended for specific complication.

Through qualitative interviews with transgender patients who experienced complications post-vulvovaginoplasty, we will explore patient experiences and perspectives on barriers to care. Transcripts of these interviews will be analyzed through a modified grounded theory approach to identify common themes and barriers that arise. Sample size for the qualitative portion of this study will be determined based on data saturation.

Results: Pending

Conclusion: Pending

VAGINAL ESTROGEN FOR IMPROVEMENT OF OUTCOMES FOLLOWING PELVIC ORGAN PROLAPSE SURGERY: A PILOT STUDY

Power G, Azer N, Cullen J, Pudwell J, van der Merwe C, Wozney S

Memorial University

Research Supervisor: Dr. Nermine Azer

Objectives: The primary objective of this pilot study will be to determine recruitment rates to inform feasibility of a full-scale RCT. Secondary objectives include evaluating other feasibility parameters, examining the impact of vaginal estrogen on patient satisfaction, GSM symptoms and post-op complication rates at 6 weeks post-op, side effects and adherence rates, and prolapse recurrence rates.

Methods: This study will be a multi-center, randomized, open-label, parallel-group, feasibility-controlled trial recruiting patients from two tertiary centers in Canada (Kingston, ON and St. John's, NL). The planned sample size for this pilot study is N=180 (15% of the sample size needed for the full-size trial). It will include female patients 18 years or older who are undergoing apical suspension as part of recurrent or primary prolapse surgery with no history of mesh surgery. Patients receiving obliterative procedures, undergoing uterine sparing surgery, with a history of vaginal mesh surgery and those not undergoing an apical prolapse repair will be excluded. The intervention will be the use of vaginal estrogen for 6 weeks after surgery, with participants randomized into three groups to reflect current practice: no vaginal estrogen, vaginal estrogen twice weekly and nightly vaginal estrogen. Recruitment rates will be measured at twelve months. Patients will be evaluated at 6 weeks, 6 months, 1 year and 2 years post-op. Data collected at each of these time points will include: patients lost to follow up, patient satisfaction via questionnaire, GSM symptoms via questionnaire, GSM signs via physical exam and treatment failure rates. Information on side effects, adherence and post-op complication rates during the 6 week intervention period will also be collected.

Results: Pending

Conclusion: Pending

CUT, CORE, CLOSE: ADVANCING MYOMECTOMY SKILLS THROUGH A NOVEL TISSUE-BASED SIMULATION MODEL - A MULTI-INSTITUTIONAL VALIDATION STUDY IN OBGYN RESIDENCY TRAINING

Dolling-Boreham R, Rattray D, Neveu J

Memorial University

Research Supervisor: Dr. Joannie Neveu

Objectives: To develop and validate a cost-effective, medium-to-high fidelity laparoscopic myomectomy simulation model for OBGYN residents, aimed at improving laparoscopic surgical skills, procedural understanding, and confidence.

Methods: A novel simulation model will be constructed using beef roast (uterus), cow tongue (fibroids), and pig fallopian tubes, assembled to allow for realistic surgical steps including electrosurgery. The simulation will involve OBGYN residents (PGY 1–5) and staff surgeons across two Canadian institutions. Participants will engage in a didactic session, laparoscopic myomectomy simulation, and repeat the procedure a week later. Staff will complete one simulation for validation purposes. Performance will be video recorded and assessed by blinded expert reviewers using the GOALS scale, a validated suturing scale by Moorthy et al., and a novel myomectomy specific scoring system to assess procedural knowledge and skill. Pre and post simulation surveys will be used to assess realism, utility, and educational impact.

Results: We expect roughly 20 residents and 10 staff surgeons across both institutions to participate. The model is expected to simulate a real-life fibroid uterus for simulation of laparoscopic myomectomy effectively. We expect higher performance scores by expert surgeons compared to residents, and significant improvement in resident scores between simulation sessions. As a result, we expect this model to demonstrate both face and construct validity. Preliminary cost analysis estimated \$20 per unit.

