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# 2020 Department of Obstetrics and Gynecology Annual Report

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UNIVERSITY OF  
CALGARY

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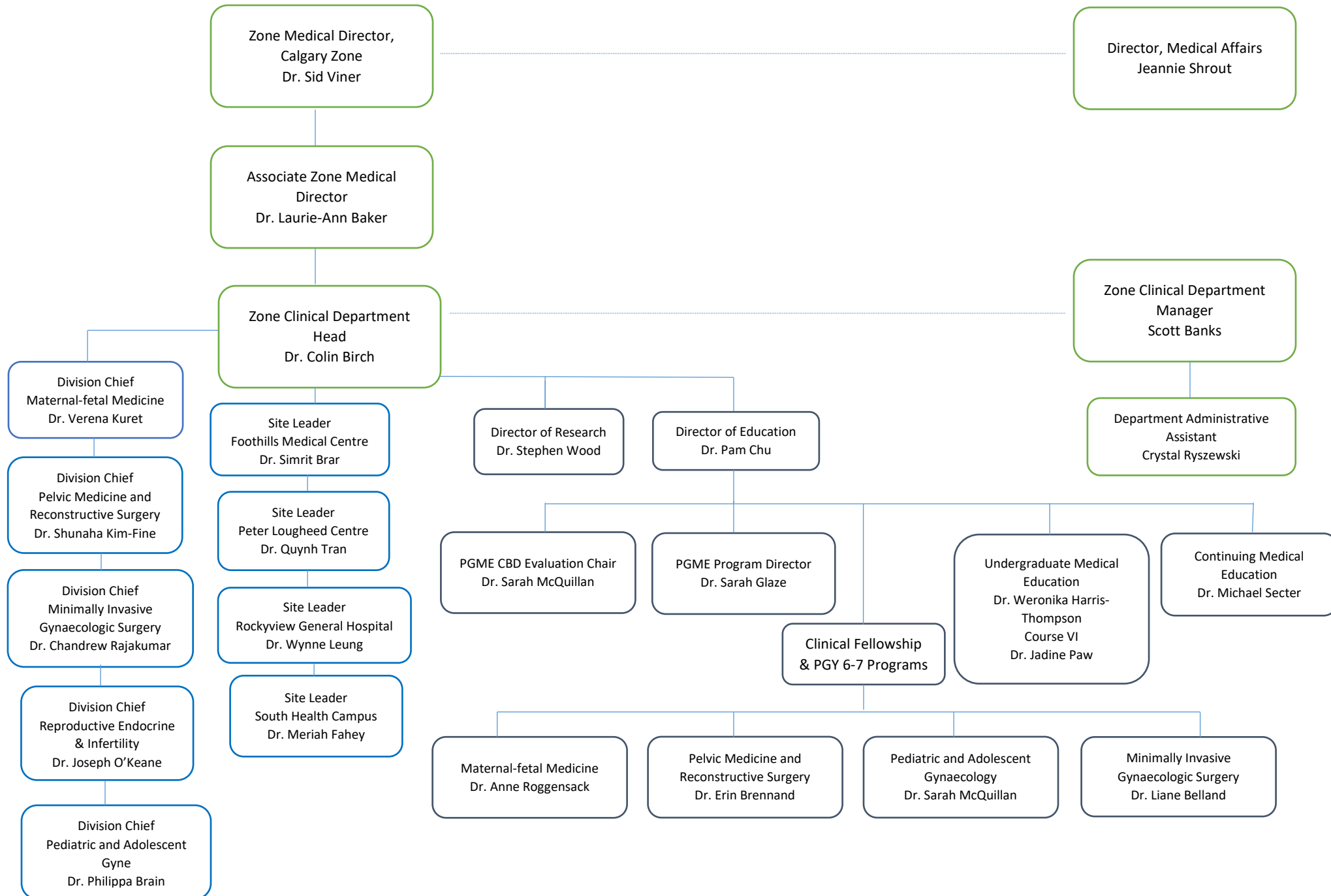
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# ORGANIZATIONAL CHART



# MISSION STATEMENT(s)

## Alberta Health Services

### Our Vision

Healthy Albertans.  
Healthy Communities.  
**Together.**

### Our Mission

To provide a patient-focused, quality health system that is accessible and sustainable for all Albertans.



### Our Values

To provide a patient-focused quality health system that is accessible and sustainable for all Albertans.

**compassion**

We show kindness and empathy for all in our care, and for each other.

**accountability**

We are honest, principled and transparent.

**respect**

We treat others with respect and dignity.

**excellence**

We strive to be our best and give our best.

**safety**

We place safety and quality improvement at the centre of all our decisions.



## Cumming School of Medicine University of Calgary



### VISION

We partner with University leaders to support the "Eyes High" vision.

"Eyes High" is the University of Calgary's bold and ambitious vision to become one of Canada's top five research universities, grounded in innovative learning and teaching and fully integrated with the community of Calgary, by the university's 50th anniversary in 2016.

### MISSION

By creating and delivering exemplary human resources services, processes, and outcomes

we contribute to and share in the University's mission and goals to:

- Sharpen focus on research and scholarship;
- Enrich the quality and breadth of learning;
- Fully integrate the university with the community.

### VALUES

The strategy also articulates eight core values shared by the university community; curiosity; support; collaboration; communication; sustainability; globalization; balance and excellence.

## DEAN'S OFFICE CUMMING SCHOOL OF MEDICINE STRATEGIC PLAN 2015 – 2020

### VISION

Creating the future of health

### MISSION

We must fulfill our social responsibility to be a school in which the common goal of improved health guides service, education and research. We must foster the collective pursuit of knowledge and its translation, through education and application, to better the human condition.

### VALUES

Excellence | Collaboration | Engagement | Respect

### STRATEGIC GOALS

We are committed to maintaining the public's trust and respect as a premier academic health science centre by meeting the following goals:

- Serve our diverse communities by understanding and responding to their health needs and by effectively stewarding the resources entrusted to us by Albertans.
- Generate knowledge that has both local and global impact by fostering novel collaborative alignments among basic and clinical scientists, physicians and educators.
- Train the next generation of health-care pioneers and providers by rejuvenating the education and career development of biomedical innovators.

# MESSAGE FROM THE CHAIR



**Dr. Colin Birch, Zone Clinical Department Head  
Department of Obstetrics and Gynaecology  
Calgary Zone**

The year 2020 will be remembered as the most challenging for Medicine and Society. We have faced stressors both within and outside of our working lives that, as the year dawned, could never have been imagined. We have risen to the challenges that for many have resulted in deep personal reflection and reset in life's values.

Our Department also rose to the challenges as a unified body and during the first wave of COVID 19 took, in April, the bold step of closing one of our Obstetrical sites (SHC). We, like many others anticipated the turmoil of staff losses to disease burden, such as was predicted from the carnage in NYC. In this endeavor, we witnessed how a team of like-minded professionals can achieve what was thought, in a short period, to be impossible. Many lessons can be learnt by the whole organization from this real time simulation. Ultimately, it was likely not required and with the second wave alternative plans were employed as the actual birth rate continue to be lowered by the financial climate of the province (The birth rate is a bellwether for the economic wellbeing of society). In Obstetrics our workload is, for the most part, unscheduled and established nine months ahead of any hospital admission. I must commend WH workers for their adaptability during this period.

Meanwhile the business of Medicine continued and as a dual specialty, we have been doubly affected by the changes enforced by the government in the Surgical and Maternal portfolios.

There have been successes as the department increases its footprint within the university and AHS. Dr. Pam Chu, one of our Gynecological Oncologists, is Associate Dean Equity and Diversity. Dr. Wynne Leung has become the Quality Lead for the provincial Surgical SCN further enhancing a robust Quality initiative with Dr. Gregg Nelson remaining the International Secretary for the ERAS project. As we increase, our Safety and Learning portfolio Dr. Chandrew Rajakumar now is the Medical Director for ATSSL, a facility that we have utilized effectively for under and postgraduate teaching. For trainees Dr. Jaelene Mannerfeldt is the lead for the overall portfolio of Resident Affairs and Wellness. Dr. Magali Robert has become the Medical Lead for the Regional Pain Centre.

2020 has seen the retirement of some of the 'giants' within our Specialty. All have been former Heads of Department and have National/International reputations. It is down the paths that they have forged that I now walk. We wish Professors Jarrell, Lange and Wilson good health in the next phase of their lives.

COVID has made a significant impact on our delivery of CME, which like many other departments has made the move to a virtual videoconference ZOOM platform. We have found a number of advantages as attendance has spiraled upwards and due to our National and International connections, there has been a steady stream of experts delivering high quality learning from their homes or offices to ours. The department has been on the forefront of COVID education with national webinars led by Dr. Stephanie Cooper. Drs. Castillo and Kuret have been leaders of the national CanCOVID project and have provided education provincially and nationally on matters of management and vaccination.

This academic year our educators won the most of any specialty for undergraduate education with Dr. Jadine Paw receiving a prestigious national Dr. Carl Nimrod teaching award. This group have provided a stellar start to a medical career for so many. Dr. Kelly Albrecht, after many years of developing an innovative Clinical Clerk teaching program, has stepped down to pursue further training at Baylor University. Our much sought-after residency program graduated a fine group of PGY5 OB/GYNs (see pictures).

# MESSAGE FROM THE CHAIR

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Our global efforts have been diminished through 2020 due to the travel restrictions but virtual plans are being made for collaborations with CUHAS in Tanzania.

It is the ambition and dedication of members, which is the lifeblood of any Department and it, is now, as a result, that the Department of Obstetrics and Gynecology has become a national leader. It remains a distinct privilege to be the Head of Department to this exceptional group.

I must be acknowledged that without the tireless efforts of our supportive administrative staff on the fourth Floor North Tower at the FMC, under the direction of Scott Banks (Departmental Manager), many of our successes would be much harder to achieve. A special thanks to Crystal Ryszewski who has been the cornerstone in the production of this report.

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# WHO WE ARE

## Faculty, Staff and Trainees

### 2020



# FACULTY

## PROFESSOR

|         |            |
|---------|------------|
| Cross   | James C.   |
| Duggan  | Maire A.   |
| Ghatage | Prafull    |
| Johnson | Jo-Ann     |
| Nation  | Jill G.    |
| Nelson  | Gregory    |
| Robert  | Magali     |
| Wood    | Stephen L. |

## ASSISTANT PROFESSOR

|            |          |
|------------|----------|
| Rajakumar  | Chandrew |
| Roggensack | Anne M.  |
| Sycuro     | Laura K. |
| Brennand   | Erin A.  |
| Chaput     | Katie H. |
| Glaze      | Sarah J. |

## ASSOCIATE PROFESSOR

|           |          |
|-----------|----------|
| Birch     | Colin    |
| Chu       | Pamela   |
| Gibson    | Paul S.  |
| Metcalf   | Amy      |
| Nerenberg | Kara A.  |
| Slater    | Donna M. |

## CLINICAL PROFESSOR

|         |             |
|---------|-------------|
| Brain   | Philippa H. |
| Donovan | Lois E.     |
| Lange   | Ian R.      |

## CLINICAL ASSOCIATE PROFESSOR

|             |            |
|-------------|------------|
| Carlson     | Kevin V.   |
| Castillo    | Eliana     |
| Connors     | Gregory T. |
| Edwards     | Heather E. |
| Hawkins     | T. Lee-Ann |
| Iwanicki    | Stanislaw  |
| O'Keane     | Joseph     |
| Pollard     | Jeffrey    |
| Rosengarten | Albert     |
| Sam         | David.     |
| Simrose     | Rebecca    |

## CLINICAL LECTURER

|                 |              |
|-----------------|--------------|
| Collins         | Tanya B.K.   |
| Coughlan        | Laura M.     |
| Dalton          | Elise M.     |
| Gottlieb        | Heather      |
| Harris-Thompson | Weronika     |
| Hawkins         | Deborah P.   |
| Jim             | Brent P.     |
| Kerr            | Christina L. |
| Krakowski       | Katrina L.   |
| Lee             | Kovid        |
| Mendlowitz      | Ariel R.     |
| Mueller         | Harry D.     |
| Osborne         | Christine F. |
| Paw             | Jadine       |
| Soucie          | Jennifer E.  |
| Teitelbaum      | Lisa         |
| Wallace-Chau    | Dhea C.      |

## CLINICAL ASSISTANT PROFESSOR

|          |             |
|----------|-------------|
| Adolph   | Allyson J.  |
| Albrecht | Kelly D.    |
| Allan    | Bruce B.    |
| Belland  | Liane M.    |
| Brar     | Simrit K.   |
| Browne   | Philip M.   |
| Caddy    | Sheila C.   |
| Cameron  | Anna        |
| Cenaiko  | David F.    |
| Chadha   | Rati        |
| Cham     | Christopher |

## CLINICAL ASSISTANT PROFESSOR

|           |            |
|-----------|------------|
| Cusano    | Ronald E.  |
| Daley     | Tara E.    |
| Davey     | Stanley J. |
| Donnelly  | Jocelyn M. |
| Dwinnell  | Shannon J. |
| Ekwalinga | Pauline R. |
| Fahey     | Meriah S.  |
| Foong     | Shu C.     |
| Gibbons   | Sherri M.  |
| Gotz      | Tamas      |
| Grossi    | Matthew V. |

## CLINICAL ASSISTANT PROFESSOR

|            |            |
|------------|------------|
| Jeffery    | John D.    |
| Kenny      | Kathryn M. |
| Khan       | Karla E.   |
| Kim-Fine   | Shunaha    |
| Kristensen | Ingrid B.  |
| Krushel    | Robert F.  |
| Kuret      | Verena H.  |
| Lam        | Gail       |
| Lamb       | Kendra M.  |
| Le Jour    | Caroline   |
| Leung      | Wynne I.   |

# FACULTY

|               |             |              |           |             |              |
|---------------|-------------|--------------|-----------|-------------|--------------|
| Chang         | Viviana     | Hauck        | Brian     | Li          | Andrew W.    |
| Chow          | Clinton J.  | Henning      | Paul A.   | Lo          | Katherine A. |
| Cooper        | Stephanie   | Igras-Kulach | Dorothy   | Lyndon      | Charlene A   |
| Mahalingham   | Aisling M.  | Pirwany      | Imran R.  | Vlasschaert | Meghan E.    |
| Mannerfeldt   | Jaelene M.  | Ruiz Mirazo  | Eider     | Wagner      | Alese M.     |
| Mattatall     | Fiona M.    | Sanders      | Ari P.    | Watson      | Sheila D.    |
| McCubbin      | Duncan J.   | Schachar     | Jaime D.  | Watson      | James L.     |
| McQuillan     | Sarah K.    | Scott        | Selma G.  | Wilson      | Donald G.    |
| Min           | Jason K.    |              | Michael   | Wong        | Benjamin     |
| Murphy        | Magnus      | Secter       | B.        | Zakariasen  | Amy D.       |
| Naber         | Claudia G.  | Soliman      | Nancy     |             |              |
| Nasr-Esfahani | Maryam      | Steed        | Joel      |             |              |
| Oluyomi-Obi   | Titilayo F. | Suri         | Michelle  |             |              |
| O'Quinn       | Candace P.  | Thurston     | Jackie L. |             |              |
| Paterson      | Nicole D.   | Topping      | Chelsey   |             |              |
|               |             | Tran         | Quynh M.  |             |              |

## RESIDENCY PROGRAM

| PGY 1                | PGY 2                      | PGY 3               | PGY 4             | PGY 5                 |
|----------------------|----------------------------|---------------------|-------------------|-----------------------|
| Carrigan, Rebecca    | Kaderali, Shaleeza         | Paydaychee, Larissa | Amath, Aysah      | Bonneville, Gabrielle |
| Passarella, Eloise   | Petrick, Carmen            | Kale, Mrugunka      | Ambacher, Kristen | Di Palma, Vanessa     |
| Friebe, Erika        | Wang, Serena               | Manuel, Courtney    | Andrew, Lauren    | Lafreniere, Kyle      |
| Kent, Sarah          | Wilfong-Pritchard, Kathryn | Marguerie, Monique  | Genge, Evan       | Lin, Tinya            |
| Fitzpatrick, Shannon | Smith, Rope                | Grant, Rachel       | Rohla, Amanda     | Luo, Violet           |
| Shymansky, Tamila    | Ting, Paxton               | Whitty, Robin       | Blades, Megan     |                       |
|                      | Herrera-Gonzales, Rebecca  |                     |                   |                       |

# FACULTY

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## PELVIC MEDICINE AND RECONSTRUCTIVE SURGERY CLINICAL FELLOWSHIP

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Edwards, Allison

Carter-Ramirez, Alison

## MINIMALLY INVASIVE GYNAECOLOGIC SURGERY CLINICAL FELLOWSHIP

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O'Leary, Meghan

## PEDIATRIC AND ADOLESCENT GYNAECOLOGY CLINICAL FELLOWSHIP

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Nelson, Kayla

## STAFF

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Banks, Scott – Zone Clinical  
Department Manager



Ryszewski, Crystal – Department  
Administrative Support



McKeon, Karen – Residency  
Program Administrator



Detillieux, Jordan-Rose – Research  
Administrative Support

# FACULTY

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McNeil, Val – Clinical  
Administrative Support



Contreras, Jolanta – Clinical  
Administrative Support



Skiffington, Janice – Research  
Coordinator



Tang, Selphee – Data Analyst



Chaput, Katie – Perinatal  
Epidemiologist



Metcalfe, Amy – Research PhD

# FACULTY

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## CONGRATULATIONS AND FAREWELL FACULTY AND STAFF RETIREMENTS

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R. Doug Wilson  
Professor Emeritus

Doug Wilson was the Department Head from 2008-2018. He was the first Canadian to hold a Medical genetics/maternal Medicine qualification. Dr. Wilson spent much of his career in BC before relocating to CHOP where he developed an interest in fetal surgery. The author

of over a 100 peer reviewed papers and book chapters Dr Wilson now sits on the SOGC Council and remains active in policy and research



Libby Goodliff

Libby Goodliff was a department figurehead for the better part of 35 years. She provided administrative support to the department as a whole. It was widely accepted that Libby was the go-to for anything physicians and staff might require. Her years of experience and dedication have earned her a well-deserved retirement.



Ian Lange  
Professor Emeritus

Ian Lange was the Department Head from 1997-2008. A native Kiwi Dr. Lang trained in Maternal Fetal Medicine in Winnipeg where he became the Director of the High Risk pregnancy unit before moving to Calgary. A sought after speaker, respected educator and executive member of the SOGC Dr. Lange

mentored many future MFM practitioners. He will be also remembered as a foundational member of the local CHAOS group (Calgary High Alpine Outdoor Society).



John Jarrell  
Professor Emeritus

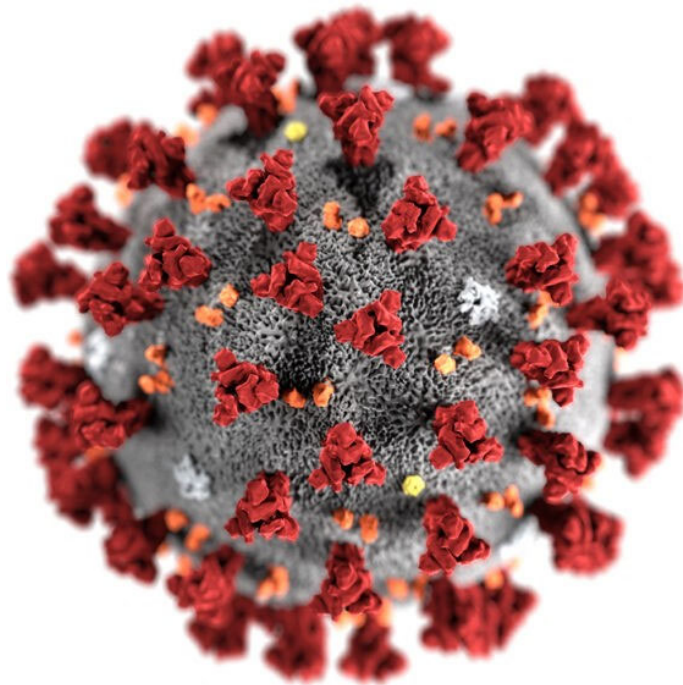
John Jarrell was the Department Head 1988-1993 before continuing to be the first 'Chief Medical Officer' for the Calgary Regional Health Authority 1994-2000. His early career saw his

research interests focus on Reproductive Endocrinology. Latterly he achieved an International

reputation for his work and innovations in the management of Chronic Pain. He has published over 100 papers in peer review journals and written many book chapters.

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## COVID - 19



## CANCOVID

Dr Kuret (MFM) and Dr Castillo (ReproID) are the co-leads for the clinical management and research surveillance of COVID-19 infection in Pregnancy for the province of Alberta. They lead an obstetrical surveillance team, who provide clinical support to patients, care providers, and delivery units across the province. This includes developing provincial clinical recommendations for antepartum and intrapartum management of pregnant patients with COVID-19 infection, including biosampling at the time of delivery.