Conclusion: Pending

DRIVERS OF INCREASING CESAREAN DELIVERY RATES AT THE HEALTH SCIENCES CENTRE: A FIVE-YEAR ANALYSIS OF CONTRIBUTING FACTORS

Sorensen R, Neveu J

Memorial University

Research Supervisor: Dr. Joannie Neveu

Objectives: To identify and analyze the key factors contributing to the increasing cesarean delivery rates at the Health Sciences Centre in Newfoundland and Labrador between 2019 and 2024, focusing on maternal, fetal, and clinical characteristics.

Methods: The study will be a retrospective cohort study conducted on all births from January 1st, 2019, to December 31st, 2024, at the Health Sciences Centre in Newfoundland and Labrador. Rates of primary and repeat cesarean deliveries will be analyzed, including the indications for the procedure. The cohort and clinical characteristics will be identified using the Newfoundland and Labrador Provincial Perinatal Program Database. Factors to be examined as possible contributors to the increasing cesarean delivery rate will include, but are not limited to, maternal demographics (such as age, parity, pre-pregnancy body mass index, and pre-existing health conditions), fetal characteristics (such as birth weight), obstetrical characteristics (including previous mode of delivery and current or prior pregnancy complications), and labor and delivery characteristics (such as gestational age, mode of labor onset, use of epidural anesthesia, and type of fetal monitoring). The influence of these factors on cesarean delivery rates will be assessed using appropriate statistical analyses.

Results: Data extraction from the Newfoundland and Labrador Provincial Perinatal Program Database is ongoing, and approval by the Health Research Ethics Authority is in progress. Results are not yet available but will be shared upon completion of data analysis.

Conclusions: Pending

SURGICAL SEXISM – DOES SEX INFLUENCE TIME TO TREATMENT IN PATIENTS PRESENTING WITH ACUTE APPENDICITIS?

Herst S, Pace D, Neveu J,

Memorial University

Research Supervisor: Dr. Joannie Neveu

Objectives: To assess if female patients presenting with acute appendicitis experience a delayed time to treatment (i.e. appendectomy) in comparison to male counterparts, and identify sex-based differences in short-term complication (i.e. negative appendectomy, perforation). Assess for differences in the physical presentation, chemical presentation, and the workup of acute appendicitis between male and female patients. Identify rates of initial misdiagnosis in patients undergoing emergency appendectomy to assess for a sex-based difference.

Methods: This study would involve a retrospective review of all emergency appendectomies performed at HSC in St. John's Newfoundland. Inclusion criteria would be broad and include all patients above the age of 18 seen in the emergency department between January 1st, 2022, and December 31st, 2024, who received an appendectomy. Exclusion criteria would be patients under the age of 18 and pregnant patients. Our records indicate this would be ~338 charts.

Primary data of interest includes the patient's sex, time of presentation to the ED, and OR start time for emergency appendectomy. Secondary data points of interest will be patient's age, presenting symptoms (i.e. with or without RLQ pain, nausea/vomiting, fever), lab abnormalities (i.e. elevated WCC, neutrophils, CRP), use and type of pre-operative imaging, final pathology from the surgery, hospital length of stay post-op, and rates of initial misdiagnosis.

A student's t-test would be used to compare average time to treatment and length of stay for appendectomy patients, to assess for a statistical difference between male and female populations. Chi-squared analysis would then be used to compare the percentages of male and females with classic physical exam findings (RLQ pain, nausea/vomiting, fever), lab abnormalities (elevated WBC count, elevated neutrophils, elevated CRP), use of pre-operative imaging (no imaging, CT scan, ultrasound), and final pathology from operation (perforated, not perforated, or negative appendectomy). Finally, multivariate analysis would be used to identify which factors independently influenced time to treatment. A p-value <0.05 would be considered statistically significant.