They co-lead the provincial COVID-19 in Pregnancy research initiatives and represent Alberta on the Canadian COVID-19 in Pregnancy Surveillance Program, CANCOVID-PREG ( [Canadian COVID-19 In Pregnancy Surveillance \(CANCOVID-Preg\)](#) ). This is a pan-Canadian surveillance project that aims to better our understanding of COVID-19 in pregnancy. Through CANCOVID-Preg, maternity care providers across the nation are coming together to further the collective understanding of the epidemiology of COVID-19 in pregnancy, and to collect critical data which will help to inform recommendations for management and care of pregnant women and their infants during this pandemic. As part of this effort, Drs Kuret and Castillo have secured significant research funding to support the provincial and national research work.

Drs Kuret and Castillo have provided numerous CME presentations for clinical care providers regarding the management of COVID-19 in pregnancy. As well, they are working closely with AHS Medical leaders to contribute to education and policy development related to COVID-19 in pregnancy. They have also been invited to join the 19 To Zero Project, an international multidisciplinary coalition of experts, to help lead the national efforts for COVID vaccination.

### Canadian Surveillance of COVID-19 in Pregnancy: Epidemiology, Maternal and Infant Outcomes

PI - National: Dr Deborah Money, Professor, Obstetrics & Gynecology, University of British

### AHS moves all South Health Campus, High River childbirths during pandemic

*All maternity services in the Calgary area will be consolidated to three hospitals during the COVID-19 pandemic, AHS announced Thursday*

Author of the article:

**Jason Herring**

Publishing date:

Apr 17, 2020 • April 17, 2020 • 2 minute read



The South Health Campus in the community of Seton.

All maternity services in the Calgary area will be consolidated to three hospitals during the COVID-19 pandemic, Alberta Health Services announced Thursday.

Childbirths and other inpatient obstetrical and neonatal care will be moved out of the South Health Campus and High River General Hospital, a move AHS says is part of planning for a surge in COVID-19 patients in Alberta hospitals in the coming weeks.

Throughout the pandemic, planned care at the South Health Campus will move to Foothills Medical Centre, Rockyview General Hospital and Peter Lougheed Centre, AHS said. Services at the High River General Hospital will be relocated to Rockyview.

"AHS must ensure there is appropriate space and resources to handle the anticipated surge in COVID-19 patients," AHS said in a statement Thursday.

"This includes freeing up spaces in our hospitals for patients who need a higher level of care, and redeploying frontline staff and resources to areas of greatest need."

Columbia. Pan-Canadian Surveillance Program.  
Co-Leads – Provincial, AB: Dr. Kuret and Dr E.  
Castillo. University of Calgary, Reproductive  
Infectious Diseases, Obstetrics, Maternal-Fetal  
Medicine, Neonatology, Pathology, Microbiology.  
Reproductive Infectious Diseases

\*\*CIHR and PHAC funding for total of \$1.59M for  
Canadian study, ~ \$223,000 for Alberta study

According to a memo sent to staff at South Health Campus Thursday, midwife births will take place at Foothills, family medicine births will move to Rockyview and other obstetrical services will be managed at Peter Lougheed. Neonatal intensive care unit (NICU) patients will move to one of the three hospitals depending on the level of care required.

The announcement follows the AHS decision in late March to centralize pediatric emergency-room space in Calgary to the Alberta Children's Hospital, converting all nine dedicated children's beds at the South Health Campus into space for adults.

Last week, seven staffers at the Foothills maternity ward tested positive for COVID-19, with additional coworkers entering self-isolation as a result of the outbreak.

Alberta Health officials said they were working to determine the origin of the infections.

In her daily update Thursday, Alberta chief medical officer of health Dr. Deena Hinshaw assured that despite the emergence of COVID-19 cases at Foothills, the facility remains safe and there was no risk to patients. "I want to assure Albertans there is no increased risk to pregnant patients coming to the Foothills Medical Centre," Hinshaw said. "The maternity units continue to be a safe and appropriate space to deliver babies and receive care."

According to official AHS modelling, Alberta will see about 818 COVID-19 hospitalizations at the peak of the outbreak in a probable scenario in late May. The province says they will have 2,250 acute-care beds dedicated to novel coronavirus patients by the end of April.

[jherring@postmedia.com](mailto:jherring@postmedia.com)

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# DIVISIONAL AND SITE UPDATES



# DIVISION AND SITE UPDATE



Dr. Philippa Brain, Foothills Medical Centre Site Lead. (Outgoing)  
Division Leader for Pediatric and Adolescent Gynaecology

## Foothills Medical Centre

### Site Achievements

**Neo/OB retreat:** A combined retreat with Neonatology, Obstetrics and MFM reviewing a number of topical clinical questions and highlighting QI in the departments of Obstetrics and Gynecology and Neonatology. (See attached summary Appendix 1)

**Development of separate Gyne call schedule:** This was a complete change in culture and development of a separate gyne call schedule including the subspecialty groups. The impetus for this was responding to a QAR

**Implementation of Triage Doc:** The development of a separate OB in triage mimics the provision of emergency care in the ER but is specific for pregnant patients. This has been made as a formal proposal for an ARP but in the crisis of covid we implemented this position to try and offset patient wait times through the covid pandemic. The impetus for this was enhanced patient care and safety and reduce wait times for patients in the triage area.

**Development of ARP for Triage Obstetrician:** Please see above. Separate funding through an ARP has been requested and is ongoing. This has been delayed during the covid pandemic.

**Implementation of QBL for postpartum:** Phase 2 of the PPH project (quantitative blood loss at elective cesarean sections and postpartum) Quantitative blood loss on postpartum through a pad check sheet has been implemented and an ongoing QI project is underway to evaluate and standardize this process (see QI section below)

**Streamline AIP process and booking of complex cesarean sections:** A formalized process was developed to facilitate the booking of complex sections and facilitate multidisciplinary care in their management

**Implementation of post partum patients to Triage:** The timely transfer of patients to L and D triage presenting to the general ER with complications within the first two weeks postpartum. This enhances the timely management of patients with postpartum complications and has been shown to significantly reduce wait times for these patients and limits the in house OB from being called off the unit to care for these patients (Go live Jan 11, 2021)

**Enhanced in Patient rounding:** The in house OB team developed an enhanced rounding protocol with improved staff and resident interaction and improved patient care. This includes antepartum and postpartum.

**Enhanced NP support on Postpartum:** Development of an NP position for all postpartum patients and planning of interaction with NP for complicated postpartum obstetrical patients.

**Covid Achievements:** (This simple list in no way reflects the work and energy by the bigger OB team to implement changes to adapt for covid on labor and delivery and postpartum.)

Triage OB Rota

Triage OB back up call rota  
Remote hand over by Zoom  
Urgent gyne clinic  
Incorporation of Midwifery with SHC closure  
Incorporation of off service patients to Postpartum and 41A including collapsing of antepartum beds to postpartum

**Development of multiple flow sheets:**

Covid positive OB patients requiring ICU, IM care  
Covid positive patients requiring emergency cesarean sections  
Management of covid positive triage and laboring patients  
Admission of covid pos patients with obstetrical complications (APH, PROM)  
Management of on watch and outbreak units  
Videos on Donning and Doffing  
Simulations of transfer of covid pos patients.  
Preparation of OR and Laboring rooms to accommodate covid positive patients

**Individual achievements: (subspecialty physicians are included in separate reports)**

**Dr. Jennifer Soucie:**

Research:

Cohort Study completed for screening for GAS in the antepartum period. With increasing rates of invasive Group A Streptococcus, specifically in the Obstetrical population, a study was conducted to evaluate the carrier rate of GAS in prenatal population. Samples were taken on 200 women along with a short questionnaire filled out to evaluate risk. This is currently being written up for publication.

Multicentre Database development evaluating the screening and outcomes for Abnormally Invasive Placenta. This project will retrospectively evaluate cases over the last decade and will follow cases prospectively for the next 10 years. Mining of the database will allow answers to important questions; such as, the optimal screening for AIP and most effective management.

Lead for evaluating applications for DEAR Committee funds. This entailed developing a clear protocol for applications and for individually reviewing applications along with two other researchers and then summarizing and presenting decisions to committee meetings that occur every 3 months.

Teaching:

Lead educator for the Critical Appraisal program offered to residents through the Obstetrics and Gynecology training program at the University of Calgary.

Administration:

Acting Financial Officer for the DEAR Committee.

Surgical Lead for Medicos En Accion, an international not for profit organization that works out of Guatemala providing affordable and free surgical care to those in need. Patients financial donation to care provided is based on their ability to contribute, no patient is turned away. Care is limited to those in financial need for assistance, and for those who would otherwise not be able to obtain surgical care.

**Dr. Michael Secter:**

Administration:

CME Director- Transition to virtual rounds. Host of 13 guest speakers from Universities in Canada and abroad.  
CME- Amalgamated and developed critical appraisal rounds into our virtual CME/PGME program for residents.

- Virtual CME seminars delivered and hosted:
- COVID-19 in pregnancy (Critical care: host),
- Endometriosis management for General Practitioners (invited speaker),

- Multidisciplinary management of PPH (Section of Surgical Management- international webinar- speaker)

Obesity in Pregnancy working group- Coughlan, Mattatal, LeJour, Cooper- development of surgical protocols and working towards a dedicated clinic for women with obesity.

Abnormally Invasive Placenta working group- consulting surgeon for high risk and intermediate risk AIP, consulting surgeon for early invasive placenta and cesarean scar/complex ectopic pregnancy. Assist Dr. Soucie in administration of the program.

Gynaecology Call Program- Working with site lead to develop the gynaecology on call program logistics.

OB Extender program- in charge of recruitment and scheduling of low-risk OB providers

Surgical Mentorship- planned 2 different come cadaver lab events - one for GYN surgeons, one for community OB/GYN. S

Surgical Mentorship- Formal MIS training of 2-year MIS fellow and resident rotation. Working on program of staff and peer surgical mentorship in Minimally invasive surgery.

Awards:

O and G Gold Star teaching award, Undergraduate medical education

### **Dr. Susan Baranowski:**

Administration:

Physician Lead: Gyne Outpatient clinic PLC

Clinical:

Medicine sans Frontiers: Afghanistan

Awards:

O and G Honor roll Undergraduate medical education

### **Dr. Kelly Albrecht:**

Administration:

Clerkship director Obstetrics and Gynecology

Teaching:

Core teacher undergraduate program

Faculty career mentor

Clinical:

Successful application to Baylor University Texas, for MFM fellowship

Awards:

Gold Star teaching award Undergraduate Medical Education

Research:

Co-author Specialist link Pathways:

Post pregnancy bleeding, AUB and post-menopausal bleeding

### **Dr. Aisling Mahalingham:**

Administration:

Development of an ARP in obstetrics for Triage Obstetrician

Teaching:

Core teacher Undergraduate program

Awards:

Gold Star teaching award Undergraduate Medical Education

### **Dr. Michelle Suri:**

Administration:

Resident coordinator FMC

Simulation Coordinator Dept OBGYN

Member of RPC

Development of Covid protocols on L and D  
Simulation of covid patient and video of donning and doffing

**Dr. Laura Coughlan:**

Administration:

Completed Masters of Health Administration May 2020

Zonal Implementation of Mife/miso inductions for Late Losses Dec 2020

Member of FMC Quality and Safety Committee

Revised Induction of labor Process, Developed new Induction form Dec 2020

Established Committee for Bariatric Care in OBGYN:

Obesity in Pregnancy working group- Coughlan, Mattatal, LeJour, Cooper- development of surgical protocols and working towards a dedicated clinic for women with obesity.

Awards:

O&G honor roll Undergraduate medical education

**Dr. Simrit Brar:**

Administration:

Connect Care:

Successful in securing OBIX funding for Calgary zone and continue to ensure appropriate build and documentation within Connect Care despite the changes in wave roll out (final dates pending).

Out of Country:

Central Triage processes more firmly established with engagement of Ministry of Health.

Postpartum quality and safety committee: Development of survey for review of postpartum care.

Research:

Impact of a Clinical Intervention to Decrease Opioid Prescribing in Post-Cesarean Section

Shanaya Aujla RN; Amy Metcalfe PhD; Selphee Tang; Rob Thompson MD: Submitted Canadian Journal of Anesthesia

**Dr. Stephen Wood:** (see research annual report)

Administration:

Division Head Research

**Dr. Philippa Brain:**

Administration:

Appointed Clinical Professor University of Calgary

Site lead OBGYN FMC

Division Head Pediatric and adolescent Gynecology

Physician lead EPAU clinic

Gynecological Lead Transgender care (PAG report)

Co-chair CANPAGO, SOGC

Research:

Publications: (See also Peds Gyne annual report)

For Publication:

Rates of blood transfusion associated with acute postpartum hemorrhage and

antepartum anemia: Papalia N, Chang D, Tang Selphee, Brain P. submitted to JOGC Dec2020

Determinants of first trimester spontaneous abortion management in the emergency department: an equity analysis, Amelia Srajer, Megg Wylie, Kevin Lonergan, Philippa Brain MD, Eddy Lang MD Submitted to Canadian Association of Emergency Physicians

Co-author Specialist link pathway: Post-pregnancy bleeding

Awards:

Recipient of Established Physician of the Year FMC 2019 Presented 2020

Other:

Leadership course: Haskayne School of Business

## Challenges

**Implementation of a separate gyne call system:** The implementation of a gyne call system was a response to a QAR on prolonged wait times of gyne patients in the ER. Creating a cohesive call schedule between the generalists and the subspecialty teams at FMC was complicated. The basis of the schedule was dependent on OR time at FMC. In response the REI team gave up their OR time. Gyne oncology declined from the schedule based on a contract obligation of providing call only for gyne oncology. Ongoing issues have presented themselves with junior resident coverage and limited gynecology residents at FMC with ongoing resolution of call coverage. Implementing significant system change while going through a global pandemic could have resulted in significant team disruption and it is a testament to the team that we were able to negotiate and implement this change as seamlessly.

**Covid:** The adaptation to a global pandemic has been overwhelming. The AHS, as a huge corporation, struggles to make policy changes and adapt at the speed with which is required to adjust to the fast moving pandemic. The physician leadership team lead the changes with support from administration. The ability for the clinical leadership, unit managers, nurses and physicians to work as a team, with support from the higher level leadership, department heads and program managers was, and is, the silver lining to this pandemic

**Resident coverage:** Changes to the second year resident rotations has lead to a reduction in the number of residents on labor and delivery. Day to day coverage for both Obstetrics and Gynecology with separate call schedules has been a challenge. This has been presented to RPC for evaluation

## Workforce Planning

Dr. Brain : Sabbatical starting July 2021: Certificate in Patient Safety Oxford, UK

Dr. Albrecht: Successful application to Fellowship at Baylor University Texas

Potential need for recruitment to cover Dr. Brain/Albrecht.

## QA/QI and Innovation

Development and approval of Quality and safety committee as subcommittee of WHAC QI committee for regular review of obstetrical outcomes, section 9 protected, using obstetrical dashboard

Funding for full time data analyst for obstetrical outcomes though Calgary Health Foundation

- PPH support by 0.2 data analyst (Olesya Barrett): \$75,000 over the course of the project.
- New OB QI analyst position: \$100,000 per year x 3 years. (Calgary Health Foundation funding)

Postpartum Quality and Safety committee: Survey of postpartum patients evaluating care

Implementation of QBL Postpartum: Development of QI project incorporating Total QBL for delivery and Postpartum, implementation of allowable blood loss and incorporating novel technology with transcutaneous HGB

## **Future Directions and Initiatives**

Antepartum day unit: Development of an antepartum day unit to address alternatives to inpatient stays for out of town patients with obstetrical problems and providing access to enhanced fetal monitoring as an outpatient

Quality and safety review committee: coordination and enhancement of quality and safety committees addressing both gynecological and obstetrical care.

Operationalizing of reporting of QI: Site, regional and provincial reporting

Bariatric Care: Committee for safety in Bariatric Care in OBGYN (Laura Coughlan, Michael Secter, Anita Cizecki)

Development of Bariatric Obstetrics Clinic (Caroline Le Jour, Laura Coughlan)



**Dr. Wynne Leung Rockyview General Hospital  
Site Lead**

## Rockyview General Hospital

### Accomplishments and Highlights

Our group has been very active this year in leadership roles. Highlights include Dr. Fiona Mattatall who is the Co-chair for the Transgender Working Group of the Society of Obstetricians and Gynecologists of Canada. Dr. Dhea Walalce-Chau is initiating a Peer Support Program for the Department of Obstetrics and Gynecology in conjunction with Well Doc Alberta. Dr. Wynne Leung has will be starting a new role as the Alberta Surgical Quality Improvement Lead, South Sector.

### Workforce Planning

This year we saw the retirement of Dr. Charlene Lyndon from our call group. We had several excellent candidates apply to our site and will be welcoming Dr. Caitlin Jago in the new year, fresh from her Minimally Invasive Surgery Fellowship in Ottawa. Our staffing has been surprisingly good this year. We had anticipated more physician absences due to Covid-19 and therefore planed several backup systems. Luckily, everyone remained healthy for the most part and we have no planned changes to the group in the coming year.

### QA/QI and Innovation

We are excited to facilitate Dr. Ingrid Kristensen's QI project on fetal scalp sampling. We have continued to collect data as a site through the pandemic. We continue to meet regularly with our colleagues in Diagnostic Imaging to review difficult cases and improve our understanding and communication between departments. We are participating in the Zonal initiative to see postpartum patients in obstetrical triage, thus reducing the workload for the ED.

### Future Directions and Initiatives

We have been invited to participate in the Complex Care Hub initiative through the Department of Internal Medicine. We hope to address the population of postpartum patients who develop hypertension and are at risk for preeclampsia or eclampsia. Our goal is to manage this population through the CCH allowing them to have "inpatient" level care while being at home. This would reduce the burden on the hospital and improve the monitoring and follow up of this population which is currently underserved.

Dr. Wallace-Chau's Peer Support Initiative is strongly supported by our group and we look forward to participating in its inception.

The RGH NSQIP collective has started collecting data on Cesarean Section patients. We hope to further adopt the NSQIP Surgical Site Infection bundle in the Labour and Delivery OR as the practice is now well established in the Main OR.



**Dr. Qyunnh Tran Peter Lougheed Centre Site Lead**

## Peter Lougheed Centre

### Accomplishments and Highlights

- Postpartum triage pilot project was highly successful
- Established a separate gynecology call schedule for PLC site where staff is first call– however still not getting call stipend for this that other sites are receiving
- Substance Use in Pregnancy/ ARCH program is running smoothly so far – collaboration between ARCH physicians/ Internal Medicine and Obstetrics

### Challenges

- Out group is looking at ways to maximize usage of the OR time that we do have.
- Also minor surgery at PLC undergoing major renovations may be able to do small cases there under IV sedation in the future (just like SHC). Also awaiting “Alberta Surgical Initiative” to release approval/ funding to move small cases out to NHSF’s.
- Women’s Health clinic - plans to move most of TA cases out of hospital. We currently funnel a lot of D&C’s for incomplete and missed SA’s picked up through ER through the WHC. We will then see increasing number of D&C’s on our Emerge surgery list each night. Backing up the system further.

### Workforce Planning

- Have hired Dr Angela Deane as 0.5FTE. She will be joining us in Jan 2022. We now will have 12 full time FTE’s for obstetrics and 3 - 0.5 FTE’s. These 3 half time specialists will transition into full time positions as people retire. Also have 1 gynecologist giving us a total of 16 at the PLC..
- With the anticipation of Dr Cenaiko and Dr Iwanicki retiring in the next 5 years? We will need more specialists with vaginal surgery skills and urogyn skills.. Dr Angela Deane our new hire will fill some of this gap but will likely recruit along the same line for the future.

### QA/QI and Innovation

- Operative Vaginal Delivery Audit at PLC by Dr Nasr – successfully resulted in significant reduction in OVD rates at PLC over the last year. Now implementing an “OVD Pause” before each of these deliveries. Dr Nasr is also involved in other obstetrical QI projects.
- NSQIP – Dr Belland - “surgical bundles” into OR routines to reduce surgical site infections
- Dr Nasr – research into intranasal oxytocin and botulinum injections for chronic pain.
- Same Day Discharge for Hysterectomy – as a group we have worked on protocol to improve likelihood of same day discharges. Should see compiled data in 2021. Will be submitted as gyne contribution in response Ernst&Young Review and challenge to decrease length of stay.

### Future Directions and Initiatives

- Elective C-section in main OR – currently only one day per week. Would love to have a 2<sup>nd</sup> day in main OR weekly to decant some of the workload from L&D unit. Also could fit in D&C’s picked up from

Emerg into these days. Highly unlikely that we will get more OR time from the surgical pool. Will likely need to find time within our gyne allotted time. May be more feasible as more senior surgeons with more OR time start to retire.

- MFM Assessment Clinic at the PLC – would love to see this come to fruition. Currently have MFM at PLC site 3x/week.



**Dr. Meriah Fahey South Health Campus, Site Lead**

## South Health Campus

### Accomplishments and Highlights

Development and implementation of a comprehensive multidisciplinary care plan and pathway for patients with complex obesity

Member of our team assumed the roles of Medical Director of the ATSSL lab University of Calgary and President of the Section of Obstetrics and Gynecology for the Alberta Medical Association.

Member of our team heads Specialist Link for our Women's Health.

Bringing on a larger OBGYN resident presence

### Challenges

We remain under resourced for access to surgical time for elective gynecology cases – we continue to advocate at the Surgical Services and Zone level for allocation to offset the current wait time of four of our members, which sits at about one year. Clear Score has not been helpful in allocation from other services.

Utilization of our maternity unit for long term care patients during pandemic surge – we anticipate a return to 'normal' once numbers come down but we continue to advocate with those who will listen that this is a detriment to the care of our patients and the degree of this use on our unit is not in keeping with equitable resource utilization for the zone.

Beyond the pandemic, we would like to expand obstetrical services by increasing capacity – increased capacity was underway early 2020 but is on hold at present

### Workforce Planning

We have completed hiring of four new individuals who will begin work in 2021. This should stabilize our workforce planning for the year.

### QA/QI and Innovation

Ongoing work in the study and reporting on fetal malpresentation

Ongoing work with implementation of REDUCED guidelines

### Future Directions and Initiatives

Supporting medical education at SHC

Increasing access to elective surgical time

Increasing Obstetrical capacity at SHC

Supporting personal and career development of SHC OBGYNs

Home-hospital programming for obstetrics

# DIVISION AND SITE UPDATE



Dr. Shunaha Kim-Fine Division Lead, Pelvic  
Medicine and Reconstructive Surgery

## Pelvic Medicine and Reconstructive Surgery

### Accomplishments and Highlights

#### AWARDS

Editor's pick: Guidelines for Vulvar and Vaginal Surgery: Enhanced Recovery after Surgery(ERAS) Society Recommendations. Altman AD, **Robert M**, Armbrust R, Fawcett WJ,

NihiraM, TamussinoK, SehouliJ, DowdySC, NelsonG. AJOG. <https://doi.org/10.1016/j.ajog.2020.07.039>

Editor's pick: highlighted in Green Journal Podcast Sept 2020. **Brennand EA**, Wu G, Houlihan S, Globerman D, Gagnon LH, **Birch C**, Hyakutake M, Carlson KV, Al-Shankiti H, **Robert M**, Lazare D, **Kim-Fine S**; Calgary Women's Pelvic Health Research Group. Two Intraoperative Techniques for Midurethral Sling Tensioning: A Randomized Controlled Trial. Obstet Gynecol. 2020 Sep;136(3):471-481. doi: 10.1097/AOG.0000000000004027. PMID: 32769657; PMCID: PMC7431154.

Manuscript selection in ABOG maintenance of certification program: **Brennand EA**, Quan H. Evaluation of the Effect of Surgeon's Operative Volume and Specialty on Likelihood of Revision After Mesh Midurethral Sling Placement. Obstet Gynecol. 2019 Jun;133(6):1099-1108. doi: 10.1097/AOG.0000000000003275. PMID: 31135723; PMCID: PMC6553521.

CIHR clinical mentorship in women's health research grant: **Brennand EA**

MSI Foundation Research grant: **Brennand EA**

OPIH 10th Anniversary Award: **Brennand EA**

Top 10% reviewer for Green Journal: **Brennand EA**

#### EDUCATIONAL ACTIVITIES

**Robert M**: Education committee - Responsible for all medical and allied health learners coming Through the Calgary Chronic Pain Centre, member of Pain Medicine Resident committee, **Chair** - Calgary Chronic Pain Centre Continuing Education Committee

**Brennand EA**: Fellowship Program Director

**Kim-Fine S**: Urogyne rep to the Residency Program Committee, co-fellowship program director

#### ADMINISTRATIVE RESPONSIBILITIES

AMA ref Forum Delegate for U of C GFT physicians: **Brennand EA**

Western Representative on the Executive Board of Canadian Society of Pelvic Medicine, Steering Committee member of Collaborative Research in Pelvic Surgery: **Kim-Fine S.**

Medical Director of Calgary Chronic Pain Program, Member of Faculty of Graduate Studies, Member of Neutral Chair Committee, Leader in Global Health Initiative, Medical Director of Calgary Chronic Pain Centre (April 1 2019- ongoing). Member of Executive Committee of Department of Anesthesia (Sept 2020-ongoing), Chair Quality Council, Calgary Chronic Pain Centre (Oct 2019-ongoing). Chair Chronic Pain program Clinical ARP committee (April 2019-ongoing). Co-Chair of Outcomes Committee, Alberta Pain Strategy (Sept 2019-ongoing), Bone and Joint Health SCN Core Committee (Nov 2019-onwards), Advisor for Alberta to Canadian Task Force on Chronic Pain (Oct 23, 2019)

## REVIEWERSHIPS

Robert M: CIHR Project Grant: Spring 2020 competition reviewer (7 reviews), Reviewer for Journal of Obstetrics & Gynecology, **Abstract reviewer, SOGC (10 abstracts)**. Resident Appeal Committee Member (May 16, 2019)

Brennand EA: Green Journal reviewer, IUJ reviewer

Kim-Fine S: IUJ reviewer

## GRANTS

1. Can Health West Network (2020-2022) (\$250,000) Evaluation of APP for pain management in transitional pain service. Executive sponsor: Tracey Wasyluk, Rob Tangay, Program/Clinical Sponsor: **Magali Robert**, Key system evaluator: Kathryn Birnie
2. CIHR operating grant (2020-2024) \$696,152 evaluating the efficacy of intranasal oxytocin on pain and function among individuals who experience chronic pain: A multi-site, placebo-controlled, blinded, sequential, within-subjects crossover trial. PIs: J. A. Rash & T. S. Campbell, Co-Investigators: D. Flusk; A. MacInnes, M. Nasr-Esfahani, P. Poulin, **M. Robert & Y. Yi**, Collaborators: L. Cooper
3. Women's Health Clinical Mentorship Grant (2020-2022) Uterine preservation versus hysterectomy for pelvic organ prolapse surgery: A mixed methods prospective cohort study exploring health outcomes and patient beliefs. PI: **Erin Brennand**, Kathleen Chaput, Ariel Ducey, Co-I **Shunaha Kim-Fine**, Amy Metcalfe, **Magali Robert**
4. The association between the route of administration of postmenopausal hormone therapy and hypertension in women in Alberta. Sofia Amed, Jennifer Marie MacRae (PI), Amy Metcalfe, Kare Nerenberg, **Magali Robert** (CO-I)
5. Cosm (industry funded) Predictive modeling for pessary use (July 2020-ongoing) \$7000. PI: **Magali Robert**
6. Dear Fund (May 29, 2019-ongoing) \$5000 Marijuana and bladder symptoms in multiple sclerosis patients. PI **Shunaha Kim-Fine, Magali Robert**, Luanne Metz
7. Dear Fund (May 29, 2019-ongoing) \$4700 Prevalence of Cannabinoid use in the chronic pelvic pain population PI **Magali Robert**, Maryam Nasr-Esfahani, John Jarrell, James Currie
8. IMAGINE Network in the SPOR (Strategy for Patient Oriented Research) initiative of CIHR, Sex and Gender \$125,000. Co-Chair Laura Targownik, Amy van Engelen, members: Dean Tripp, Cynthia Seow, Jennifer Jones, **Magali Robert**, Kim Daley.

## PRESENTATIONS

Sexual Function in men and women with IBD, **M. Robert**, with Dr. Cynthia Seouw. IBDMEDED webinar series

Invited lecturer for the 13th Annual Lectureship in Pelvic Reconstructive Surgery 2020 at University of British Columbia, **EA Brennand**

Invited speaker Annual Meeting of the Canadian Society of Pelvic Medicine, Telemedicine for Urogynecologic Care during COVID-19 Pandemic, **S. Kim-Fine**

Oral Presentation, 42<sup>nd</sup> Annual Scientific Meeting, Society of Gynecologic Surgeons. SEXUAL FUNCTION AFTER PELVIC ORGAN PROLAPSE SURGERY: A SYSTEMATIC REVIEW COMPARING DIFFERENT APPROACHES TO PELVIC FLOOR REPAIR D. Antosh; E. Balk; **S. Kim-Fine**; K. V. Meriwether; G. Kanter; A. Dieter; M. Mamik; M. Good; R. Singh; A. Alas; M. Foda; D. D. Rahn; R. G. Rogers

Oral Presentation, 42<sup>nd</sup> Annual Scientific Meeting, Society of Gynecologic Surgeons. QUALITY OF SEXUAL FUNCTION OUTCOME REPORTING IN PELVIC ORGAN PROLAPSE TRIALS D. Antosh; K. V. Meriwether; **S. Kim-Fine**; E. Balk; A. Dieter; G. Kanter; M. Mamik; R. Singh; M. Good; A. Alas; M. Foda; D. D. Rahn; R. G. Rogers

Non-Oral Poster Presentation, 42<sup>nd</sup> Annual Scientific Meeting, Society of Gynecologic Surgeons. RELATIONSHIP OF POSTOPERATIVE VAGINAL ANATOMY AND SEXUAL FUNCTION **S. Kim-Fine**; D. Antosh; E. Balk; K. V. Meriwether; G. Kanter; A. Dieter; R. Singh; M. Good; M. Foda; M. Mamik; D. D. Rahn; R. Rogers

## PUBLICATIONS

Altman AD, **Robert M**, Armbrust R, Fawcett WJ, Nihira M, Jones CN, Tamussino K, Sehouli J, Dowdy SC, Nelson G. (2020). Guidelines for vulvar and vaginal surgery: Enhanced Recovery After Surgery Society Recommendations. Am J. Obstet Gynecol.223(4): 1595-1602.

Flynn, M. J., Campbell, T. S., **Robert, M.**, Nasr-Esfahani, M. & Rash, J. (2020). Intranasal Oxytocin as a treatment for Women's Chronic Pelvic Pain: A Randomized Feasibility Study. JOGO. 42(1): 72-79.

**Brennand EA**, Wu G, Houlihan S, Globerman D, Gagnon LH, **Birch C**, Hyakutake M, Carlson KV, AlShankiti H, **Robert M**, Lazare D, **Kim-Fine S**; Calgary Women's Pelvic Health Research Group. (2020). Two Intraoperative Techniques for Midurethral Sling Tensioning: A Randomized Controlled Trial. Obstet Gynecol.136(3): 471-481.

Ducey A, Donoso C, Ross S, **Robert M**. (2020). From anatomy to patient experience in pelvic floor surgery: Mindlines, evidence, responsibility, and transvaginal mesh. Am J Obstet Gynecol.260(113151): 0.

Graves L, Green C, **Robert M**, Cook J. (2020). Methamphetamine Use in Pregnancy: A Call for Action. J Obstet Gynaecol. Can. 0(0): 0. In Press

Brooks KCL, Varette K, Harvey MA, **Robert M**, Brison RJ, Day A, Baker K, Della Zazzera V, Sauerbrei E, McLean L. (2020). A model identifying characteristics predictive of successful pelvic floor muscle training outcomes among women with stress urinary incontinence. nt Urogynecol J.0(0): 0. In Press

Thornton KG **Robert M**. (2020). Prevalence of Pelvic Floor Disorders in the Fibromyalgia Population: A Systematic Review. Journal of Obstetrics and Gynaecology Canada.42(1): 72-79.

Luo FY, Nasr-Esfahani M, Jarrell J, **Robert M**. (2020). Botulinum toxin injection for chronic pelvic pain: A systematic review. Acta Obstet Gynecol Scand.99(12): 1595-1602.

Harvey MA, Lemieux MC, **Robert M**, Schulz JA. (2020). Directive clinique No. 411 :Utilisation des pessaires.J Obstet Gynaecol Can.S1701-2163(20): 30912-9.

Harvey MA, Lemieux MC, **Robert M**, Schulz JA. (2020). Guideline No. 411: Vaginal Pessary Use.J Obstet Gynaecol. Can. 1701-2163(20): 30912-9.

Sandwith E, **Robert M**. (2020). Rug-pee study: the prevalence of urinary incontinence among female university rugby players.Int Urogynecol J.0(0): 0.

Grimes CL, Antosh DD, Oliphant S, Yurteri-Kaplan L, **Kim-Fine S**, Melamud G, Heisler C, Chung DE; Collaborative Research in Pelvic Surgery Consortium (CoRPS). Correlation of Electronic (Web-Based and Smartphone) Administration of Measures of Pelvic Floor Dysfunction: A Randomized Controlled Trial. Female Pelvic Med Reconstr Surg. 2020 Jun;26(6):396-400. doi: 10.1097/SPV.0000000000000713. PMID: 30889034.

Antosh DD, **Kim-Fine S**, Meriwether KV, Kanter G, Dieter AA, Mamik MM, Good M, Singh R, Alas A, Foda MA, Balk EM, Rahn DD, Rogers RG. Changes in Sexual Activity and Function After Pelvic Organ Prolapse Surgery: A Systematic Review. Obstet Gynecol. 2020 Nov;136(5):922-931. doi: 10.1097/AOG.0000000000004125. PMID: 33030874.

Chaikof M, McDermott CD, **Brennand E**, Sanaee M. Patients Seeking "Vaginoplasty" Deserve Assessment and Treatment by Experts in Female Pelvic Medicine and Reconstructive Surgery. Aesthet Surg J. 2020 Nov 9:sjaa286. doi: 10.1093/asj/sjaa286. Epub ahead of print. PMID: 33165577.

**Brennand EA**, Ugurlucan FG, Brown HW, Jeffery S, Campbell P, Grimes CL, Yurteri-Kaplan LA. Female Pelvic Medicine and Reconstructive Surgery challenges on behalf of the Collaborative Research in Pelvic Surgery Consortium: managing complicated cases : Series 5: management of recurrent stress urinary incontinence after midurethral sling exposure. Int Urogynecol J. 2020 Sep;31(9):1747-1754. doi: 10.1007/s00192-020-04385-3. Epub 2020 Jun 26. PMID: 32592017.

- successful Pessary Care Course for Family Physicians with goal of discharging long term pessary followup care to these physicians, thereby shortening our growing wait list
- Urgent Gyne clinic was run through the Pelvic Floor Clinic during 1<sup>st</sup> wave of COVID 19 pandemic
- Dr. E. Sandwith graduated from our fellowship in June 2020. She is now settled in Victoria
- Dr. S Kim-Fine
- Dr. C. Birch – continues on as Dept OBGYN Head
- Dr. M. Robert – continues as Section Head of Chronic Pain

Wrote the response to the RAMQ Moratorium on mesh that is on the CSPM website and was the lead author on the invited Health Canada report regarding long term safety of midurethral slings

## Challenges

- COVID -19 restrictions on in person care, as well a total number of patient visits in AHS facilities
- Lack of ORs and learning opportunities in first (and second wave) for trainees
- Loss of funding for the NP in the Pelvic Floor Clinic, which means wait list continues to grow

## Workforce Planning

- Will need 1 new fellowship- trained FPMRS within next 5 years, timing offset by COVID-19

- 1 MSc Research Associate, K. Ramage, has been hired by the Section to support research
- 2 new fellows started Summer 2020: Dr. A Edwards (U of A) and Dr. A Carter Ramirez (Macmaster)
- Planning for next fellow to start in fall 2021
- Request for funding to replace NP position has been submitted to AHS

### **QA/QI and Innovation**

- Physician Learning Project for UI pathway referrals started
- Discussing possible program for Home care for pessary care in the community

### **Future Directions and Initiatives**

- Re-visiting intake / referral process to the Pelvic Floor Clinic to try and reduce waitlist
- Implementation of new policy of discharge of pessary follow-up patients to community providers



Dr. Chandrew Rajakumar Division Lead, Minimally Invasive Gynaecologic Surgery

## Minimally Invasive Gynaecologic Surgery

### Accomplishments and Highlights

The MIGS division consists of Drs. Chandrew Rajakumar (Head), Liane Belland (Fellowship Director), Kathryn Lo (Fellowship Co-Director), Ari Sanders, Michael Selter, Jackie Thurston (QI/QA), and Alese Wagner. We welcome Dr. Caitlyn Jago to the team (see Workforce planning).

Peer-reviewed Publications in 2020:

Technicity in Canada: A nationwide whole population analysis of temporal trends and variation in minimally invasive hysterectomies.

Chen I, Mallick R, Allaire C, Bajzak KI, **Belland LM**, Bougie O, Cassell KA, Choudhry AJ, Cundiff GW, Kroft J, Leyland NA, Maheux-Lacroix S, **Rajakumar C**, Randle E, Robertson D, Thiel JA, Tulandi T, Yong PJ, Laberge PY. J Minim Invasive Gynecol. 2021 Jan 18:S1553-4650(21)00038-8. doi: 10.1016/j.jmig.2021.01.010.

Guideline No. 404: Initial Investigation and Management of Benign Ovarian Masses. Wolfman W, **Thurston J**, Yeung G, Glanc P.

J Obstet Gynaecol Can. 2020 Aug;42(8):1040-1050.e1. doi: 10.1016/j.jogc.2020.01.014.

Guideline No. 392-Classification and Management of Endometrial Hyperplasia.

Auclair MH, Yong PJ, Salvador S, **Thurston J**, Colgan TTJ, Sebastianelli A.

J Obstet Gynaecol Can. 2019 Dec;41(12):1789-1800. doi: 10.1016/j.jogc.2019.03.025.

Uterine Defect after Open Maternal-fetal Surgery.

Ting P, **Sanders AP**. J Minim Invasive Gynecol. 2020 Jul 27:S1553-4650(20)30347-2. doi: 10.1016/j.jmig.2020.07.016.Parasitic Leiomyoma Involving the External Iliac Vessels.

**Sanders AP**, Shirreff L. J Obstet Gynaecol Can. 2020 Mar 12:S1701-2163(20)30045-1. doi: 10.1016/j.jogc.2020.01.015.

Other notable Highlights of 2020 is the Appointment of Dr. Chandrew to the position of President of the Section of Obstetrics and Gynecology in the Alberta Medical Association as well as the Medical Director of the Advanced Technical Skills Simulation Laboratory, University of Calgary and the appointment of Dr. Jackie Thurston to the Department of OBGYN Executive Committee for Quality Improvement.

### Challenges

As with other surgical services the COVID-19 pandemic has caused major delays in delivery of care, both in initial consultation and time to surgery, for our patient population. This further worsens the disability associated with the conditions the MIGS group focuses on. Improved triaging algorithms and virtual consultations have been implemented to mitigate these setbacks.

With limitations of ADOP surgeries many colorectal endometriosis cases requiring bowel resection have been delayed until further notice. This is also the situation for patients traveling great distances within Alberta for their procedures.

The final and standing issue is delay in surgical care. In general, our group's completed procedures out of (aCATS) window is 50-75%. Unfortunately, the major driving force behind this is limited OR time. It is our hope that with Dr. Jago's new appointment, some cases can be decanted to her waitlist allowing for more timely delivery of care.

## **Workforce Planning**

Dr. Caitlyn Jago, a graduate of the University of Calgary, has been hired to Rockyview General Hospital after completing a 2-year AAGL accredited fellowship in MIGS at the University of Ottawa. Additionally, Dr. Angela Deane, is completing a 1-year fellowship in Toronto with the prospect of returning to Calgary and joining the Peter Lougheed Center's team.

With these recruitments, there will be increased MIGS services available at all four Calgary hospitals. Looking to the future, there is a strong need for a second MIGS practitioner to support Dr. Selter at the Foothills Medical Center. There is a gap identified through analysis of the technicity index at FMC that we aim to support through future recruitment.

## **QA/QI and Innovation**

The MIGS group continues to demonstrate surgical excellence at our respective sites with each member demonstrating a technicity index of 97-100%, which are in far excess of each hospital's average TI (82% PLC; 79% RGH; 79% SHC; 45% FMC).

Simulation and Virtual Surgery are innovative means of improving technical skills without risk of harm. These are employed at the ATSSL, University of Calgary and Zoom.

Dr. Thurston is collaborating with the Department of Surgery and the Surgery SCN to develop a QI Dashboard for our division. Following a pilot phase, this digital interface can be made available for use by the department.

## **Future Directions and Initiatives**

With growth of our MIGS division, the group will be sufficiently large to support a second fellow or focused clinical fellowships (ie endometriosis and chronic pain, fibroids, etc.). Advent of digital QI dashboard would allow virtual sharing of metrics across all sites and allow for analysis and specific feedback to division members. Finally and as always, our group aims to contribute as leaders and scholars with involvement in guideline development, scientific and educational publications, and assuming roles of governance and advocacy.



**Dr. Magali Robert Division Lead, Chronic Pain**

## Chronic Pain

### Accomplishments and Highlights

The Calgary Chronic Pain Program encompasses the following services: Chronic Pain Center, transitional pain, chronic pain consult services and support for PCNs.

2020 was an unprecedented year as the Center also underwent restructuring. Highlights were the implementation of a new model of care for the whole center to improve access and patient flow, implementation of measures to follow patient progress and development of a dashboard to track patient care utilization in the program. In addition, a research strategy was developed. A plan to expand transitional services to provide city wide perioperative pain and peripartum pain management to patients at risk of developing chronic pain was initiated.

The Chronic Pain Center provides interdisciplinary care to patients suffering from neuromuscular pain, pelvic pain and/or post traumatic headache as well as providing physician consultative support and opioid stewardship. In 2020, 1083 new patients were seen (of which 249 were pelvic), 890 MD-MD consults were completed. The transitional pain service in the SHC saw over 100 new patients. The consult service saw 723 new inpatients at all the sites.