Results: Pending

Conclusions: Pending

CHEMOTHERAPY INFUSION REACTION BEFORE AND AFTER COVID-19 VACCINATION: A REAL-WORLD STUDY

Saleeb M, Neveu J, Glynn N, Cullen J
Research Supervisor: Dr. Joannie Neveu

Objectives: To assess whether the prevalence of HSRs in patients receiving paclitaxel or docetaxel for gynecological and breast cancers has changed between the pre-COVID-19 period (2018–2019) and the post-COVID-19 vaccination period (2022–2023). A secondary objective is to explore whether the timing of COVID-19 vaccination correlates with HSR incidence.

Methods: This retrospective cohort study will review electronic medical records from two time periods. Patients who received paclitaxel or docetaxel will be identified, and HSRs will be inferred based on corticosteroid (SoluCortef) administration post infusion. Chi-square tests will compare HSR prevalence across cohorts, and if sample size allows, Cox proportional hazards models will evaluate the relationship between vaccination timing and HSR risk. Data will be drawn from the electronic medical record systems Aria and NLHS Digital Health in Newfoundland and Labrador, covering the periods January 1, 2018–December 31, 2019, and January 1, 2022–December 31, 2023.

Results: Pending

Conclusion: Pending

METFORMIN: A NEW FRONTIER IN TREATING DISORDERED PROLIFERATIVE ENDOMETRIUM AND SIMPLE HYPERPLASIA – A RANDOMIZED-CONTROLLED CLINICAL STUDY

Di Lorenzo G, Neveu J

Memorial University

Research Supervisor: Dr. Joannie Neveu

Objectives: To evaluate the effectiveness of metformin compared to progestin in promoting histological resolution of disordered proliferative endometrium or simple hyperplasia.

Methods: This randomized-controlled study will enroll patients with histologically confirmed DPE or SH diagnosed by biopsy. Eligibility criteria will include histologically confirmed DPE or SH, being assigned female at birth, age over 18 years old, pre and postmenopausal women and the ability to provide informed consent. Blocked randomization will be utilized, and patients will be assigned to one of two treatment arms including: 1) Metformin alone; or 2) Progestin Alone. Possible progestin treatments will include Megestrol Acetate, Medroxyprogesterone Acetate (PO, IM), as well as progestin IUDs. Before the start of treatment, patients will undergo bloodwork including a fasting blood glucose and fasting insulin level. This will be repeated at 6 and 12 months. Each patient, regardless of treatment arm, will have a repeat biopsy at 3, 6 and 12 months, as well as a weight taken at each respective time. A safety analysis will be conducted at 6 months. Our primary outcome will assess the histological resolution of DPE and SH via biopsy across the two treatment arms at 3 months. Our secondary outcomes will assess the histological resolution of DPE and SH with repeat biopsies at 6 and 12 months. Furthermore, the potential relationship between DPE, SH and insulin resistance will be investigated. To assess insulin resistance, we will use the HOMA-IR. Statistical analyses will include Chi-square tests for categorical variables, multinomial logistic regression as well as Spearman correlation to evaluate the relationship between insulin resistance markers and histological response.

Results: Pending

Conclusion: Pending

PART 2: ORAL PRESENTATIONS

UNCOVERING ENDOMETRIAL ABNORMALITIES IN OBESE WOMEN AWAITING BARIATRIC SURGERY: A CASE FOR OPPORTUNISTIC SCREENING

Di Lorenzo G, Neveu, J

Memorial University

Research Supervisor: Dr. Joannie Neveu

Objectives: To determine the prevalence of endometrial abnormalities, including premalignant and malignant lesions, in symptomatic women awaiting bariatric surgery, and to assess the potential utility of endometrial biopsy as a targeted screening tool in this high-risk population.