This was done during the pandemic when the Center was closed to in-person visits from March to August. The clinic at RRDTC had one week to vacate and relocate at the South Calgary Urgent Care Center in office cubicles. This included closure of all interventional services for one month. At one point only physician and psychology services were available; all virtual. Return to the Center allowed resumption of all services. Adaptation included development of all groups to be online, encouragement of virtual appointments when possible and support for working from home.



Dr. Gregg Nelson Division Lead, Gynaecologic  
Oncology  
Deputy Department Head

## Gynaecologic Oncology

### Accomplishments and Highlights

Our team provides comprehensive gynecologic cancer care to patients across Southern Alberta. We are recognized as national leaders in the areas of radical abdominal debulking for ovarian cancer and HIPEC (heated intraperitoneal chemotherapy). We continue to work towards finalizing our program in Sentinel Lymph Node mapping for endometrial, cervical and vulvar cancers. During 2020, our Division was very productive in research (41 publications and total grant funding held \$3,285,821).

### Challenges

To date we have had struggles getting our sentinel lymphatic mapping program off the ground – this has been impeded by barriers at the hospital administration level.

### Workforce Planning

We have posted for a clinical Gyn Onc position which we hope to fill in July 2021 (interviews of 2 applicants pending). We hope to be able to convert one of the current clinical positions into a GFT position in the next 2-3 years in order to secure protected time for research.

### QA/QI and Innovation

Our Division continues to lead surgical quality improvement at an international level through our ERAS program (associated with 21 publications in 2020).

### Future Directions and Initiatives

Dr. Anna Cameron is co-leading a grant application entitled “A perioperative glycemic management pathway for reducing length of stay in Alberta surgical patients” (Partnership for Research and Innovation in the Health System Competition, Alberta Innovates, to be submitted Mar 15, 2021, Requesting \$1,000,000)

Dr. Gregg Nelson is co-leading a grant application entitled: “Enhanced Recovery for All (ERA): Minimizing Harm Associated with Hospitalization” (Canadian Institutes of Health Research - Team Grant: Personalized Health; Submitted Dec 10, 2020, Requesting \$1,975,000)



**Dr. Verena Kuret Division Lead, Maternal-fetal Medicine**

## Maternal-fetal Medicine

### Accomplishments and Highlights

MFM Team instrumental in supporting care of pregnant patient with COVID-19 infection through clinic, surveillance, and research

### Challenges

- MFM cARP program renewal application currently under review by AH
  - Several changes were requested to align with AH policies
- Ongoing team discord
  - AHS Leadership and Facilitators involved in finding resolution
- Equipment replacement (ultrasound machine)
  - SHC US needs replacement, provincial capital expenditures budget frozen

Need to develop machine procurement, maintenance and replacement longterm plan

### Workforce Planning

- Dr Ian Lange retired Dec 31, 2021. Celebration has been deferred until after the pandemic
- Dr Jo-Ann Johnson began a 1 year sabbatical dedicated to research and implementation of Enhanced First Trimester Pre-eclampsia screening/management
- Will re-evaluate new potential 0.5 FTE MFM cARP position in Q2/Q3
  - Impact analysis already completed and approved

### QA/QI and Innovation

- A new MFM service-wide Quality Assurance program has been developed and instituted: The 'Alberta Health Services Calgary Zone Women's Health Maternal Fetal Medicine Quality Assurance Aggregate Working Group'

A new initiative that has been formalized as a Zone-wide approach to bring together the required stakeholders to review adverse and potentially adverse events identified by the Section of Maternal Fetal Medicine. This committee reports to and is a resource for the Women's Health Quality Assurance committee on matters of quality assurance in fetal imaging

### Future Directions and Initiatives

- Awaiting approval of Calgary MFM cARP program by AH
- Telemedicine research/feasibility study started
- Initiation of MFM Day Unit at PLC is underway
  - Target start date March 2021

- New FFS MFM Clinic established by Dr Cooper with private radiology company (CDC)
- Calgary will be host of 17<sup>th</sup> ISUOG Virtual International Symposium 2021
- New multidisciplinary collaborations:
  - Reproductive Infectious Diseases Clinic (MFM and ReproID/OBIM)
  - Hematology/Rheumatology collaboration (MFM and Hematology)
  - Penicillin delabeling Clinic for pregnant patients in currently in development (MFM, ReproID, Pharmacy, Allergy/Immunology).



**Dr. David Somerset Division Lead, Fetal Therapy**

## Fetal Therapy

### Accomplishments and Highlights

All procedures done at FMC, as day cases. Jan to Nov 2020 reported.

RFA: 2 procedures. Since 2017: 6/9 live born or ongoing.

Shunts: 2 procedures on 2 patients. Since 2017: 8/10 live born or ongoing. Two not live born had been found to be incompatible with life following shunt insertion. One live born had care withdrawn at 2 months of life due to poor prognosis.

IUT: 7 procedures / 2 patients. Both live born in T3. Since 2014 23 pt's received 62 transfusions. 100% of non-hydropsic fetuses survived. All cases of allo-immune hemolytic anemia survived. The only losses were 2 of 3 fetuses with parvovirus presenting before 20 weeks.

Dr O'Quinn performing IUT, RFA and shunts under supervision now (2nd operator)

Dr Connors has retired from procedures

### Challenges

Lack of a dedicated space for these procedures means we can only do them prior to 8am on Tuesdays and Thursdays, after 5pm on weekdays or weekends. This resulted in one demise of twins in 2019 when we could not do a procedure Friday am, and the fetuses had died before we could intervene in the evening.

2. Relative few cases means maintaining skills up and training others to join the team is challenging.

3. Manufacturer issued recall for shunts in the fall. In conjunction with colleagues internationally we are continuing to use up current stock and have ordered a different, though slightly inferior, product. We are putting pressure on the manufacturer

### Workforce Planning

Dr O'Quinn is expected to become independent at uncomplicated IUT in 2021 if we get enough cases.

Dr Connors has retired from procedures.

Hope to start training a third colleague.

## **QA/QI and Innovation**

All cases are followed up through to delivery and the neonatal period, with annual audit and reporting of outcomes to stakeholders to ensure the program results are acceptable.

IUT – Provincial Program successfully launched in 2014

RFA – Program successfully launched in 2017

Shunts – Program successfully launched in 2017

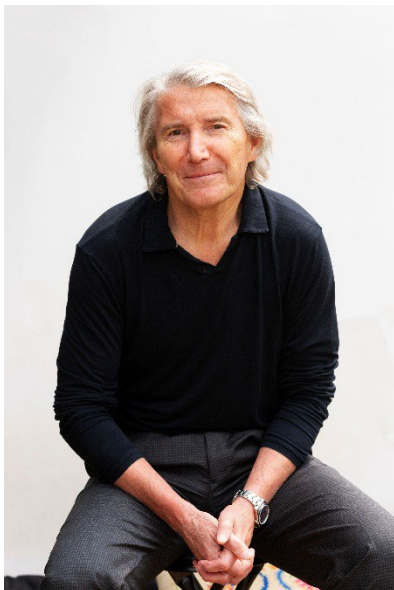
Working well with colleagues in Edmonton to care for their patients.

Working well with OB Anesthesia to provide conscious sedation where indicated.

## **Future Directions and Initiatives**

We would like to offer services to Saskatchewan pt's – need to establish appropriate agreements between health authorities.

2. Consider introduction of laser for TTTS (has been recommended by external reviewer).



**Dr. Joseph O'Keane Division Lead, Reproductive Endocrine and Infertility**

## Reproductive Endocrine and Infertility

### Accomplishments and Highlights

#### Clinic Visits

The total number of new consultations seen at the clinic including male and female was 6,049 (-4%). This is decreased from 6,256 in 2019. There were 18,016 repeat visits over this interval, again contrasting with 2019 of 17,475. In 2020, 1,759 hysterosalpingograms (-26% vs 2019) and 881 sonohysterograms (-22% vs 2019) were performed.

The average wait list from initiation of referral to consultation is approximately six to eight weeks. Urgent referrals such as patients requiring chemotherapy or extirpative surgery are generally seen on the day of referral. All patients receive a phone call from a booking clerk within one week of receiving the referral and a confirmatory fax is sent to the referring physician within a week of receipt of the referral. Currently, there is a minimal wait if a couple needs IVF or other infertility treatments, save a general 2-3 month wait for surgical treatments.

#### Clinical Services

##### 1. In Vitro Fertilization

There is essentially no wait list for IVF as patients can have their cycle initiated almost immediately after investigations are completed. The total number of IVF cycles in 2020 was 994. This is a 14.7% drop from 2019. The overall average age of patients was 35.5. The average number of oocytes collected was 13. Conventional insemination was used to fertilize the oocytes in 34% and ICSI in 66%. The antagonist stimulatory protocol was used in 77% with conventional long agonist protocol used in 1%. The antagonist protocol has resulted in a dramatic decrease in the incidence of ovarian hyperstimulation with this now being a rare event. The flare protocol was used for poor responders in 22% of cycles. Seventy-one (71) cycles (7%) were cancelled prior to oocyte retrieval due to poor stimulatory response; 37 of these were converted to IUI.

The overall clinical pregnancy rate per fresh embryo transfer was 37% in 254 patients up to the age of 35; a pregnancy rate of 30.9% in 218 patients between the ages of 36 to 39; 19.5% pregnancy rate in 131 patients 40 years of age or older.

There were 86 day two transfers completed, with an average number of embryos of 1.7 being transferred. Overall clinical pregnancy rate per embryo transfer was 11.9%; ongoing twin rate of 0% and triplet rate of 0%.

Fifty-eight (58) embryo transfers were performed on day 3 cleavage stage with an average number replaced of 2.1 and a clinical pregnancy rate of 20.7%; ongoing twin rate is 9%.

Four hundred and sixty (460) embryos were transferred at the day 5 blastocyst stage. The average number transferred was 1.3 with an overall clinical pregnancy rate of 35.9%; ongoing twin rate of 4.5%.

In our high-prognosis single embryo transfer patients (defined as one day 5 embryo transfer, aged less than 36, with at least one cryopreserved embryo), the clinical pregnancy rate was 46.7%. There were 153 transfers performed in this category with an average age of 32 and ongoing twin rate of 1.5%.

Seventy-seven percent (77%) of IVF cycles were antagonist protocol cycles. Ninety-six (96) cycles that had agonist trigger instead of HCG and 99% of these had a subsequent freeze-all to minimize the risk of ovarian hyperstimulation. This protocol has essentially eliminated ovarian hyperstimulation syndrome at RFP.

Forty-four (44) anonymous oocyte donor cycles were performed with a clinical pregnancy rate of 38.1%.

There were no fresh donor oocyte cycles due to the change in federal legislation regarding same. We completed 52 cycles for fertility preservation with oocyte vitrification.

## **2. Frozen Embryo Transfer**

We completed 1,022 frozen embryo transfers with an average number of embryos transferred of 1.3 and an overall clinical pregnancy rate of 43.1%. More specifically, the pregnancy rate was 44.9% in 721 patients at or under the age of 35; 41.8% of 246 patients aged 36 to 39; 25% of 55 patients 40 or older.

Nine hundred and ninety (990) vitrified blast cycles underwent embryo transfer with a clinical pregnancy rate of 43.1%; ongoing twin rate of 10.4% and triplet 0%.

We obtained a clinical pregnancy rate of 33.3% in 12 cycles with extended culture from two pronuclei to blast. The clinical pregnancy rate was 37.5% in 8 cycles with extended culture from day 3 to blast.

Overall, the number of babies born through the Regional Fertility Program now exceeds 380.

In summary, there was approximately 14.8% decline in the number of IVF cycles. Overall, the clinical pregnancy rate for all programs was stable with increased emphasis using antagonist protocols and further attempts to minimize multiples utilizing culture to blastocyst and increasing number of single embryo transfers.

## **3. Intrauterine Insemination**

We performed 1,862 cycles of clomiphene / letrozole in 2020 (27% decrease vs 2,562 in 2019). We performed 19 cycles of superovulation in 2020 versus 19 cycles in 2019.

## **4. Diagnostic Semen Laboratory**

Four thousand and sixteen (4,016) semen analyses (20% decrease) were performed over 2020. Of these, 1,952 were from family physician referrals. One thousand seven hundred and sixty-seven (1,767) post-vasectomy semen analyses were completed. Of the semen analyses, 2,009 had immunobeads testing for anti-sperm antibodies.

There were 1,320 semen preps (25% decrease) for intrauterine insemination with partner sperm performed, with an overall pregnancy rate of 11.2%. Clomiphene citrate and letrozole were medications most commonly used for augmentation of ovulation with IUI. Letrozole is currently our drug of first

choice for induction of ovulation with PCO. There were 299 cycles (36% decrease) of donor insemination with a pregnancy rate of 11.4%.

Seven hundred and thirty-seven (737) semen preps (20% decrease) were completed in conjunction with IVF cycles. Seven (7) ICSI preps were performed to evaluate suitability of sperm with IVF and ICSI. Our current Urologist, Dr. Dushinski, performed 10 percutaneous epididymal sperm aspirations (PESA) and 27 testicular sperm aspirations (TESA). There were 10 preparations for retrograde ejaculation.

One hundred and thirty-four (134) males elected to freeze sperm ahead of IVF in view of potential problems with sperm production on day of oocyte retrieval. In total, there were 8,081 semen evaluations (25% decrease) at DSL in 2020. There were 1,767 post-vasectomy evaluations. One vibroejaculation was performed with Dr. Jennifer Litzenberger. This procedure is now available at RFP.

## **5. Other Services Provided**

- Non-invasive prenatal testing: Sixty-five (65) patients had a Harmony test performed in 2020.
- Invitae carrier screening (CooperGenomics): Thirty (30) patients underwent screening.
- Known donor oocyte (temporarily on hold)
- Gestational surrogacy (temporarily on hold)
- Embryo donation
- Preimplantation genetic testing for aneuploidy (PGT-A): this program has dramatically increased as now all 23 sets of chromosomes can be evaluated and this may be helpful in couples with recurrent IVF implantation failure.
- Preimplantation genetic testing for specific genetic abnormalities (PGT-M)
- Tubal, uterine, and endometriosis surgery
- Recurrent pregnancy loss
- Oncofertility (male and female)
- Oocyte and sperm preservation in transgender fertility preservation: Dr. Tom Gotz is currently leading this program. There have been a number of instances in clinic where female to male transgendered individuals have undergone ovarian stimulation, oocyte retrieval, and vitrification.
- Vibrostimulation

## **Challenges**

The COVID-19 pandemic struck in March with unprecedented consequences for patient and staff safety and provision of services. The clinic was shut down from mid March for two months with suspension of all clinical services with the exception of completing IVF cycles that had been started prior to the shutdown.

The clinic reopened mid May with fully compliant COVID-19 precautions as outlined by AHS and CFAS standards. This included a patient questionnaire, patient and staff temperature testing, wearing of appropriate PPE, social distancing, cleaning protocols, etc. Clinical services were initially limited including IVF, IUI, and DSL services. This resulted in an overall decline in the number of IVF cycles from 1,008 to 994 (-14.8%) and in total DSL procedures from 10,888 to 8,081 (-25%) for 2020 compared with 2019. IUI cycle numbers declined 27% from 2,562 in 2019 to 1,862 in 2020. The only clinic patient visits permitted after reopening were for procedures. All initial consultations and follow-up visits were conducted by telemedicine. However, new in-person patient consultations were started October 1st but all follow-up

visits continued to be conducted via telemedicine. There was an overall reduction of 4% of new consults in 2020 vs 2019.

The shutdown has further ramifications by reducing the availability of ancillary services such as bloodwork at APL, HSG (overall decline -26% vs 2019) and SHG (overall decline -22% vs 2019) resulting in delay of fertility investigations and treatments. The OR was shut down for elective surgeries thus delaying fertility promoting surgeries.

Resources were diverted to the retooling and reorganization to best mitigate possible impact of COVID-19 on patients and staff. This required the constant provision and updating of information re COVID-19 including vaccination advice for patients and staff. All areas such as RN's, LPN's, embryology, DSL, MD's were subdivided into teams in order to prevent possible disruption of clinical services. The inherent uncertainty caused by this disruption of services proved very difficult for our infertility patients who were already stressed by their infertility diagnosis. This was especially problematic for our patients in the older reproductive age groups due to the difficulty of accessing fertility services and the constant worry that treatment may have to be discontinued.

Resident education proved challenging as patient exposure was limited. This was partially compensated by resident teaching and attendance at telemedicine consultation and follow-up in physicians' offices. Dr. Wong organized teaching sessions and virtual telemedicine type OSCEs with residents rotating through the service. Undergraduate attendance at the clinic was temporarily discontinued.

The yearly gala for procurement of funds for the Generations of Hope fund was cancelled due to COVID-19 concerns. This unfortunately will affect the ability to aid financially challenged patients in accessing IVF services particularly with the current downturn in the Calgary economy.

## **Workforce Planning**

The OR scheduling was reorganized as both Dr. Michael Sector and Dr. Ari Sanders (both sub specialists in laparoscopic and hysteroscopic surgical procedures) participated in triaging and performing surgery on our more complex patients. Dr. Jennifer Soucie also expedited surgical treatment for our patients. The wait list for surgery is approximately 2-3 months. Dr. Litzenberger is available to perform vibroejaculation on spinal cord injured patients.

## **QA/QI and Innovation**

As with all challenges, new and improved protocols and innovative methods for delivery of services evolved. This was especially pivotal in the take-up of telemedicine. The only patients seen in person at RFP from March to October were patients for procedures and later in the year new consultations. This undoubtedly proved to have some benefits for patients, permitting easier access, minimizing travel and providing increased flexibility. This crisis precipitated new methods and protocols to permit work from home for physicians and staff. These trends will undoubtedly persist.

The critical role of social media and the RFP website were highlighted both in provision of accurate up to date information on clinic procedures, accessibility and COVID-19 updates.

The rapid evolution of the COVID-19 virus was matched by the medical and scientific response in containing this pandemic particularly the speed at which vaccines have been procured. The infection control and protocols will protect our patients both from this virus and future potential infectious agents.

## **Publications**

- Alviggi C, Esteves SC, Orvieto R, Conforti A, La Marca A, Fischer R, Andersen CY, Bühler K, Sunkara SK, Polyzos NP, Strina I, Carbone L, Bento FC, Galliano D, Yarali H, Vuong LN, Grynberg M, Drakopoulos P, Xavier P, Llacer J, Neuspiller F, Horton M, Roque M, Papanikolaou E, Banker M, Dahan MH, Foong S, Tournaye H, Blockeel C, Vaiarelli A, Humaidan P, Ubaldi FM; POSEIDON (Patient-Oriented Strategies Encompassing Individualized Oocyte Number) group. COVID-19 and assisted reproductive technology services: repercussions for patients and proposal for individualized clinical management. *Reprod Biol Endocrinol*. 2020 May 13;18(1):45. doi: 10.1186/s12958-020-00605-z. PMID: 32404170; PMCID: PMC7218705.
- Warner E, Yee S, Seminsky M, Glass K, Foong S, Kennedy E, Narod S, Quan ML. Effect of a Knowledge-Translation Intervention on Breast Surgeons' Oncofertility Attitudes and Practices. *Ann Surg Oncol*. 2020 May;27(5):1645-1652. doi: 10.1245/s10434-019-07972-x. Epub 2019 Oct 28. PMID: 31659644.
- Warner E, Glass K, Foong S, Sandwith E. Update on fertility preservation for younger women with breast cancer. *CMAJ*. 2020 Aug 31;192(35):E1003-E1009. doi: 10.1503/cmaj.200245. PMID: 32868272; PMCID: PMC7458684.

## **Research Grants & Activity – Dr. Foong**

- Oncofertility among adolescent and young adult cancer survivors in Alberta: a mixed methods study  
-co-applicant of the study  
Funding Agency: Canadian Institutes of Health Research (awarded: \$612,000)  
Tenure: 2020-2024
- Reducing the bURden of Breast cancer in Young women (RUBY) Study  
-sub-project co-investigator of SPOKE (Surgeon and Patient Oncofertility Knowledge Enhancement) and GYPSY (Giving Young women with breast cancer Predictors of Sterility post-chemotherapy)  
Funding Agency: Canadian Institutes of Health Research and the Canadian Breast Cancer Foundation (OBW139590).  
Tenure: in progress until Mar 31, 2023
- Sickle Cell Transplant Evaluation of Long Term and Late Effects of Transplant Registry (STELLAR)  
-member of the Reproductive Health Working Group  
Funding Agency: National Institutes of Health (NIH)
- The effect of exogenous hormone administration on arterial stiffness and endothelial function in females undergoing in-vitro fertilization  
-co-applicant of the study  
Funding Agency: Canadian Institutes of Health Research (submitted)



Dr. Philippa Brain, Foothills Medical Centre Site  
Lead. (Outgoing)  
Division Leader for Pediatric and Adolescent  
Gynaecology

## Pediatric and Adolescent Gynaecology

### Accomplishments and Highlights

#### Division Members:

##### **Dr. Philippa Brain**

Division Head Pediatric and Adolescent Gynecology

Co-Chair CANPAGO (Canadian Pediatric and Adolescent Gynecology Organization SOGC)

##### **Dr. Sarah McQuillan**

PAG fellowship director

Western Rep CANPAGO

##### **Dr. Jaelene Mannerfeldt**

##### **Dr. Christine Osborne**

##### **Dr. Kayla Nelson: Fellow**

**Administration highlights:** Despite a climate of fiscal restraints and a global pandemic we have successfully progressed our program by:

- Approval of expansion of the program to SHC with addition of two half days of clinic per month. This is a late adolescent young adult clinic and will allow us to follow patients with complicated congenital and acquired abnormalities of the genitalia. Includes clerical and nursing support
- Access to out-patient procedural room SHC for simple procedures in the later adolescents (IUD insertion, hymenorrhaphy)
- Development of a morning clinic at ACH by moving the virtual and Fellow's clinic to the morning. Increasing patient exposure for the fellow and reducing congestion of the multiple clinics in the afternoon. Enhanced virtual capability.
- Increased clerical support specific to Peds gyne (0.2 FTE): Provides support for OR booking and follow up appointment bookings. Clerical on site at clinic on Thursdays

#### **Transgender Care:**

- Presentation to SOGIE PAC: reinforced the need for a coordinator for transgender care particularly surrounding coordination of postop care
- Development of multidisciplinary transgender gyne clinic at SHC

## Academic Highlights:

### PAG Publications:

1. Osborne, C., McQuillan, S. & Brain, P. (2020). Who Should be Following the Trans-Female Patient Pre and Post Vaginoplasty? An Argument for the Pediatric Gynecologist. *Journal of Obstetrics and Gynecology Canada*. Available online 20 May 2020.
2. Osborne, C., Mannerfeldt, J., Brain, P. & McQuillan, S. (2020). Difficulties in Transition of Care from Pediatric to Adult Gynecology Providers. Should we Maintain Care into Adulthood? *Journal of Pediatric and Adolescent Gynecology*, 33(3), 255-259.
3. Statement on Pediatric and Adolescent Gynecologic Care During and After the COVID-19 Pandemic Rachel Spitzer and Philippa Brain (on behalf of the SOGC's Canadian Paediatric and Adolescent Gynaecology and Obstetrics Committee) SOGC Dec 2020

### For Publication:

1. Revision Gender Affirming Vaginoplasty Surgery for Female Transgender Patients Osborne, C., McQuillan, S., Millar, D. & Brain, P. Submitted Transgender Health (2020).
2. Lafreniere, K., Osborne, C. Mannerfeldt, J. (2020). The Use of Progestin Intrauterine Devices (IUDs) for Menstrual Management in Developing Countries: A Narrative Review. Submitted to: *Obstetrics and Gynecology International*

### Ongoing Research Projects:

- The Calgary PCOS Algorithm: A Quality Improvement Study The protocol for all of the patients meeting the criteria of irregular bleeding, hirsutism, or query PCOS from the family MDs has been applied. All patients were sent back bloodwork to be entered into the study. Peggy and I then have gone through each patient chart and referred them to Gyne vs Endo. 49 patients currently enrolled in the study
- Nelson KL, McQuillan SK, Brain, PH, Osborne, CO; "Preoperative Vaginal Dilation Prior to Surgical Management of Transverse Vaginal Septums". Ongoing
- Pediatric and Adolescent Gynecology Transfer of Care in North America RedCap survey went out to NSPAG 60 people have filled out a survey. *Current Status: Start of Data Collection from RedCap*
- Osborne, C McQuillan SK A Quality Improvement Study: Addressing Fertility Preservation in Female Pediatric Oncology Patients in Calgary, Canada.
- Osborne C, McQuillan SK, "The Use of Gonadotropin Releasing Hormone Agonists with Add-Back in Adolescent Patients with a Vaginal Septum: A Systematic Literature Review"
- Osborne C "The Role of Men in Family Planning: Rethinking Masculinity"
- Nelson KL, McQuillan SK; "Pregnancy and Placenta Increta in a Non-Communicating Uterine Horn". Pending
- Nelson KL, McQuillan SK; "Pediatric and Adolescent Gynecology Virtual Appointments for Children with Developmental Delay- Family Perspectives". Ongoing
- Nelson KL, Regehr, G, Gringerich, A; "Residents as Supervisors: A Cognitive Lens on How Senior Residents Make Entrustment Decisions". Masters thesis awaiting ethics.
- Whitty, Robin, Osborne, Christine: Evaluation of referrals for cosmetic labial abnormalities.

**Chapters:** (Dr. Christine Osborne)

Clinical Protocols in Pediatric and Adolescent Gynecology: Substance Use

Clinical Protocols in Pediatric and Adolescent Gynecology: Female Genital Mutilation

**Working Group:** Disorders of Sexual Differentiation, UBC (Drs. Brain, Osborne)

Project Title: Creation of a Position Statement Against Early Cosmetic Surgical Correction for Atypical Genital Anatomy in the Setting of DSDs

**Panel Discussion (Dr. Mannerfeldt):** Ethics and Reproduction in ambiguous genitalia. 2nd year medical students at the University of Alberta.

**Grand Rounds:**

**Christine Osborne:**

- Complex Contraception Rounds, UBC, May 2020 Condom Use in Long Acting Reversible Contraception Users
- Complex Contraception Rounds, UBC, March 2020 Contraception for Those Who Do Not Need Contraception (Lupron, Orilissa, Visanne)
- DSD Rounds, UBC, March 2020 Ongoing Understanding of the Risks of Early Surgical Correction for DSD
- Grand Rounds, Department of Pediatric Surgery, University of Calgary, Feb 2020 Disorders of Sexual Differentiation: Shedding Light on an Ambiguous Subject
- May 2020 DSD Working UofC Multidisciplinary Rounds Goal: Will try to organize this into a q4 month rounds

**Dr. Nelson:**

- Hematocolpos and Hematometra, Department of Pediatric General Surgery Grand Rounds

**Teaching:**

- Presenter: Contraception Update for Gynecologists and Primary Care Providers, Department of Obstetrics and Gynecology City-Wide, Interdisciplinary Update, October 20, 2020; Calgary, Alberta (Drs Nelson and Osborne)
- Teaching Sessions given to OBGYN Residents:
  - Abnormal Vaginal Bleeding
  - Developmental Delay and Gyne issues
  - Normal physiology of puberty,
  - Precocious and Delayed Puberty,
  - How to be Strategic and Organized in CBME- Resident Teaching and Q+A, August 2020
  - Pediatric General Surgery,
  - Amenorrhea,
  - Adolescent sexuality and contraception,
  - Abnormalities of the Repro Tract,
  - Genital Trauma and Sexual Abuse
  - Pediatric Urology,
  - Disorders of Sexual Differentiation, Mullerian Anomalies
- Teaching Sessions given to Pediatric Residents:
  - Pediatric Chief teaching session on Pediatric and Adolescent Gynecology, Dr Kayla Nelson, Dr. Christine Osborne

### **Awards:**

#### **Dr. Kayla Nelson:**

1) Karen Mann Catalyst Grant- Royal College grant (30, 000) awarded to one person in Canada. Goal of grant is to foster ongoing development and mentorship of junior faculty who demonstrate interest/passion in medical education. This grant will support my masters work and allow for me to present my work and network with other medical education scholars in Canada and internationally.

## **Challenges**

### **Pediatric Gynecology Call:**

Issues:

- Infrequent referrals
- Ongoing discomfort with provision of PAG care for adult gynecologists
- Lack of reimbursement for call
- Patients at ACH and complex issue of transfer of acute patients
- Variable support from services at ACH (Pediatric surgery, Teams)

Solutions:

- Call coverage divided between adult sites with support by PAG provider assigned to that site
- PAG emergency cheat sheet
- Development of specialist link pathways
- Alternate funding for PAG

### **Funding:**

Ideally suited for clinical ARP and academic ARP. Unable to join either Pediatrics or Peds surgery ARP.

### **Prolonged patient wait times:**

Major strides have been achieved in this area with expansion of clinics to SHC (see accomplishments and highlights). Wait list for ACH patients still unacceptably long. Audit of patient numbers 6 months after SHC clinic initiated will provide further assessment of wait times. Significant congestion of outpatient clinic space at ACH with patient volume restrictions with covid pandemic have limited ability to address wait times. The development of specialist link pathways will reduce common non urgent PAG problems, specifically labial adhesions and perception of abnormal appearing labia.

## **Workforce Planning**

### **PAG Providers:**

Dr. Christine Osborne joined the PAG team in July 2020. Dr. Kayla Nelson was recruited to SHC to start July 2021.

Dr. Brain will be on sabbatical July 2021

Dr. McQuillan returned from Mat leave Oct 2020

We have an adequate number of clinical providers given the restriction of clinic space. We anticipate a reduction in clinical providers in 2021 due to sabbatical and possible maternity leaves. No further recruitment required.

Fellowship program is part of the North American match:

Successful candidate: Tara Justice

**Prolonged wait times:** Will continue to address this area with evaluation of program with adjustments as stated above and development of SHC clinics

**Transgender Program:** The formal request for a transgender program was halted with the UCP government. Drs McQuillan and Brain provide care for the postop trans females returning from Montreal and have requested a joint transgender clinic at SHC. The funding of gender reaffirming surgeries in Montreal is ad hoc and lacks coordination leading to last minute referrals and difficulty if postop complications arise. At the very least funding for a Transgender coordinator with timely referral for postop care as well as knowledge of care providers would greatly enhance the care for this population.

## QA/QI and Innovation

Development of Specialist Link pathways for common PAG problems to reduce waitlists:

- Labial adhesions
- Perception of abnormally appearing labia

## Future Directions and Initiatives

### Ongoing development of PAG Networks:

The Calgary program has developed a strong network of PAG providers in Western Canada. Monthly journal clubs include PAG providers in Vancouver, Victoria and Winnipeg. Joint research projects between Vancouver and Calgary PAG programs are already being developed, for example, fertility preservation in patients requiring chemotoxic agents as well as the DSD group developing a position statement on timing of gender corrective surgery in patients with DSD.

The Calgary PAG program is actively involved in the fellowship teaching sessions which include all PAG fellowship programs in North America. Drs McQuillan and Brain are presenting "Gonnectomy" In Feb. 2021.

All members of the PAG team are members of the North American Lit Serv connecting PAG experts in North America to discuss challenging clinical cases.

Canadian PAG providers are connected through CANPAGO with twice yearly national rounds. CANPAGO is reviewing access to these rounds through the SOGC website and local university websites providing PAG care

# DIVISIONAL AND SITE REPORTS



Chelsea Hamill Manager, Women's Health  
Ambulatory Clinics  
Bryan Peffers Executive Director, Women's Health

## Women's Health Ambulatory Clinic

### Accomplishments and Highlights

- In preparation for Epic/Connect care, significant amount of committee work done in the past year to align care throughout the province.

#### OB/GYNE:

- 5th year of Influenza Vaccination Program in OB Clinics- 398 patients vaccinated in 2020; results in patient and family centered care approach
- Centralized triage of unassigned Gyn Referrals by Physician Lead and distribution of referrals to first available physician with the goal of minimizing the Gynwaitlist
- Adjustment of clinic workflows to facilitate the virtual care option for patients, while including the COVID screening, to promote patient and staff well being
- New fetal monitor as a result of Calgary Health Foundation funding
- Reporting of physician wait times to primary care providers, upon receipt of referral
- **Modifications made to workflow to have a 0.2% increase in service deliver, despite the pandemic**

#### Pelvic Floor Clinic:

- Hosted Level II Pessary training course x 2; to enhance access pessary care in the community
- Initiated engagement with the Physician Learning Program, focused on developing clinical pathways for family physicians to support specialized patient care in the community, with a reduction in the PFC Urogynecology waitlist
- Initiated process to have pessary follow up managed in the community via referral to physicians trained in pessary courses, with goal of increased capacity to see new referrals and decrease waitlist times.
- Transition to virtual care for patients seen by physicians and nurses, in response to pandemic.
- Adjustment of clinic workflows to facilitate the added workload of virtual care and COVID Screening
- Hosted 2.5 day, internationally attended Laborie Urodynamics Course
- **Modifications made to workflow to have the least impact in service delivery, at a reduction of -6.8%**

#### Colposcopy Clinic:

- Adjustment of clinic workflows to accommodate pandemic response.
- Developed process to ensure urgent ambulatory visits for cervical screening

- continued, despite pandemic
- **Modifications made to workflow to have the least impact in service delivery, at a reduction of -17% (larger impact as no virtual options available)**

#### **Early Pregnancy Assessment/Pregnancy and Infant Loss Program:**

- Ongoing collaboration with the South Health Campus with Central Triage Process
- Developed virtual process to ensure urgent ambulatory visits continued, despite pandemic. Increased qualitative feedback regarding patients' preference to be seen virtually.
- Modifications made to workflow to have a 12% increase in service delivery for EPA and 2% increase for Pregnancy and Infant loss.

## **Challenges**

Global pandemic impacting ability to see full operational need for patients, resulting in increased wait times in Colposcopy and Pelvic Floor Clinic

## **Workforce Planning**

- Positions temporarily vacated and unable to replace full FTE equivalent, in cost savings measure
- Addition of new Obstetrician to the OB/GYNE team

Transition in Management December 2020 (resulting in UM covering for 7 weeks, balancing workload prior to new recruit joining)

## **Future Directions and Initiatives**

#### **OB/GYNE:**

- Ongoing virtual care option, where applicable

#### **Pelvic Floor Clinic:**

- Initiation of the Physician Learning program pathway to support access to this specialized knowledge base in the community
- Re-direction of routine pessary care, supported in the community by trained skilled pessary providers, an estimated reduction of more than 250 follow up appointments, increasing the capacity to provide specialized new patient consults within the clinic.
- Ongoing pessary courses for community providers

#### **Colposcopy Clinic:**

- Designing process to reduce waitlist of 500 non-urgent patients (as a result of non-urgents being delayed with pandemic), goal of completing this work within 6 months
- Preliminary discussions to absorb (merge) the TBCC Colposcopy Clinic on Friday afternoons

#### **Early Pregnancy Assessment/Pregnancy and Infant Loss Program:**

- Silent Hope Memorial Service – bi-annual
- Goal to complete EPA/PILP patient education videos as a result of Tiny Footprints funding

Creation of Alberta Referral Directory profile for Pregnancy and Infant Loss Program

### Clinic Stats – 2019-2020 Comparison (to expect a 10% reduction in 2020-2021)

#### OB Gyne

| Provider/visit type | New         |             | Follow/Up   |             | Total         |               | Total       |
|---------------------|-------------|-------------|-------------|-------------|---------------|---------------|-------------|
|                     | 2019        | 2020        | 2019        | 2020        | 2019          | 2020          | % Change    |
| OB In-Person        | 1003        | 1051        | 5662        | 5233        | 6665          | 6284          | -6%         |
| OB Phone            | NA          | 105         | NA          | 353         | NA            | 458           | NA          |
| Gyne In-Person      | 1937        | 1380        | 2430        | 1683        | 4367          | 3063          | -30%        |
| Gyne Phone          | NA          | 473         | NA          | 786         | NA            | 1259          | NA          |
| RN – Nurse only     |             |             | 124         | 118         | 124           | 118           | -5%         |
| <b>Total</b>        | <b>2940</b> | <b>3009</b> | <b>8216</b> | <b>8173</b> | <b>11,156</b> | <b>11,182</b> | <b>0.2%</b> |

#### Colposcopy

| Provider/Visit type | New         |             | Follow/Up   |             | Total       |             | Total       |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                     | 2019        | 2020        | 2019        | 2020        | 2019        | 2020        | % Change    |
| Physician           | 2440        | 1807        | 3272        | 2967        | 5712        | 4774        | -16%        |
| Procedure: LEEP     | 756         | 609         |             |             | 756         | 609         | -19%        |
| <b>Total</b>        | <b>3196</b> | <b>2416</b> | <b>3272</b> | <b>2967</b> | <b>6468</b> | <b>5383</b> | <b>-17%</b> |

#### Pelvic Floor Clinic

| Provider/visit type | New         |      | Follow/Up   |      | Total         |               | Total        |
|---------------------|-------------|------|-------------|------|---------------|---------------|--------------|
|                     | 2019        | 2020 | 2019        | 2020 | 2019          | 2020          | % Change     |
| Physician In-Person | 1430        | 478  | 2494        | 1279 | 3924          | 1757          | -55%         |
| Physician Phone     | NA          | 704  | NA          | 1184 | NA            | 1888          | NA           |
| Nursing In-Person   | 2351        | 1042 | 2916        | 1450 | 5267          | 2492          | -53%         |
| Nursing Phone       | 1008        | 3505 |             |      | 1008          | 3505          | 247%         |
| NP In-Person        | 459         | 304  | 167         | 102  | 626           | 406           | -35%         |
| NP Phone            | 62          | 240  |             |      | 62            | 240           | 287%         |
| PT In-Person        | 255         | 81   | 659         | 376  | 914           | 457           | -50%         |
| PT Phone            | 11          | 139  | 1090        | 333  | 1101          | 472           | -57%         |
| PFC Workshops       | 129         | 28   |             |      | 129           | 28            | -78%         |
| PT Group Visit      | 236         | 132  |             |      | 236           | 132           | -44%         |
| Procedure: UD's     | 208         | 144  |             |      | 208           | 144           | -31%         |
| Procedure: Cysto's  | 270         | 288  |             |      | 270           | 288           | 6.7%         |
| <b>Totals</b>       | <b>6419</b> |      | <b>7326</b> |      | <b>12,664</b> | <b>11,809</b> | <b>-6.8%</b> |

\*2019 NP visits impacted by NP off for significant portion of the year

\*2020 NP visits only Jan-Apr

## Early Pregnancy Assessment Clinic

| EPL<br>Provider/visit type  | New  |      | Follow/Up |      | Total |      | Total    |
|-----------------------------|------|------|-----------|------|-------|------|----------|
|                             | 2019 | 2020 | 2019      | 2020 | 2019  | 2020 | % Change |
| Nursing                     | 581  | 138  | 45        | 25   | 626   | 163  | -74%     |
| Phone Calls                 | NA   | 486  | 629       | 753  | 629   | 1239 | 97%      |
| Total                       | 581  | 624  | 674       | 778  | 1255  | 1402 | 12%      |
| PILP<br>Provider/visit type | New  |      | Follow/Up |      | Total |      |          |
|                             | 2019 | 2020 | 2019      | 2020 | 2019  | 2020 | % Change |
| Counsellor                  | 215  | 51   | 355       | 120  | 570   | 171  | -70%     |
| Phone Calls                 | NA   | 112  | 253       | 559  | 253   | 671  | 165%     |
| Total                       | 215  | 163  | 608       | 679  | 823   | 842  | 2.3%     |

# DIVISIONAL AND SITE REPORTS



Dr. Rati Chadha Medical Lead, Antenatal  
Community Care Program  
Carrie Collier & Carolyn Campbell

## Antenatal Community Care

### Accomplishments and Highlights

#### Overview of Accomplishments

ACCP provides prenatal care and clinical observation in the community for pregnant women with fetal and maternal complications, who would otherwise need to be admitted to an antepartum unit at any of the four Calgary hospitals. While maintaining a similar level of patient care, ACCP over the years has saved the health system significant costs. The program operates in Calgary Zone including various rural areas (Airdrie, Strathmore, Okotoks, Cochrane). Referrals are accepted from obstetricians, perinatologists, obstetricians and family physicians. A similar ACCP program operates in Edmonton Zone.

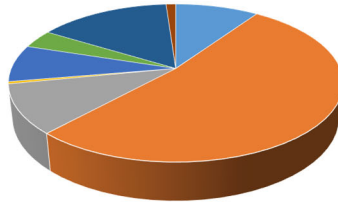
ACCP supports clients with high-risk pregnancies with the following diagnoses: hypertensive disorders in Pregnancy (HDIP); pre term Labour (PTL); premature rupture of membranes (PROM); placenta previa; antepartum hemorrhage (APH); fetal Surveillance; and intrauterine growth restriction (IUGR).

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This report captures data from the annual year period, 2020

| ACCP Stats by Client Diagnosis - % of cases<br>2020 |            |
|---|------------|
| PTL   | 9.6%       |
| GH  | 52.2%      |
| PROM  | 10%        |
| IUGR  | 0.4%       |
| Placenta Previa                                     | 7.6%       |
| APH   | 3.8%       |
| Fetal Surveillance                                  | 15.2%      |
| Other   | 1.1%       |
| <b>Total admissions</b>                             | <b>440</b> |

ACCP - Primary Diagnosis on Admission



Preterm Labour (9.6%)  
 Rupture of Membranes (10%)  
 (7.6%)  
 Fetal Surveillance (15.2%)  
 Hypertension Disease of Pregnancy (52.2%)  
 Premature  
 Intrauterine Growth Restriction (0.4%)  
 Placenta Previa  
 Antepartum Hemorrhage (3.8%)  
 Other (1.1%)

The highest primary diagnosis for admissions this year was gestational hypertension at 52% (up from 50% last year). The next most frequent requests for follow-up include fetal surveillance, premature rupture of membranes, and preterm labour.