Methods: We will conduct a prospective cross-sectional study to evaluate the use of endometrial biopsy in women on the bariatric surgery waitlist as a routine screening tool. Eligible participants included women aged 18 years and older who are currently on the bariatric surgery waitlist and who underwent endometrial biopsy due to abnormal uterine bleeding. Clinical data will be extracted from electronic medical records, including age, body mass index (BMI), menopausal status, comorbidities, and endometrial biopsy results. Histopathologic findings will be categorized as benign, non-atypical hyperplasia, atypical hyperplasia, or endometrial carcinoma. The primary outcome will assess the prevalence of endometrial abnormalities, particularly pre-malignant or malignant lesions. Findings will be used to assess the potential role of endometrial biopsy as a targeted screening method in this high-risk population. Descriptive statistics will be used to summarize baseline characteristics and pathology results, and logistic regression analysis will be performed to identify clinical predictors associated with abnormal findings.

Results: Pending

Conclusion: Pending

MORTALITY RISK FACTORS IN NEWFOUNDLAND AND LABRADOR IN WOMEN WITH OVARIAN CANCER

Weber A, Cullen J, Power P

Memorial University

Research Supervisor: Dr. Patti Power

Objectives: The objective of our study is to analyze risk factors that may impact mortality from ovarian cancer for Newfoundland and Labrador by reviewing retrospective chart data from January 2014 to January 2024, considering location of patient residence and chemotherapy administration, surgical pathology report wait-times and surgical factors. In particular, we hope to identify (a) Newfoundland and Labrador's 5-year mortality rate and (b) whether place of residence impacts mortality risk, (c) if there is a relationship between place of residence and chemotherapy modification (d) incidence of both somatic and germline BRCA testing.

Methods: This retrospective cohort study will use data gathered from January 2014 to January 2024, totalling approximately 320 patients. The data will undergo survival analysis, logistic regression, cause regression, and machine learning.

Variables include: postal code at diagnosis, age at diagnosis, time from referral to first assessment by gynecologic oncology, BMI, time of survival after diagnosis, time to pathology report from date of surgery/biopsy, stage at diagnosis, histological type, BRCA somatic and germline testing, postal code of chemotherapy administration, types of chemotherapy administered, platinum resistance, reduced or skipped dose chemotherapy and the indication, and surgical factors around debulking operations such as residual disease, who performed surgery etc.

Results: Pending

Conclusion: Pending

EFFECT OF POSTOPERATIVE Pedometer USE ON RECOVERY OUTCOMES IN PATIENTS UNDERGOING LAPAROTOMY FOR MAJOR GYNECOLOGIC SURGERY: A PILOT STUDY RANDOMIZED

Manning S, Nikolla A, Pretty R, Au K, Warden G, Neveu J.

Memorial University

Research Supervisor: Dr. Joannie Neveu

Objectives: Enhanced Recovery after Surgery (ERAS) protocols have significantly improved postoperative outcomes for patients undergoing laparotomy for major gynecologic surgery. This trial proposes integrating a pedometer-based intervention within an ERAS protocol to measure its effectiveness in enhancing recovery outcomes by providing measurable and motivational activity goals.

Methods: This pilot study is a single-blind, block-randomized controlled trial. Participants, adult patients scheduled for elective laparotomy for major gynecologic surgery and already enrolled in an ERAS protocol, will be randomly assigned to either standard ERAS care or ERAS care supplemented with a pedometer to monitor and encourage physical activity. Data collection will span six weeks post-surgery, focusing on hospital stay lengths and recovery metrics. The primary outcome is the length of hospital stay, with secondary outcomes including postoperative pain scores, quality of life, physical activity levels, patient satisfaction, and healthcare utilization.

Results: Pending

Conclusion: Pending

THE INCISION DECISION: TRIAGING CAESAREAN SECTIONS TO OPTIMIZE DECISION TO DELIVERY INTERVAL

Benson S, Witt L, Tuck K, Wadden K, McKeen D, Neveu J

Memorial University

Research Supervisor: Dr. Joannie Neveu

Objectives: The first outcome of our study is to achieve consensus among obstetric care professionals, including obstetricians, anesthesiologists, and specialty nurses, on the urgency criteria, communication protocols, and time benchmarks for non-elective CS using the Delphi method. Once the communication tool is created, we aim to evaluate its effectiveness in reducing delays and improving DDI practices by identifying systemic, logistical, and diagnostic barriers that hinder optimal DDI intervals. Finally, we aim to propose evidence-based strategies aimed at streamlining workflows and improving efficiency in achieving favorable DDIs.