Clients are discharged from the program once they are at a safe gestational age, the physician deems the client to be medically safe for discharge, or if the client goes into early labour. There are very few non-accepted clients – only those who: do not fit the above diagnostic categories (5); unable to contact (2); or who have moved out of the Calgary Zone (6); or decline services (8).

## Highlights

- **COVID-19**

Public health in Calgary Zone has taken on many responsibilities during the COVID-19 period. At the onset, we were required to take on COVID testing and set up assessment centres, and throughout this term, we also participated in surge planning to ensure that acute care was supported with its capacity concerns. The ACCP team developed new COVID-related guidelines (PPE, Safety, pre-screening etc). ACCP nurses were able to contribute through extra shifts in support of Public Health COVID testing, or as per the team availability.

ACCP was able to recruit and train additional nursing casuals, and also obtained funding through both Calgary Health Foundation and AHS capital equipment to access new fetal monitors to expand our capacity when needed. In addition the purchased fetal monitors will connect with the future OBIX software required by the Connect Care system.

## 2. Home Health Monitoring Project

It is in early stages, but we have been invited to participate in a provincial project supporting home monitoring for clients. The CloudDx system allows the client to check and record BP, complete a daily assessment, and the provider is able to monitor the status through a web-based portal. We will pilot this with a small number of clients in the New Year to review its impact and benefits. We anticipate it may help minimize our phone calls and perhaps enhance the continuity of health metrics and trends in health status. We hope this will also allow us to communicate any trends to the primary care provider and anticipate it may help with increased safety, since blood pressures can be consistently reviewed and uploaded at a time convenient to the client.

### 3. Client Contacts and Provider Consults:

- **Client Contacts:** ACCP Nurses had over **9800 client care contacts involving care for 440 clients**. Clients each receive daily services - home visits and/or telephone contacts. Depending on their gestational age at admission and date of discharge, there is a wide range in the frequency of contacts per client from 1- 30 contacts. **2434** contacts were one to one home visits, a slight decrease from last year. There were **6400** telephone calls with clients.
- **Provider consults:** The program completed **410** physician telephone consults and over **580** calls to hospital triage.
- **Our capacity** was high this year within the program and continues to be at this time. While there were certainly surges at periods throughout the year, our overall case volume was slightly lower this year. It's possible that with COVID-19 some clients may have been less willing to receive home visitation support though that is not something we are able to assess. In addition, there is a slight decrease in monthly birth rate, reported in Tableau for Calgary Zone.
- **Perinatal Education:** With prenatal classes having gone on Zoom this year, ACCP patients are now more readily able to participate in our 6 and 10 week groups on-line from home.

**Fetal Monitoring changes:** the team was trained and successfully implemented the change in fetal monitoring along with acute care last Fall, 2019

## Challenges

1. **Capacity:** Program capacity, at times, exceeds client volume. This year, we were able to work flexibly and support other Public Health initiatives including COVID-19 testing. However, we are concerned that not all obstetrical providers are consistently referring to the ACCP program. To mitigate this challenge, we attend COMS annually with a booth to reach providers and share information. In addition, we have circulated information packages to physicians and ACCP is on the Alberta Referral Directory. We may consider future surveys to assess provider/patient need.
2. **OBIX and Connect Care:** The new software system chosen to link fetal monitoring within Connect Care is determined as OBIX. We understand that the Calgary Health Foundation will be supporting associated costs with implementing this system. At this time, Calgary is expected to be in Connect Care for Wave8.

**Complex casework:** we continue to observe many clients struggling with social and economic challenges. We access social work support from prenatal teams and offer key referrals, but may continue to review other ways to connect these families to support systems.

## Workforce Planning

ACCP has only 6.62 RN FTEs (full time equivalent) which has been consistent for a number of years. We work continuously to review capacity, workload and geographic coverage for clients. Our program RN FTE remains consistent at this time.

From a physician workforce perspective, we have benefitted from the Medical Director support; Dr. Chadha has supported the raising of awareness of the Program and helping with problem-solving and clinical consultation as well as staff education.

## Future Directions and Initiatives

- Use of Zoom for support to ACCP Clients.
- Updating of practice guidelines and evidence based approaches.

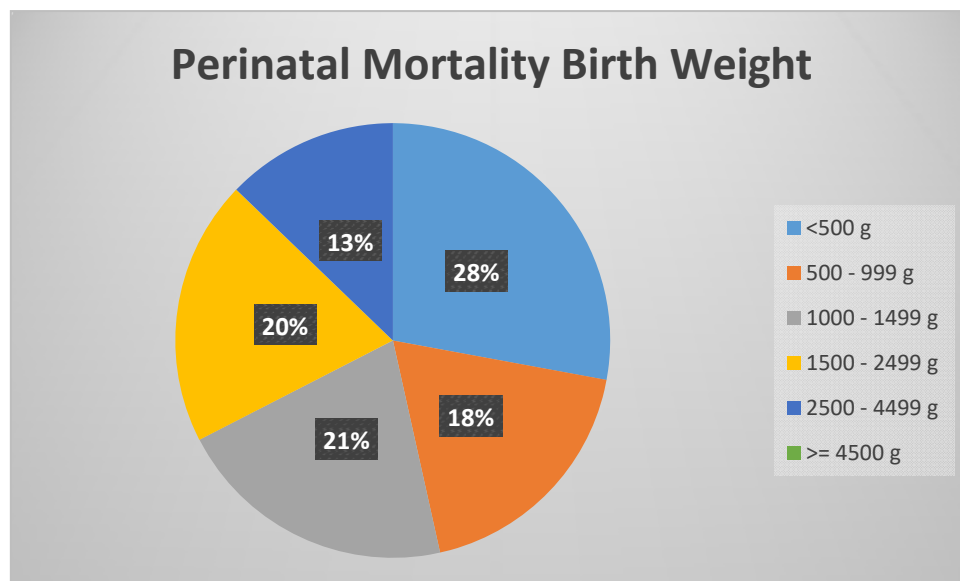
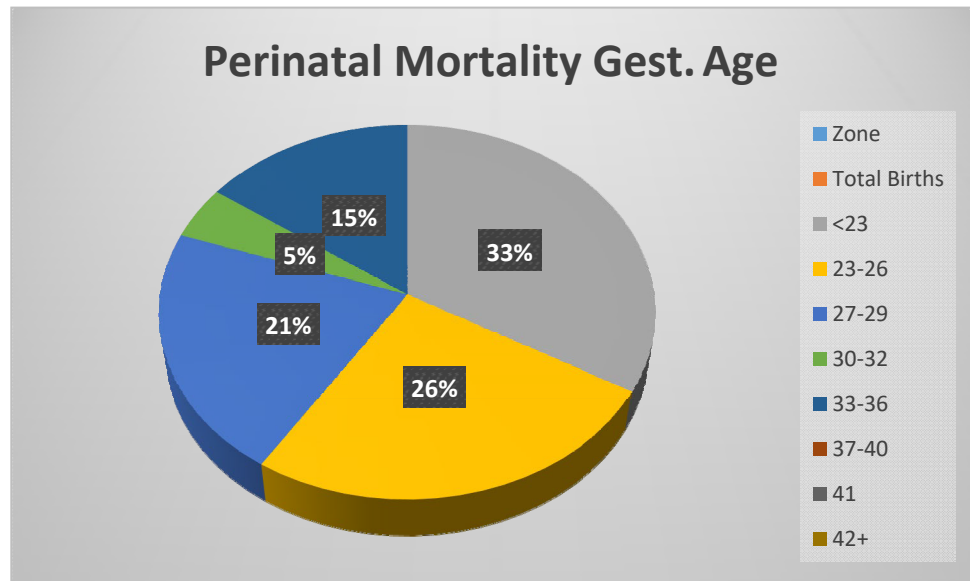
Continually raise awareness of the populations we see – including clients from other zones, who are able to stay within the Calgary Area for monitoring.



Dr. Pauline Ekwanga Medical Leader, Perinatal Mortality Committee

## Perinatal Mortality Committee

Total cases reviewed 87



Dr. Susan Baranowski Medical Leader,  
Gynaecology Outpatient Clinics - PLC

## Gynaecology Outpatient Clinics - PLC

### Accomplishments and Highlights

#### **Background**

Abortion care is provided in Calgary in two main locations – PLC Women's Health Clinic (WHC) and Kensington Clinic (KC), a private non-hospital surgical facility.

Kensington Clinic provides access to medical abortion with Mifegymiso, and surgical abortion up to 20 weeks.

The PLC WHC is open 50% (Tuesdays, Wednesdays, and alternating Mondays). It provides some low-risk surgical abortion but has an **expanded scope** which includes service for women with medical morbidity, complicated fetal anomalies, surgical challenges, complicated anesthetic needs, and advanced gestational age up to 23+6 weeks. The comprehensive and safe care is facilitated by its location within the hospital setting, and the expertise and advocacy of the specialist Gynecologists and the support team of clerks, nurses and social workers.

Together, KC and WHC work together to provide an array of gold-standard graduated care surrounding termination of pregnancy for women in southern Alberta, southern British Columbia, Saskatchewan and Manitoba, northern Alberta, Yellowknife, and Yukon (when capacity in Edmonton is limited). Of note, Edmonton does not provide service past 20 weeks.

#### **PROGRAM MOVE TO NEW LOCATION, November 2019**

The WHC completed its first year in its new location on Unit 23 at the Peter Lougheed Centre. The move took place in November 2019 when the PLC ER took over the old outpatient clinic space for their proposed renovation. Now, procedures are in one of the Main OR rooms, rather than the outpatient setting. The WHC utilizes one of the available ORs as a procedure room, however, it maintains independent administration, staffing, and booking processes lending itself to more fluid and flexible process and function. A maximum of 14 cases are booked per day (D&C and D&E), compared to approximately 15-20 cases in the old outpatient setting.

The scope of **clinical work** done at the WHC consists of the following:

#### **SURGICAL ABORTION FOR UNPLANNED/UNWANTED PREGNANCY**

WHC's primary focus is surgical abortion related to abnormal or unplanned pregnancy. The WHC follows the Alberta Health Services Guidelines for Termination of Pregnancy. The clinic now routinely provides access to surgical abortion up to 23+6 weeks, and specialized service for high-risk clientele **not accessible** elsewhere in Calgary or Alberta.

WHC provides a gateway through which more specialized cases can be evaluated and triaged for best care in the safest location and with an experienced provider. WHC has a very close relationship with the Obstetric Internal Medicine group and the PLC Pre-operative Assessment Clinic for case review and peri-operative planning. The WHC program is instrumental in multidisciplinary case-coordination.

Data for numbers NA.

#### **SURGICAL ABORTION FOR FETAL ANOMALIES**

WHC and the MFM group in Calgary have formed a very close relationship to help women who choose to termination pregnancies for fetal anomalies. After MFM identifies fetal anomalies and women have been counselled about options, WHC provides care for those who have made a choice for D&E over medical

induction. MFM provides pre-operative feticide in selected cases. MFM and WHC work together to ensure that any testing, autopsy, and Genetics referrals have been carried out. Once a referral has been received, a social worker initiates contact to review decision-making and provide information and psychosocial support surrounding the experience, recognizing that it is far more than just a surgical procedure. They also provide aftercare, extensive grief/loss counselling, mementos, and choices re: respectful disposition of remains. The WHC has a comprehensive and specialized woman-centered approach to guiding women through this process.

In the last three years, WHC performed 120, 127, and 164 (extrapolated for fiscal year) procedures for genetic anomalies.

### **ADVANCED GESTATIONAL AGE > 20 weeks**

Calgary now has four providers skilled and comfortable with D&E past 20 weeks. This means that women can exert a preference for surgical management rather than having an induction for termination, and it has prevented the need to travel to Vancouver, Ontario, or the US for care.

In the last three years, WHC performed 57, 80, and 120 (extrapolated for fiscal year) D&Es > 20 weeks.

### **MISSED ABORTION CARE**

In May, 2018, the WHC became the pilot program for the Northeast for the Early Pregnancy Assessment Clinic, helping the Zone complete the QI-driven mandate to provide pregnancy loss care to women in all quadrants of the city. This formalized the work that WHC was already providing--efficient access to D&C and D&E for women with miscarriage in the first and second trimester. With minor adaptations, protocols for expectant and medical management of miscarriage were implemented for < 12 weeks to match the other EPA programs at SHC and FMC. WHC remains the primary site for surgical care of 2<sup>nd</sup> trimester miscarriage.

In the last three years, WHC performed 157, 129, and 169 (extrapolated for fiscal year) procedures for missed abortion.

### **POST PROCEDURE CONTRACEPTION and LONG-ACTING REVERSIBLE CONTRACEPTION (LARC), including Intrauterine devices and systems.**

There is a substantial body of literature supporting the importance of contraception counselling and access to LARC (IUDs) at abortion clinics. IUDs are the most effective (and cost-effective) contraception option available. As women learn about the benefits of IUDs, they and MDs from the community are seeking access, particularly for extremely young women and those with challenging insertions who may request or require sedation for the procedure.

Almost 25% of all women having abortions for undesired pregnancy choose immediate post-op placement of LARC with copper IUDs or progesterone IUSs.

Prior to the move, WHC was offering placement of LARC under sedation independent of a procedure. Administration has prohibited inclusion of this service since November 2019.

### **MEDICAL EDUCATION**

#### **Obstetrics and Gynecology Specialty Residents**

WHC is the sole location for D&E surgical training in Calgary. Kensington hosts residents and provides excellent education about medical abortion and the use of Manual Vacuum Aspirators (IPAS), however they have historically had a policy of not letting residents do D&E.

Over the last decade, we have trained more than 20 specialty residents and fellows to perform D&E to 20+ weeks. At least 15 specialty residents have created a special one-month abortion and reproductive health elective; so far this year, another five residents have planned to do this. These electives distribute time spent at the PLC WHC clinic, Kensington, and the STI Clinic.

A structured curriculum for teaching and evaluation of surgical abortion care was near completion last year and

is currently being modified to incorporate Competence by Design framework and evaluation scheme. This will be presented to the Residency Training Committee by year-end.

MFM Fellows and Genetics residents spend time in the clinic to learn about termination care.

Family Medicine Residents had a mandatory one-day observational experience in the clinic; we hope to reintroduce this curriculum post-pandemic.

Clinical clerks are offered a voluntary ½-day observational experience, unfortunately on hold due COVID 19.

## **Challenges**

### **COVID 19**

Pregnancy termination and miscarriage care are essential women's health services and thus have continued throughout the pandemic.

The PLC WHC was the location designated to manage presumptive or positive COVID 19 abortion cases. While abortion is time sensitive due to advancing gestational age, deferring procedures by two weeks (for disease resolution or isolation) is feasible most of the time. A COVID 19 clinical pathway/protocol was created to manage cases otherwise.

### **PROPOSAL TO SHIFT LOW RISK SERVICE TO COMMUNITY**

There is a recent site proposal to redistribute a portion of low-risk abortion service out of acute care (from WHC) to the community (to KC). While it would be ideal to be able to continue to provide service to low risk women in Northeast Calgary, the focus of ongoing advocacy will be to maintain provision of surgical services **unique** to WHC and to ensure service that must occur within the hospital setting for safety is not jeopardized or lost.

### **ANOTHER PROPOSED MOVE TO NEW LOCATION, IMMINENT**

The PLC surgical services group is planning on clearing the backlog of elective cases deferred by the COVID 19 pandemic. With OR space and time allocation at a premium in this context, there has been consideration about moving WHC out of the Main OR to another location at the PLC with a procedure room on site.

Moving out of the Main OR to a procedure room near the clinic area will promote efficiency and create a more patient centered experience, however, there must always be caution that there will be no loss of the specialized service unique to WHC with any change of service.

## **Workforce planning**

Workforce has grown consistently over the years with a maximum number eight MDs, but the current roster is smaller than we've had in the past. There are currently five gynecologists on the regular roster: Caroline LeJour, Jadine Paw, Stephanie Cooper, Laura Coughlan, and myself. Simrit Brar and locum physicians will take shifts as well.

Resident training remains a priority to train future professionals.

Specialists who are interested in advancing skill in D&E are welcome to shadow and participate. Recruitment is always open.

## **QA/QI and Innovation**

In the summer of 2019, a thorough process review was initiated by management, but is on hold because of competing demands in the realm of surgical services due to the pandemic. Informal adjustments to process with

are continually made with the aim to improve women's experience.

Written material supporting the informed consent process was created in 2019.

National Abortion Federation Policy Guidelines and Alberta Health Guidelines are used to guide standards of practice and are reviewed annually.

Close collaboration with OB Internal Medicine to create a list of medical issues requiring review by Pre-op Assessment clinic, guidance for management of more routine medical complications, facilitation of pre-op assessment to patients with phone advice.

The WHC Policies and Procedures Manual was updated in 2019/2020.

## **Future Directions and Initiatives**

### **Relocation of minor gynecologic procedures out of Main OR setting**

WHC's model of care provides the most efficient, patient-centered service when cases are kept out of the Main OR setting. Prior to COVID 19 and the change in the government in 2019, there was a proposed renovation of new minor surgical suites at the PLC, with an intention to include many of the minimally invasive surgical procedures performed in women's health. While a renovation of this magnitude is not feasible in the near future, the proposed plans for the upcoming move are aligned with the principle and follow a step-wise progression toward the long-term goal.

### **Support another program move**

Provide ongoing communication and support for clinic staff who will be affected by another relocation. Renew relationships and inter-reliance on other departments within PLC for best ongoing support to the program in new location: lab, radiology (ultrasound), pathology.

**Restart placement of IUDs under sedation.**

**Fundraising for affordable IUDs.**

### **Medical Abortion**

With availability of Mifegymiso for medical abortion, it would be appropriate to be able to offer women access to medical abortion, reducing surgical abortion and overall risk to women. There has been resistance to any change in scope for WHC thus far due to budget constraints, but this would be a priority in the near future as it is standard of care.

**Finalize abortion education curriculum and evaluation scheme.**

**Plan to review relationship and connection with MFM.**



**Dr. Bruce Allan Director, Department Education and Research Fund**

## Department Education and Research Fund (DEAR)

### **Accomplishments and Highlights**

- Annual membership fees have changed from elective to mandatory for department members
- Improved vetting of research grants and improving funding access from annual review of applications to every four months
- Designation of a treasurer (Dr. J. Soucie)
- Bank account has been established strictly for DEAR funds separate from Department funds

### **Challenges**

- Justify to department members that there is value in their contributions
- Increase the utilization of research grant availability
- COVID has impacted requirement for funds for CME, etc therefore there is an increasing surplus available that was unexpected

### **QA/QI and Innovation**

- Expansion of scope of funding to include QI and QA initiatives

### **Future Directions and Initiatives**

- Examination of the mandate of DEAR to ensure that it plays an important role in supplementing access to funding but does not replicate existing funding sources or become a “make work project”. Dollars spent but be seen as adding value to the department and its members rather than just spending money because it is available
- Reducing surplus funds by either decreasing annual fees or increasing funding / research grants.

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## EDUCATION



# EDUCATION



**Dr. Pamela Chu Education Section Lead**

## Education Section

### Accomplishments and Highlights

Despite the tumultuous and difficult year it has been for our department, not only did our members continue to deliver excellent care for our patients, but Faculty and Residents continued to provide innovative and outstanding teaching and training.

This is supported by the Department of O&G having the most nominations for outstanding teaching at this year's UME Faculty Appreciation Night. We had 21 O&G Clerkship, and 2 Course 6 Gold Star recipients, along with 18 Honor Roll mentions in total. In addition, **Dr. Ron Cusano** was honored with a Lifetime Achievement Award for his longstanding contributions to UME. At the PGME level, we had several Faculty nominated for awards including Dr. Sarah McQuillan for Outstanding Commitment to Residency Education Award, and Drs. Kathryn Kenny and Amy Zakariasen for the Resident Mentorship Award. These accomplishments are particularly amazing when one considers the size and make-up of our department compared to other larger departments comprised of largely not fee-for-service clinicians.

#### Education Leadership:

Education continues to be the academic pillar of excellence in our department guided by strong leadership both at a Departmental as well as at a Faculty level:

UME - Course 6: Dr. Jadine Paw

UME – Clerkship: Dr. Weronika Harris-Thompson (Dr. Kelly Albrecht – stepping down as Co-Director)

PGME – Dr. Sarah Glaze

Gyne Onc: Dr. Prafull Ghatage

MFM: Dr. Anne Roggensack

MIGS: Dr. Liane Belland

PMRS: Dr. Erin Brennand

PAG: Drs. Sarah McQuillan

CME – Dr. Michael Sector

Dr Chandrew Rajakumar was appointed as Medical Director of the Advanced Technical Skills Simulation Laboratory (ATSSL) and sits on the Strategic Education Council (SEC) at Cumming School of Medicine. Dr. Pamela Chu, in her role as Associate Dean Professionalism Equity and Diversity, is also a member of SEC; sits on the Departmental Vice Chairs Education Committee as O&G Vice Chair; and, serves as O&G Lead for Faculty Development.