Methods: The Delphi method will be used to create “Priority” level categories for the non-elective CS at our center. Once the tool is created, we will then have dedicated teaching materials and sessions aimed at effectively implementing the use of the tool within the Caseroom. Our primary outcome is DDI and a collection of secondary outcomes including both maternal and neonatal outcomes. Thereafter, ongoing quarterly reports will be disseminated as a means of ongoing quality improvement.

Results: Pending

Conclusion: Pending

THE BIOMECHANICAL ANALYSIS OF INDIVIDUALS LIVING WITH SYMPTOMS OF FEMALE PELVIC FLOOR DISORDERS DURING PROLONGED STANDING: A LABORATORY-BASED CASE-SERIES STUDY

McGrath A, Pinsent E, Bajzak K, Nelson-Wong E, Wadden K, De Carvalho D

Memorial University

Regis University

Objectives: Studies of prolonged standing in healthy adults have identified patterns of muscle co-contraction in the trunk that precede the development of low back pain (LBP) and can be used to classify individuals as standing intolerant (SI). Given the prevalence of LBP in persons with pelvic floor disorders (PFD), we hypothesized that the presence of the SI response will be more prevalent in this population. The purpose of this study was to determine SI/ST proportions in a sample of PFD participants and describe muscle activation/postural control between tolerance groups.

Methods: 51 female participants self-identifying with PFD were included in the analysis after being recruited for a single laboratory session and instrumented with EMG sensors on the internal and external obliques, gluteus medius (GM), and lumbar erectors at L3 before completing a prolonged standing exposure situated over two force plates. Muscle activity and force plate data were continuously sampled, with back pain ratings taken on a 100 mm VAS every 10 minutes. The trial ended at 70 minutes or after two successive pain change scores ≥ 10 mm was reported (participants labeled as SI). To date, data reduction for EMG includes the co-contraction index (CCI) for the GM which was calculated over 1-minute windows for the last collected standing trial.

Results: 79% of participants were classified as SI, experiencing an average [95% CI] peak pain score of 24 [18, 30]. The average bilateral GM CCI for the SI and ST groups were 1126 [64, 2187] and 562 [-149, 1273] respectively. The analysis of force plate data and a between group comparison of all variables is underway.

Conclusion: The increased proportion of SI individuals suggests that those with female PFD may be at an increased risk of developing back pain during standing when compared to healthy adults. Future studies should generate interventions for patients with female PFD to reduce SI and improve their quality of life

GUEST SPEAKER

[BACK TO AGENDA](#)



FROM IDEAS TO IMPACT: A RESIDENT'S GUIDE TO A LIFE IN ACADEMIC MEDICINE

DR. PEDRO T. RAMIREZ,
Chair, Department of Obstetrics and Gynecology
Professor in Gynecologic Oncology
Houston Methodist Hospital
Neal Cancer Center
Editor-in-Chief, International Journal of Gynecological Cancer

Dr. Pedro T. Ramirez is Chair of the Department of Obstetrics and Gynecologic at Houston Methodist Hospital. He is also the recipient of the Alan L Kaplan, MD Chair in Obstetrics & Gynecology.

He has published a total of 361 manuscripts in peer-reviewed journals, including the New England Journal of Medicine and has published a total of 19 book chapters. In addition, he is the Editor for the textbook titled Principles of Gynecologic Oncology Surgery. Dr. Ramirez is also the Editor-in-Chief of the International Journal of Gynecological Cancer.

In 2017, Dr. Ramirez was bestowed the David M. Gershenson MD Distinguished Professorship in Gynecologic Oncology Research. In 2018, Dr. Ramirez was awarded the Jack and Beverly Randall Prize for Excellence in Cancer Treatment. In 2020, he was awarded the prestigious Ernst Wertheim Award by the Austrian Gynecologic Oncology Society for his lifetime contribution to the field of gynecologic oncology surgery.

PART 3: ORAL PRESENTATIONS

ASSOCIATION BETWEEN ELEVATED PRE-PREGNANCY BODY MASS INDEX AND OUTCOMES OF LABOUR INDUCTION: A RETROSPECTIVE COHORT STUDY

Käärid K, Marshall E, Honor R, Sorenson R, Murphy P, Crane J, Fowler E

Memorial University

Research Supervisor: Dr. Erika Fowler and Dr. Murphy

Objectives: We aimed to evaluate the impact of elevated pre-pregnancy body mass index (BMI) on the outcomes of induction of labour (IOL). Current Canadian guidelines recommend delivery at 39-40 weeks gestation in those with a BMI of 40.0 kg/m² or greater. Given the paucity of data on IOL outcomes in those with class III obesity (BMI ≥40.0 kg/m²), more information regarding this cohort is needed.

Methods: This population-based retrospective cohort study used data from the Perinatal Program of Newfoundland and Labrador (PPNL) database between January 1, 2002 and December 31, 2023. Inclusion criteria were term delivery (≥37 weeks gestation), singleton pregnancy, vertex presentation and IOL. Exclusion criteria included prior cesarean delivery (CD), height <1.47m, and weight or height data not reported. Mode of delivery was the primary outcome of interest. Secondary outcomes included markers of maternal and neonatal morbidity and mortality. Composite maternal and neonatal outcomes, as well as a severity-weighted composite outcome, were reported. Dichotomous outcomes were analyzed using logistic regressions and numeric outcomes were analyzed using Poisson regressions. We adjusted for patient age, gestational age, parity and smoking status.

Adjusted risks or rates and associated 95% confidence intervals (CI) were calculated for each outcome. Primary and secondary outcomes were reported according to each 2.5 kg/m² increment change in BMI.

Results: A total of 16,808 records were included in analyses. We found increasing risks of unplanned and emergent CD as BMI increased. For example, the adjusted risks of unplanned and emergent CD at a BMI of 20.0 kg/m² were 22.5% (95% CI 20.8–24.3%) and 17.0% (95% CI 15.5–18.6), respectively. In comparison, these risks increased to 59.8% (95% CI 44.8–73.3) and 49.5% (95% CI 34.7–64.3%), respectively, at a BMI of 65.0 kg/m². Unsurprisingly, the opposite trend was observed for spontaneous vaginal delivery. The rate of the composite maternal outcome generally increased as BMI increased, though plateaued beyond a BMI of 45.0 kg/m². The composite neonatal outcome was less affected by maternal BMI. The severity-weighted composite outcome score was lowest at a BMI of 19.0 kg/m² (17.5, 95% CI 17.0–17.9) and increased up to a BMI of 48.0 kg/m² (33.9, 95% CI 33.3–34.5), after which it plateaued.

Conclusion: This study demonstrates a dose-dependent association between BMI and the risks of unplanned and emergent CD in those who undergo IOL. The information provided herein may aid clinicians in counseling patients, setting expectations and making well-informed decisions regarding IOL in those with obesity.