#### Highlights:

1. UME
  - The Course 6 Evaluation/Report from the Med Students rated the OBGYN portion 3.85/5. This is the highest rating that the women's health rotation has scored in the past 4 years! Course 6 overall received 3.8/5. The lectures provided by our Department members scored 4.23/5, and our Clinical Core experience on Labour/Delivery received 4.28/5.
  - Clerkship Block Week continues to be rated highly by students receiving 4.5/5
2. PGME
  - Program CaRMS match March 2020
  - Fatigue Risk Management Study ongoing with 17 participants
  - CBD (O&G and Surgical Foundations) with excellent Faculty engagement and ongoing high rates of EPA assessments
3. CME
  - Pivot to virtual Departmental O&G Grand Rounds with partnership with CSM CME Office and Physician Learning Program, allowing for increased external speakers and best attendance records in years
  - Posting of Grand Rounds to Departmental website for easy access
4. Fellowships
  - Continues to have successful matches, program completion, and subsequent job placements by Fellows, with positive impact on educational environments for PGME and UME learners
5. Departmental Vice Chairs Education Committee
  - Collaborated with UME to improve Departmental Faculty Performance Review Reports

Collaborated with PGME to develop Program Directors 360 Assessment tool

## Challenges

1. COVID
  - Course 6: All lectures and small groups virtually taught with good feedback from learners, small group Obstetrical Emergency with Standardized patients in MedSkills suspended and scenario was converted to pre-taped video
  - Clerkship: Rotation adjusted to 4-week hospital rotation with front-loaded virtual teaching letter, significantly scaled back simulation teaching, teaching redirected to clinical rotation, disruption to work and clinical exposure, cancellation of external electives, delay and cancellation of LMCC exams
  - PGME: Rotation rescheduling, delay of RCPSC accreditation exams, cancellation of external electives, disruption to work and call scheduling
  - Fellowship: Delayed start times for external trainees, single site clinical activity restrictions, decreased clinical/surgical volume
2. Faculty recruitment/engagement
  - Course 6: Small group teaching
  - CME: Grand Round presenters
3. Recognition, Merit Assessment and Promotion for Educational Roles and Activities

Development/Design, Delivery, Assessment/Evaluation, Leadership/Administration, Innovation/Scholarship, Mentorship/Coaching

## Workforce Planning

1. Targeted promotion Assistant to Associate Professor (Clinical Adjunct and Academic Faculty) for Educational roles and activities
2. UME
  - Course 6: New Breast Section Lead, Dr. Sandra Peacock

- Clerkship: 2-3 Additional Core Clerkship Teachers; recruitment for new evaluation coordinator (Dr. Kenny stepping down); Dr. Stephanie Cooper Acting Midwifery Teaching liaison

## PGME

- 6 residents per year at present

## Fellowship

- MIS: Dr. Caitlin Jago Staff recruitment; 2 Fellows per year
- Gyne Onc: Dr. Steven Bisch Staff recruitment; International trainees
- PAG: Dr. Christine Osborne and Dr. Kayla Nelson Staff recruitments; 1 Fellow every other year
- PMRS: extended integrated fellowship with MSc program from 2 to 2.5year length; 1-2 Fellows per year

MFM: 1-2 Fellows per year

## QA/QI and Innovation

1. Virtual platform for teaching, working (e.g. PGME Instagram for CaRMS Program information in lieu of in-person interviews and school tours; Clerkship shared teaching resources – high quality online teaching modules for all Clerkship Directors – SOGC Undergraduate Committee)
2. Multi- and transdisciplinary learning (e.g. cadaveric labs with Surgical and Plastic Oncology, rounds with Diagnostic Imaging and MFM, Course 6 Anatomy)

QI curriculum (PGME)

## Future Directions and Initiatives

1. Continue to advocate for funding/support for clinician educators
2. Consider EDI principles in recruitment, hiring, assessment, recognition promotion, for education roles
3. Embed EDI principles and content in curriculum, decolonization of curriculum (UME PGME CME)

Curriculum streamlining (UME Course Curriculum review to reduce redundancy in content, National Curriculum for MIGS)



## Dr. Sarah Glaze Residency Program Directory General Obstetric and Gynaecology program

### Residency Program

### Accomplishments and Highlights

Making it through COVID! Many rotations needed to be modified as our external electives were cancelled. Residents have been calm and resilient as their lives were disrupted regularly. We continued to be able to offer simulation lab, virtual half days and parties.

Our fatigue risk management study is ongoing with 17 residents participating.



Development of the resident Instagram page

<https://www.instagram.com/uofcobgyn/>

### Challenges

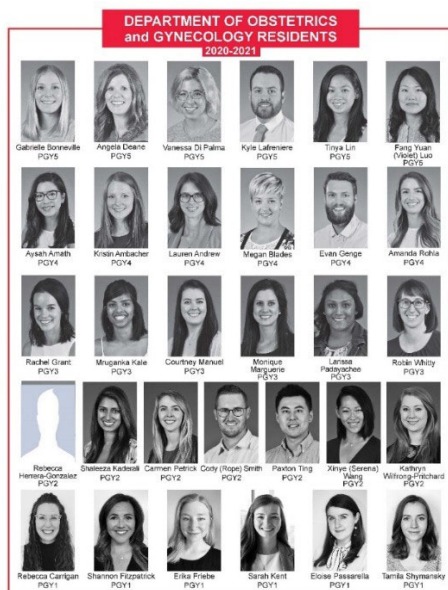
COVID was obviously the biggest challenge to face medical education in recent memory.

### Workforce Planning

We have kept our incoming resident number stable at six. This may be reevaluated in the coming years based on workforce planning for OBGYNs in the city and beyond.

### QA/QI and Innovation

Dr. Thurston has been working with our residents with to build our QI curriculum.







**Dr. Weronika Harris-Thompson Education Lead,  
Undergraduate Medical Education**

## Undergraduate Medical Education

### Accomplishments and Highlights

- Dr Kelly Albrecht will be moving on after all her incredible contributions to Clerkship! Most impressive was establishing a “Block week” at the beginning of the curriculum: simulation and case based curriculum to solidify foundational O&G knowledge for students at the beginning of their rotation- managed to achieve amazing rating 4.5/5 in 2019 as a result of this effort. She has done so much to advance Clerkship level teaching at UofC and will certainly be missed.
- Strong appreciation for O&G Faculty at the Awards night will be Jan 2021
- Thank you to clerkship committee : Dr. Kelly Albrecht (Clerkship Co-Director), Dr. Weronika Harris-Thompson (Clerkship Co-Director), Dr. Kathryn Kenny (Evaluator Coordinator / SHC rep), Dr. Aisling Mahalingham (FMC reps), Dr. Paul Henning (RGH rep), Dr. D Igras (PLC rep), Dr. D McCubbin (med hat rep), as well as our resident reps (Dr.Kyle Lafreniere, Dr Evan Genge, Dr Mruganka Kale). We had two student representatives, and we thank them for their contributions, Skye Russell and Mirna Matta. Also thank you to Crystal and Gillian for their support.

### Challenges

- Changes in scheduling secondary to COVID19; rotation adjusted to 4 week in hospital rotation. Teaching lectures front-loaded with Zoom teaching done in May/June for class of 2021 (in an effort to shorten in-person clinical rotations).
- Simulation teaching scaled back to essentials (eg SVD, pelvic exam/bimanual model practice); cancelled with increased COVID cases/prevalence in November. Teaching redirected to clinical rotation only (plus online previously done Zoom lectures).
- We are anticipating resumption of 2 half days simulation teaching and half day zoom teaching for incoming class 2022, starting March 8. Will be maintained at 4 week in hospital rotation (with hopefully some exposure to clinics once faculty comfortable with same).

### Workforce Planning

- Will be hiring 2-3 additional Core Clerkship teachers for upcoming year (notice to be sent out shortly)
- Dr. Kathryn Kenny will be stepping down as evaluation coordinator in 2020; exact date TBD, will post recruitment in near future for replacement.
- Dr. Weronika Harris-Thompson continuing on as Clerkship Director (with Dr. Albrecht departing as Co-Clerkship Director)
- Dr. Stephanie Cooper will be acting as Midwifery teaching liaison
-

## Future Directions and Initiatives

Initiative through SOGC Undergraduate committee for Clerkship directors across Canada to share teaching resources (in particular high quality online teaching modules).

Modified simulation/"block week" for upcoming year given ongoing 4 week rotation.



**Dr. Jadine Paw Education Lead, Undergraduate Medical Education – Course 6**

## Undergraduate Medical Education – Course 6

### Accomplishments and Highlights

Course 6 continues to have strong clinical teachers from the Department of OBGYN. This past year, 13 Department members provided lectures, and many more participated in small group teaching and clinical core. The Course 6 Evaluation/Report from the Med Students rated the OBGYN portion 3.85/5. This is the highest rating that the women's health rotation has scored in the past 4 years! Course 6 overall received 3.8/5. The lectures provided by our Department members scored 4.23/5, and our Clinical Core experience on

Labour/Delivery received 4.28/5. There continues to be great interest in pursuing OBGYN in the Preclerkship and Clerkship cohorts of students, and many students attribute this interest to Course 6.

The accomplishments to highlight are described below under 'Challenges'. The way that the course handled the challenges is what should be highlighted, as these changes made the course better.

Teachers nominated by the students to receive awards: Dr Dhea Wallace-Chau, Dr Jaime Schachar and Dr Jadine Paw.

### Challenges

Due to the COVID19 pandemic, all lectures and small groups were virtually taught via Zoom this past year. This was an incredible challenge to ensure that the quality of teaching and materials were not lost in the transition. Some lecturers used previously taped lectures (from last year), and others presented live on Zoom. The lecturers demonstrated flexibility in adapting to this Zoom format, and based on feedback received, the students appreciated the extra flexibility and time provided by the lecturers.

In reviewing exam results and failures from the previous year, it was identified that some lecture content was not taught thoroughly, and in fact was discordant to questions on the exam. In order to correct that this year, Dr Paw and Dr Schachar created a flipped classroom approach and re-organized how Antenatal and intrapartum care was taught. This included the creation of podcasts, incorporation of ultrasound videos in the lectures and a new lecture series. This was very well received and will continue to be teaching approach for these topics. The results from the exam this year proved that this teaching approach was more effective.

Unfortunately, recruitment for small groups remains a challenge. There were many more non-OBGYN small group preceptors this year in Course 6. Many were Master Teachers (from Dept of Psychiatry, Internal medicine, Family Medicine). Because of this, the preceptor guides needed to be updated as these non-OBGYN specialists may not have the background knowledge to field potential questions or present the important teaching points. Considerable time was spent to update all small group guides, so that any preceptor, regardless of specialty, can lead the small group. The small groups were also modified to be Zoom-appropriate.

One of the most highly rated learning experiences in past years was the small group with Standardized patients (SP) in MedSkills, where students get to experience an Obstetrical Emergency by acting it out with the SP. We could not provide this experience this year due to social distancing rules. In order to not lose this learning opportunity, this Obstetrical emergency scenario was delivered with a pre-taped video of the emergency, and the video was embedded into the small group so that students could still visualize how questions are asked, and how the patient is managed in an emergency. This scenario was created by Dr Paw, and OBGYN residents (Dr Tinya Lin, Dr Evan Genge and Dr Aysah Amath) were recruited to play the role of patient, RN and MD, and it was filmed in Medskills with the UME IT team. Feedback was very positive from preceptors and students. Depending on how the Pandemic in 2021, we may have to use this format for the upcoming year as well.

## **Workforce Planning**

New Breast Section Lead (Dr Sandra Peacock, replacing Dr Liz Monaghan), to start in 2021.

Dr Paw is the current Course 6 Chair, and plans to step down in 2 years' time (?2023). Dr Schachar remains the Exam Chair this year, and will continue for next year as well.

## **QA/QI and Innovation**

Course 6 has finally added decks to CARDS, which is a UME Cumming School of Medicine innovation. This was done prior to the start of the course by Dr Kristin Ambacher (resident) and Dr Paw, and was used often as exam prep by the students this past year. Based on student feedback, these CARDS were well used and well rated.

As described above, incorporation of Flipped Classrooms and videos into Course 6 were innovations brought in this past year to Course 6.

Anatomy was also taught completely differently this year. It was a team-teaching approach with the UME Anatomy team and Dr Paw. The Anatomy team (Dr Willetts and Dr Anderson) created podcasts using prosected specimens to explain the anatomy. Then there was an Anatomy lecture (done via Zoom, due to social distancing), where the Anatomy teachers were in the lab, and Dr Paw would add clinically relevant teaching points to provide the clinical importance of understanding anatomy. This helped the students with the clinical context of learning anatomy.

## **Future Directions and Initiatives**

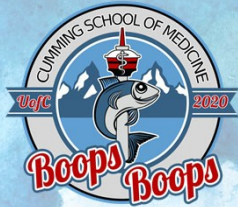
Along with the Black Lives Matter movement, there were multiple meetings this year with the Black Medical Students Association and UME about how we can be better in teaching racism, and inclusivity in Medicine. Some lectures materials this year were modified to discuss disparities in health for Indigenous people of colour (Contraception, Termination of Pregnancy, Antenatal Care, OB emergencies), and some small group cases were changed to ensure that the identifying characteristics

of the patients in the cases reflect the diversity of our patient population. We will continue working with the UME on a longitudinal curriculum tackling this important topic and to integrate it thoughtfully in our Course.

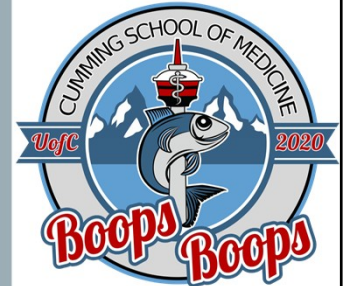
In the past years, many topics were taught many times in medical school (STI, Gestational diabetes, etc) due to the organization materials in medical school. The UME has been trying to streamline the topics to avoid redundancy. Some elements of our course were shifted this year to try to avoid this. Additionally, the Course Objectives were reviewed and updated this year to align with the MCC Objectives. It was identified that Dermatology was not covered in our course despite it being an MCC objective in women's health. An OBGYN Dermatology lecture was added to the course this year, as a collaboration between Course 2 and Courses 6 (led by Derm Dr Laurie Parsons). We will continue to modify the topics in the future to ensure that MCC Objectives are met.

## FACULTY AND UME APPRECIATION NIGHT

Classes of 2020 and 2022



## CLASS OF 2020 CLERKSHIP AWARDS



## OBSTETRICS AND GYNECOLOGY GOLD STAR AWARDS

### Faculty

- Dr. Kelly Albrecht
- Dr. Dorothy Igras-Kulach
- Dr. Kathryn Kenny
- Dr. Ingrid Kristensen
- Dr. Kendra Lamb
- Dr. Kovid Lee
- Dr. Caroline Lejour
- Dr. Wynne Leung
- Dr. Aisling Mahalingham
- Dr. Fiona Mattatall
- Dr. Michael Sexter
- Dr. Amy Zakariasen

### Residents

- Dr. Kristin Ambacher
- Dr. Chantalle Brace
- Dr. Evan Genge
- Dr. Monique Marguerie
- Dr. Larissa Padayachee
- Dr. Amanda Rohla
- Dr. Rope Smith
- Dr. Kimberley Thornton
- Dr. Robin Whitty

## OBSTETRICS AND GYNECOLOGY HONOUR ROLL

### Faculty

- Dr. Susan Baranowski
- Dr. Sheila Caddy
- Dr. Clinton Chow
- Dr. Laura Coughlan
- Dr. Matthew Grossi
- Dr. Dhea Wallace-Chau
- Dr. Jadine Paw

### Residents

- Dr. Lauren Andrew
- Dr. Mruganka Kale
- Dr. Kyle Lafreniere
- Dr. Courtney Manuel
- Dr. Ariela Rozenek

## CLASS OF 2022 PRE-CLERKSHIP AWARDS



## GOLD STAR AWARDS – COURSE SIX

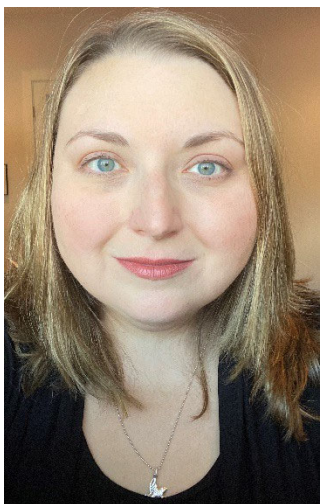
- Dr. Jadine Paw
- Dr. Izabela Sztukowski
- Dr. Fiona Mattatall

## LIFETIME ACHIEVEMENT

**Dr. Ron Cusano**

## HONOUR ROLL

- |                          |                                |
|--------------------------|--------------------------------|
| • Dr. Kristina Moore     | • Dr. Lian Willetts            |
| • Dr. Mitchell Baruta    | • Dr. Sarah Glaze              |
| • Dr. Nurunnisa Raj      | • Dr. Charlene Lyndon          |
| • Dr. Sameh Wahba Bebawy | • Dr. Leanna McKenzie          |
| • Dr. Jaime Schachar     | • Dr. Cora Constantinescu      |
| • Dr. Stephanie Hart     | • Dr. Dhea Wallace-Chau        |
| • Dr. Stephanie Cooper   | • Dr. Weronika Harris-Thompson |
| • Dr. Pamela Veale       |                                |



**Dr. Anne Roggensack Residency Program Director,  
Maternal-fetal Medicine Residency Program**

## Maternal-fetal Medicine Residency Program (PGY 6-7)

### Accomplishments and Highlights

The University of Calgary Maternal-Fetal Medicine Residency Program has continued to develop and grow this last year. It has been exciting to see our program continue to grow, and to see our graduates become MFM colleagues across Canada. We continue to be very successful in the annual Royal College MFM Sub-Specialty Committee annual “match” for MFM residency positions, and this last year

was no exception.

#### Calgary MFM residents:

- 1) **Dr. Mélodie Bourdages.** Dr. Bourdages (from Université Laval) began her residency in Calgary in October 2018. Dr. Bourdages focused on clinical research in her residency and worked with Drs. JoAnn Johnson, Jennifer Walsh, Amy Metcalfe, and Julie Lauzon studying patient perceptions of the first trimester fetal anatomical survey (sub-study of the Enhanced First Trimester Screen Study). Dr. Bourdages presented her research at the Canadian National Perinatal Research Meeting in Banff, AB in February 2020. She presented 2 abstracts at the International Society of Ultrasound in Obstetrics and Gynecology meeting In October 2020: “Assessment of maternal anxiety among women undergoing an early comprehensive fetal anatomy scan,” and “First trimester screening for open spina bifida: validation of measurement technique of the posterior fossa landmarks for open spina bifida.” Paper(s) are currently in progress for these projects. Dr. Bourdages completed her MFM residency in October 2020 and has returned home to start her MFM practice at CHUL with Université Laval in Québec, QC.
- 2) **Dr. Cindy Kao.** Dr. Kao (from the University of Alberta) began her residency in Calgary in January 2019. Dr. Kao focused on clinical research in her residency and worked with Drs. Somerset, Lauzon, and Brundler studying the outcome fetal megacystis diagnosed at 11-14 weeks gestation. She presented her abstract “Perinatal outcome and prognostic factors of fetal megacystis diagnosed at 11-14 week’s gestation” at the International Society of Ultrasound in Obstetrics and Gynecology meeting In October 2020. Her paper “Perinatal outcome and prognostic factors of fetal megacystis diagnosed at 11-14 week’s gestation” was published in Prenatal Diagnosis on November 21, 2020. Dr. Kao completed her MFM residency in January 2020 and has taken a MFM position with the Lois Hole Centre for Women and the University of Alberta in Edmonton, AB.
- 3) **Dr. Audrey Labrecque.** Dr. Labrecque (from Université de Montréal) began her residency in Calgary in September 2019. Dr. Labrecque has a clinical interest in Obstetric Hematology and is focusing on clinical research in this area in her residency. She is also pursuing a postgraduate diploma in clinical epidemiology. Dr. Labrecque is working with hematologist Dr. Leslie Skeith on a metanalysis on the complications of ASA in pregnancy and is working with Drs. Somerset and Soliman on a customized birthweight standard for a Canadian population: Calgary, AB. Dr. Labrecque serves as the National MFM Resident Representative to participate in the MFM Competence By Design Curriculum Workshops. Following completion of her MFM residency in fall 2021, Dr. Labrecque will return home with a MFM position at the CHU Sainte-Justine in Montréal, QC.
- 4) **Dr. Patrick O’Farrell.** We are pleased to announce that Dr. O’Farrell (from McGill University) matched to our program in the October 2021 match. He will begin his MFM residency in Calgary on July 1, 2021.

- 5) **Dr. Genevieve Quesnel.** We are pleased to announce that Dr. Quesnel (from University of Saskatchewan) matched to our program in the October 2021 match. She will begin her MFM residency in Calgary on September 27, 2021.

We continued to refine our approach to delivering our curriculum, in response to feedback from residents, the residency training committee, and the section of MFM. While as a specialty, Maternal-Fetal Medicine will be a late adopter of the RCPSC Competency By Design (expected in 2022), we have already embraced the principles of competency-based medical education, and become a leader in the transition. Our curriculum has already undergone a transformational change, demonstrating good fit with principles for CBD, while remaining adaptable, as individualization of training is part of our philosophy. We have continued to innovate and improve our process for resident assessment and feedback, transitioning to much more frequent low-stakes assessment, including direct observation of procedures and clinical skills. We continue to utilize a Competency Committee (chair Dr. Anne Roggensack) assessment approach and have found this method superior for tracking resident progress and for providing valuable and more specific feedback to residents. We are fortunate that (other than plans for away electives that were cancelled), our residents were able to continue their core clinical experiences during the COVID pandemic restrictions without much impact to their learning.