EARLY PRENATAL CARE PROVIDERS AND PRENATAL SCREENING: PERCEPTIONS AND PRACTICE PATTERNS OF PRENATAL COUNSELLING IN NEWFOUNDLAND AND LABRADOR

MacEachren N, Ryan M, Bajzak K, Cook C

Memorial University

Research Supervisor: Dr. Colleen Cook and Dr. Bajzak

Objectives: Informed access to prenatal screening (PNS) services is of paramount importance. All pregnant women should be offered screening and this counselling should be performed in a manner which empowers them to make an informed choice. In Newfoundland and Labrador (NL) the majority of early prenatal care in this province is provided by Family Physicians (FPs) and Nurse Practitioners (NPs) prior to referral to an Obstetrician Gynecologist in the third trimester. This study aims to examine the perceptions and practice patterns of early prenatal care providers in the province of NL as it pertains to PNS. Ultimately, we aimed to harness this information to create an accredited learning module for providers in order to educate about—and advocate for—offering comprehensive PNS to all patients. This learning module has been created in collaboration with the Office of Professional Development, the Department of Medical Genetics as well as the Department of Obstetrics and Gynecology, Memorial University.

Methods: A survey was disseminated to FPs and NPs in the province. This survey captured practice patterns of PNS including the frequency with which it is offered, perceived comfort levels with counselling, knowledge of current options, and perceived barriers to providing regular PNS counselling. This survey was used to guide the creation of an online learning module that will be accredited for medical professionals through the Office of Professional Development. The module is undergoing a final round of content revision and will be hosted online for medical professionals. Pre-test and Post-test assessments of participants will be evaluated at 3, 6 and 12 months to ascertain the effectiveness of the module in improving provider confidence and aptitude in offering PNS to obstetrical patients.

Results: A total of 43 surveys were returned from FPs and NPs. Although the vast majority (n=42) indicated that they always offer PNS, a significant level of discomfort with counselling around PNS was identified. Thirty four percent of respondents identified being either somewhat (n=11) or extremely (n=4) uncomfortable with counselling about PNS. Furthermore, nearly 40% of respondents chose incorrect responses about timeframes within which to administer testing and only n=10 (24%) of respondents were comfortable providing counselling to patients with multiple gestations. All respondents indicated that they would be interested in completing an accredited learning module on PNS.

Conclusion: This information has been used to guide the multidisciplinary (Medical Genetics, Obstetrics, Family Medicine, Maternal Fetal Medicine & Social Work) creation of a learning module to empower community prenatal care providers to provide comprehensive PNS counselling. A planning committee has been created for module accreditation which is being funded by the Medical Education Research Fund.

THE ASSOCIATION BETWEEN EPISIOTOMY AND OBSTETRICAL ANAL SPHINCTER INJURIES AMONG VACUUM- ASSISTED VAGINAL DELIVERIES: A POPULATION-BASED RETROSPECTIVE CANADIAN COHORT STUDY

Harris C, Woolcott C, Dodge A, Allen V, Clancy A, Stairs J
Dalhousie University

Objective: To estimate the association between episiotomy and OASIS in patients who underwent VAVD.

Methods: This population-based, retrospective cohort study included term VAVDs of a non-anomalous, singleton, vertex fetus between 2005-2023. Augmented inverse probability weighting analyses were used to estimate risk ratios (RR) and number needed to treat/harm (NNT/NNH) with 95% confidence intervals (CI) adjusting for confounding variables, overall and stratified by length of the second stage of labour and parity.

Results: Of 8,380 VAVDs, OASIS occurred in 868 (10.4%), of which 88.9% were third degree injuries and 11.1% were fourth degree. Episiotomy was performed in 3,775 (45.0%) VAVD. Episiotomy was not associated with OASIS risk (RR 0.96, 95% CI 0.84-1.09). Among individuals with a second stage ≥ 60 minutes, episiotomy decreased OASIS risk (RR 0.86, 95% CI 0.74-0.99). In individuals with an active phase ≥ 60 minutes, episiotomy reduced OASIS risk by 40% (RR 0.60, 95% CI 0.34- 1.06), but not in those with < 60 minutes (RR 1.03, 95% CI 0.54-1.97). When stratified by parity, episiotomy reduced OASIS risk in nulliparous individuals (RR 0.86, 95% CI 0.75-0.98; NNT 55, 95% CI 29-525). Episiotomy in parous individuals was associated with increased OASIS risk (RR 1.48, 95% CI 1.08-2.05; NNH 36, 95% CI 19-314).

Conclusion: Episiotomy is protective against OASIS in nulliparous patients and in cases where the active or total second stage of labor exceeded 60 minutes. Episiotomy was not protective among parous patients undergoing VAVD. These findings may inform patient counseling on episiotomy use to reduce OASIS risk.

LAPAROSCOPIC BARIATRIC SURGERY WITH HYSTERECTOMY FOR ENDOMETRIAL CANCER TO IMPROVE LONG-TERM OUTCOMES: A PROSPECTIVE COHORT STUDY

Goddard E, Pace D, Twells L, Neveu J

Memorial University

Research Supervisor: Dr. Joannie Neveu

Objectives: To evaluate the effect of combining vertical sleeve gastrectomy (VSG) with total laparoscopic hysterectomy (TLH) in patients with obesity and EC or atypical endometrial hyperplasia. Outcomes include disease recurrence, impact on obesity-related comorbidities, complication rate, operative time, and length of hospital stay.

Methods: Appropriate surgical candidates with early EC or atypical endometrial hyperplasia and BMI ≥ 35 kg/m² included in standard early EC surgical intervention (TLH) or combined treatment (TLH+VSG).

Results: 20 patients included, 12 (60%) underwent TLH + VSG; 8 (40%) underwent TLH alone. There was no significant difference in pre-operative BMI (46.5 kg/m² vs. 56.8 kg/m² p=0.065), pre-operative hemoglobin (134.8 g/L vs. 136.7 g/L p=0.8), post-operative hemoglobin (117.3 g/L vs 124.0 g/L p=0.5), and length of surgery (189 minutes vs. 154 minutes p=0.11) with and without VSG respectively. All procedures were laparoscopic without conversion. Hospital admission length was not significantly different (p=0.6). At 6-month follow-up, BMI was significantly lower in the combined group (36.2 kg/m² vs. 57.6 kg/m², p=0.006), with a greater BMI reduction (Δ -21.6 vs. -2.1, p=0.008).

Conclusion: Combining VSG with EC surgical staging is safe without increase in perioperative complications. The combined approach led to a substantial reduction in BMI, supporting its potential as a dual-treatment strategy for obesity and EC.

VIDEO PRESENTATION

[BACK TO AGENDA](#)

INTRAURETERAL INDOCYANINE GREEN FOR INTRAOPERATIVE LOCALIZATION OF THE URETERS: A VIDEO PRESENTATION

*Käärid K, Goddard E, Thiessen N, Neveu J
Memorial University*

Objectives: Ureteral injury is an uncommon but serious complication of gynecologic surgery. Indocyanine green (ICG) dye fluoresces under near-infrared light and can serve as a real-time contrast agent in minimally invasive surgery. We demonstrate its use for ureter localization and, thus, ureteral injury prevention in laparoscopic surgery.

Methods: Pre-operative cystoscopy was performed with bilateral placement of ureteral catheters. ICG dye was injected into each ureteral lumen. Intra-operatively, the ureters were seen to fluoresce under near-infrared light, allowing for clear localization and safe dissection. This video demonstrates the steps required to employ this technique, as well as its utility in a difficult case.

Conclusion: Intraureteral ICG dye offers a safe and effective option for both primary and secondary prevention of ureteral injury in minimally invasive surgery. This technique should be considered in minimally invasive cases with risk factors for iatrogenic ureteral injury.

We are grateful to our research day judges for their contribution to a successful Resident Research Day.

Dr. Pedro Ramirez

Dr. Erica Holloway

Dr. Lindsay Cahill

Dr. Katie Wadden

We thank Lisa Trask, Elmira Mohammadi and Christine LeGrow for their hard work in the planning and organizing of this event and Jennifer Armstrong HSIMS for her support in the program design.

THANK YOU FOR JOINING US FOR OUR
36TH ANNUAL RESIDENT RESEARCH DAY