Our academic program continues to evolve in response to resident feedback. Half-days include a variety of experiences, from preceptor-led sessions and case-based discussions, to webinars and self-study, to simulation (led by Dr. Candace O'Quinn). Although academic activities were briefly "paused" due to COVID, we were able to smoothly transition to a virtual format for our academic half-day and rounds. Residents frequently participate in presenting sectional rounds including Fetal Diagnosis and Therapy Rounds, Fetal Pathology Rounds, and Obstetric Internal Medicine / MFM Rounds. Residents continue participate in collaborative learning with the Diagnostic Imaging residents. Residents also present Department of Obstetrics and Gynecology Grand Rounds during their residency. Residents lead MFM Journal Club. Residents have been active in teaching pre-clerkship, clerkship, O&G residency, and CME.

This year, we transitioned our novel application process to a virtual format, including a virtual "coffee" with current MFM residents, a virtual "coffee" with the Program Director, a (low tech but effective) virtual tour, individual virtual meetings with faculty regarding possible research mentorship, a resident presentation at the virtual interview, and utilizing electronic survey tools for file and interview assessments. We had 6 applicants this year - a record-high – and they all expressed positive feedback with our robust virtual process.

We look forward to ongoing growth and development of our Section and Residency Program. The MFM Residency Program was fully accredited in 2015 and we recently had our regular Internal Review, conducted virtually on November 10, 2020. While we still await the final reviewer report, our exit meeting with reviewers was very positive, noting our strengths of program leadership, our "eye for the future," and preparation for the transition to CBD.

While we regularly review program documents, our core RPC this year (Dr. Stephanie Cooper, Dr. Nancy Soliman, Dr. David Somerset, and all residents) has been active in updating program documents and policies in preparation for the internal review, as well as in preparation for the upcoming External Review and transition to CBD.

## Challenges

Our clinical MFM program at AHS and EFW MFM sites continues to grow and change, and we will continue to find the best balance of educational clinical experiences for our MFM residents. Residents are members of the RPC and meet regularly with the Program Director, and we work towards continuous quality improvement. A program-specific policy for fatigue risk management was developed

and implemented this year. We continue to address limitations of physical space that could impact MFM resident learning with respect to our FMC MFM unit and a dedicated MFM resident library / office.

Plans for expansion of AHS MFM services have been challenging. Government-led changes to the physician funding framework, alternate relationship plans, and diagnostic imaging contracts contribute to an uncertainty that is outside our residency's locus of control. It is a challenging time to lead a residency program with a diverse academic and clinical faculty who participate in both alternate payment and fee-for-service streams.

## **Future Directions and Initiatives**

The MFM Residency is presently funded for up to 2 positions per year. In most recent years, given the volume of learners in our department, we have elected to only 1-2 positions to optimize the experience for our MFM residents. The current and upcoming national need for MFM physicians is unknown, and it is hoped that planned research may better inform our need for training MFMs.

With ongoing national meetings for RCPSC Competency By Design, we will be taking the last steps for transitioning our program fully to CBD. We are well-prepared for this with our current curriculum and approach to assessment; but there will be considerable work to be done on curriculum mapping once MFM EPAs are finalized. The 3<sup>rd</sup> and final CBD workshop is planned virtually in April 2021. In July 2021, additional funding from PGME will be available to support a Competence Committee Chair, CBD leadership, and Faculty Advisors, and we will look to more formally recruit and develop these roles for our program, transitioning our mentor program to an Academic Advisor format. Our MFM faculty has attended department Grand Rounds on aspects of CBD, but as the process continues, we will also look to present CME on CBD in-house to our MFM residents and faculty.



**Dr. Liane Belland Clinical Fellowship Director,  
Minimally Invasive Gynaecologic Surgery Fellowship**

## Minimally Invasive Gynaecologic Surgery Fellowship

### Accomplishments and Highlights

The MIGS Fellowship has now had its first two year academic fellow, Dr. Meghan O'Leary. The previous Fellow who completed a transition Fellowship of 18 months, Dr. Rupinder Dhaliwal is now MIGS staff at the Royal Alexandra Hospital in Edmonton.

Dr. O'Leary has completed her first year of Fellowship during which time she initiated multiple research projects that are in various stages of completion. She has presented award winning videos at the annual CanSAGE conference in September 2020 and is currently continuing her work towards a Masters of Education in Health Professions through John Hopkins University. The extension of her graduate work includes a thesis project on simulation to be conducted prior to completion of her fellowship.

The Fellow and Fellowship preceptors have been increasingly visible within the department and at local sites to provide mentorship in surgical competencies and to further education in benign gynecology. The MIGS Fellow has been the lead along with the senior Gynecology rotation resident for the "BAG" rounds (Better At Gynecology) which take place virtually on a monthly basis at the PLC with attendance by all residents at that site in addition to PLC MIGS staff. Through the direction of the MIGS Division Lead, the MIGS Fellow participates in all aspects of simulation half days for the residents. The MIGS Fellow has provided independent Gynecology call support during Covid with incredibly positive feedback from residents and staff alike.

The Fellowship ultimately would like to have two fellows on a yearly basis. Until the Covid pandemic has passed, these plans will be on hold. The incoming Fellow starting September 2021 will be Dr. Elizabeth Russell from Queen's University. She will be completing a 2 year academic Fellowship.

The MIGS Fellowship match was again performed through a centralized process this year with an abundance of applicants to the University of Calgary. Avenues to merge the AAGL/CanSAGE matches are underway. A national curriculum for all Fellowship programs is currently being drafted for anticipated introduction for the 2021 Fellowship stream.

### Challenges

The COVID pandemic had the potential to derail access to ongoing clinical and surgical activities for the MIGS Fellow as seen in other services. However, the Fellow was reassigned to a single site during Phase 1 of the pandemic with high surgical volume maintained with no impact on accrual of skills. The reprieve of the summer allowed return to all sites and ongoing exposure to the benefits of approaches.

The University of Calgary MIGS Fellow has noted the highest surgical volumes compared to other fellows nationally during COVID times which is a testament to the quality of the trainee and the program despite trying times.

### Workforce Planning

Dr. Caitlyn Jago who is currently completing her 2 year MIGS Fellowship with a focus on Chronic Pain will be joining the Rockyview Hospital group and will be an excellent addition to the MIGS Fellowship preceptors given the expertise she brings. Dr. Angela Deane is currently doing a one year MIS Fellowship at North York Hospital in Toronto with a strong focus on vaginal surgery and prolapse surgery. She will join the PLC group and will add a much needed dimension to the MIGS group.

## **Future Directions and Initiatives**

The addition of additional Faculty to the MIGS Fellowship will allow us to start focusing Fellows on particular areas of expertise/interest while achieving the competencies expected of a MIGS Fellowship



**Dr. Erin Brennand Clinical Fellowship Director, Pelvic Medicine and Reconstructive Surgery Fellowship**

## Pelvic Medicine and Reconstructive Surgery Fellowship

### **Accomplishments and Highlights**

The PMRS fellowship continues to be a very popular educational avenue. We have several applicants for the 2022 academic year.

We graduated 2 fellows in 2020, Dr. Emily Sandwith and a visiting fellow, Dr. Breffini Anglim who joined our program due to complications with the fellowship offering in Toronto.

Both of our current fellows, Dr. Allison Edwards and Dr. Alison Carter Ramirez are participating in clinical research and moving along their fellowships appropriately.

The program will be offering an integrated fellowship with an MSc program extending the total program time from 2 years to 2.5

We will welcome 2 new fellows in 2021, Dr. Sophie Cartier from Montreal and Dr. Jenna Hall from Queens.



**Dr. Prafull Ghatage Clinical Fellowship Director,  
Gynaecologic Oncology Fellowship**

## Gynaecologic Oncology Fellowship

### **Accomplishments and Highlights**

Eve-Lynn Langlais – Joined the University of Laval as an Assistant Professor in Gyn Oncology – Jan 2020. She was successful in passing the exams in Gyn Oncology.

Brent Jim – Joined the University of Saskatchewan, Regina as an Assistant Professor Jan 2020. He was successful in passing the exams in Gyn Oncology.

Steve Bisch – Completed his training in June 2020. He was successful in passing the exams in Gyn Oncology. He is at present working as a Locum – University of Ottawa.

Mohammed AlRuwaيسان - He was successful in passing the exams in Gyn Oncology. He is doing an extra year of training at the end of March 2021 when he returns to Saudi.

Christa Aubrey will finish her 2-year training in June 2021. She will be returning to Edmonton and will be working at the Cross Cancer Institute.

Rachelle Findley completes her 2-year training in June 2021.

Joni Kooy was successful in completing her Masters of Science and Health Care Quality from Queens University in November 2020.

Chrisitina Ince was successful in completing her MSc in Gender, Policy and Inequalities from the London School of Economics in December 2020.

We continue to have a scholarship for residents to have an extra year of non-clinical training for 2 more years.

### **Challenges**

The Covid has decreased some of the workload. However, to date this has not caused a decrease in surgical experience.

### **QA/QI and Innovation**

2 cadaver courses are held yearly – one in surgery and the other on reconstruction which is run in coordination with Plastics Oncology

### **Future Directions and Initiatives**

In the next 3 to 4 years, there will be a decrease in Canadian trainees as there will be enough Gyn Oncologists nationally. We will need to have to look at international physicians.

We have just accepted a trainee from the University of the West Indies. We are hopeful that in the end there will be more graduates coming here from the West Indies.



**Dr. Sarah McQuillan Clinical Fellowship Director,  
Pediatric and Adolescent Gynaecology Fellowship**

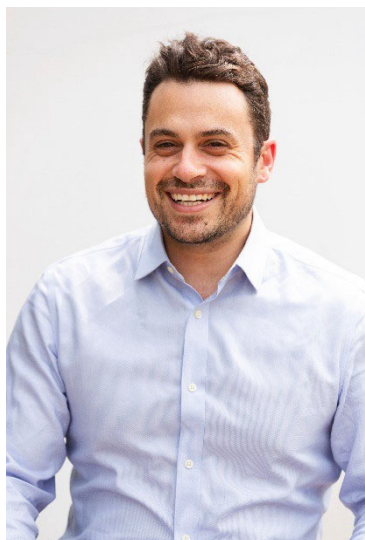
## Pediatric and Adolescent Gynaecology Fellowship

### **Accomplishments and Highlights**

In our second official year as a fellowship we've seen a lot of growth. The fellowship continues to follow the Surgical Clinical Fellowship contract model and we anticipate a surplus in funding this year due to decreased expenses caused by the COVID pandemic.

Our current fellow, Dr. Kayla Nelson has been awarded the Karen Mann Catalyst Grant – Royal College Grant (30,000). This grant is awarded to one person in Canada. The goal of the grant is to foster ongoing development and mentorship of junior faculty. This grant will support Kayla's masters work and allow for future presentation and collaboration with other medical education scholars.

The PAG fellowship also joined the National Resident Matching Program and successfully matched Dr. Tara Justice from UBC. Dr. Justice will join the fellowship in July.



**Dr. Michael Sectar Medical Leader, Continuing Medical Education**

## Continuing Medical Education

### Accomplishments and Highlights

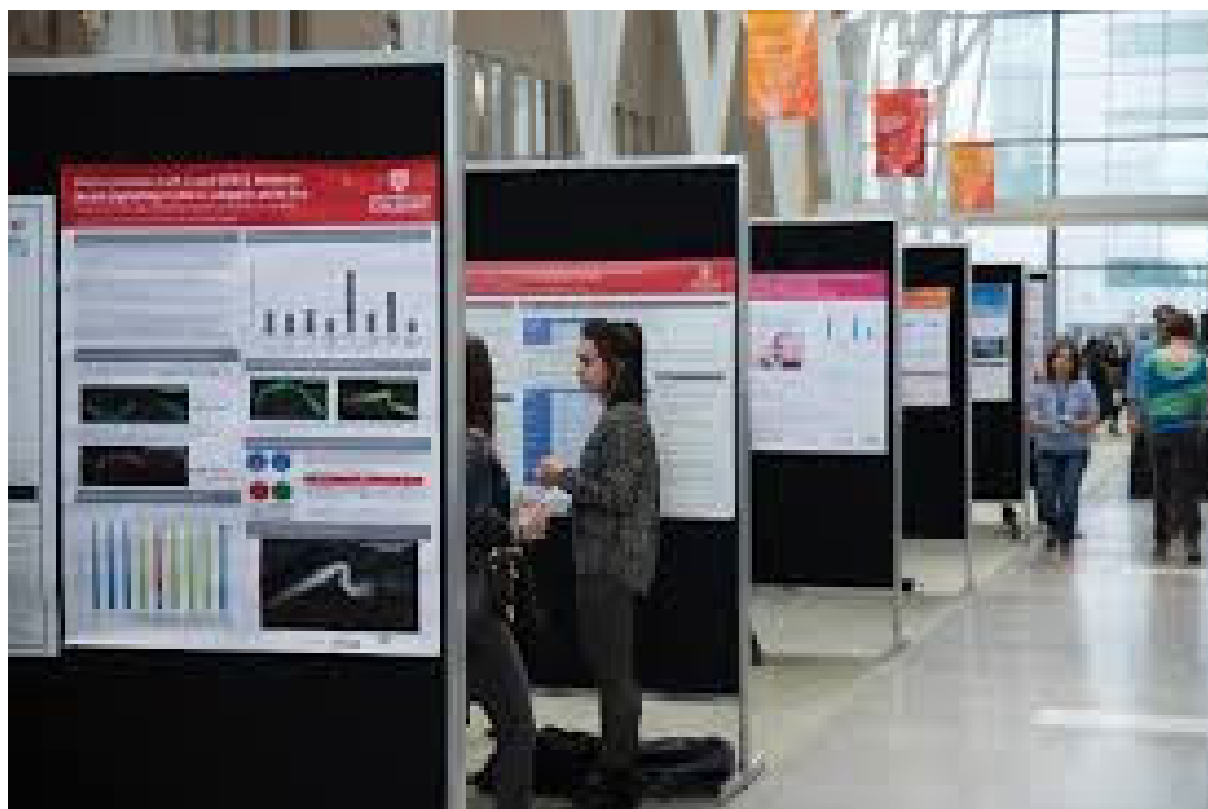
Our plans for department education have changed as this year has progressed. Ideas for in person cadaver labs and more simulation have had to transition to more online and virtual learning with the global pandemic. We've been fortunate to have had an uptake in rounds attendance since going virtual. Since September all of our department presented rounds have been recorded and posted to our webpage for review and continued education.

| Date        | Topic   | Presenter        |
|-------------|---|------------------|
| January 10  | Endometriosis: An update and a team approach  | Rajakumar        |
| January 17  | The power of the debrief  | Sloan            |
| January 31  | Fetal Pillow: a novel new device designed to make a C-Section in the second stage of labour safer and easier. | Grady            |
| February 7  | Clinical Adverse Event (CAE) has occurred – what next?  | Mevel / Peffers  |
| February 14 | Transitional pain service: A new approach to Preventing and Managing chronic Post-surgical pain.              | Stephan          |
| February 21 | Iron Deficiency in Pregnancy and Puerperium   | Papalia          |
| February 28 | Sonographic assessment of lower uterine segment in women with prior cesarean section                          | Kao              |
| March 6     | Morbidly adherent placenta: from ultrasound detection to delivery   | Bourdages        |
| March 20    | COVID 19 and Perinatal/Neonatal Considerations  | Kuret / Castillo |
| May 11      | Virtual OR Experience   | Rajakumar        |
| May 20      | Educational Rounds  | Chu              |

|              |   |                           |
|--------------|---|---------------------------|
|              |   |                           |
| June 5       | Updates in Perioperative Medicine   | Bosch / Ruzyski           |
| June 12      | Acute Uterine Bleeding  | O'Leary                   |
| June 19      | CBME in OBGYNE  | Nelson / McQuillan        |
| June 26      | Paternal and Perinatal: Care of trans-men in pregnancy                            | Thornton                  |
| September 25 | The Gender Pay Gap  | Simpson (Visiting)        |
| October 2    | Cell based therapies for treatment of cerebral palsy                              | Jenkin (Visiting)         |
| October 15   | Caring for COVID-19 Mother and Infant Dyads                                       | Kuret / Castillo          |
| October 20   | Beyond the Pill: A Hormonal Contraceptive Update                                  | Nelson / Osborne          |
| October 23   | Implementation of Routine First Trimester Combined Screening                      | Guy (Visiting)<br>Johnson |
| October 30   | Telehealth in Urogynecology   | Di Palma                  |
| November 6   | Marijuana use in Pregnancy  | Walker / Corsi            |
| November 13  | Trial of labour after Myomectomy  | Lafreniere                |
| November 20  | Staying out of headlines: Patient refusal of care for dummies                     | Findlay                   |
| November 27  | Post Cesarean Section Analgesia   | Bonneville                |
| December 3   | City Wide Rounds –  |                           |
| December 11  | Long(er) term gonadotropin suppression in endometriosis, adenomyosis and fibroids | Lin                       |
| December 18  | COVID Round table   | Kuret / Castillo          |

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## RESEARCH



# RESEARCH



**Dr. Stephen Wood Director of Research**

## Research

### Accomplishments and Highlights

This report focuses on the areas not covered in the divisional reports. However, the appendix includes all submitted departmental publications and grants.

General Gynecology Research: Maryam Nasr-Esfahani was a Co-investigator on a successful CIHR grant to evaluate intranasal oxytocin for treatment of chronic pelvic pain. Partnership for Research and Education in Premature Infants (PREMI group); 1) Dr D Slater was successful in obtaining CIHR funding for: Uterine Quiescence and Contraction. 2) A group led by Dr Metcalf and Slater obtained a large \$5,000,000 team grant from the Calgary Health Foundation to reduce rates of premature birth.

### Challenges

Recruitment to the Perinatal Epidemiology group continues to be challenging. Attempts to gain support to recruit a Clinical Perinatal Epidemiologist (Dr S Goldade MD MSc) were not successful due to unavailability of a position in the call group. This has been slightly mitigated by including Dr. Goldade, who is now at UofS in our PREMI research network. The group is also trying to develop a clinician scientist trainee (M Blades) who would start PhD with Dr Slater in July 2022. Anticipate similar issues with call group flexibility. The main risk to the PREMI group is senior members retiring and not being replaced.

Covid epidemic continues to make starting new projects, which involve patient recruitment, very very challenging.

### Workforce Planning

Clinical Epidemiologist.

Clinical Basic Scientist.

### QA/QI and Innovation

Developing Provincial Surveillance (and research) program for Moderate-Severe Hypoxic-Ischemic-Encephalopathy. Seed funding obtain. Application at Calgary Health Foundation for definitive funding.

### Future Directions and Initiatives

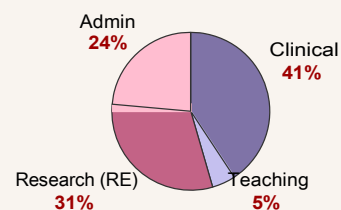
There appears to be a significant amount of research being done by generalist clinicians that is not getting much attention. Will try to highlight more of this going forward.

# Annual Report 2019-20 Obstetrics & Gynaecology

## ANNUAL FTEs <sup>2</sup>

|                                     | 2015-16   | 2016-17   | 2017-18   | 2018-19   | 2019-20   | 2020-21 <sup>1.1</sup> |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|------------------------|
| CSM                                 | 500       | 508       | 518       | 517       | 526       | 526                    |
| Basic Sciences                      | 126       | 129       | 136       | 141       | 143       | 142                    |
| Clinical w/out AARP                 | 153       | 157       | 157       | 161       | 165       | 162                    |
| Clinical w. AARP                    | 221       | 222       | 225       | 215       | 218       | 220                    |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>12</b> | <b>12</b> | <b>14</b> | <b>14</b> | <b>16</b> | <b>14</b>              |

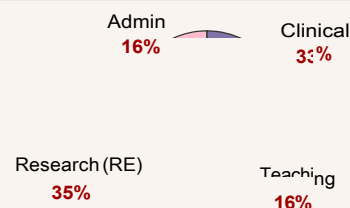
## Obstetrics & Gynaecology <sup>3.1</sup>



## ANNUAL Res <sup>3</sup>

|                                     | 2015-16    | 2016-17    | 2017-18    | 2018-19    | 2019-20    | 2020-21    |
|-------------------------------------|------------|------------|------------|------------|------------|------------|
| CSM                                 | 199.6      | 201.4      | 209.0      | 223.1      | 230.5      | 225.0      |
| Basic Sciences                      | 66.8       | 67.9       | 72.9       | 79.6       | 81.4       | 80.6       |
| Clinical with AARP                  | 81.5       | 81.0       | 83.8       | 86.4       | 89.9       | 87.2       |
| Clinical w/out AARP                 | 51.2       | 52.5       | 52.3       | 57.1       | 59.2       | 56.5       |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>3.7</b> | <b>3.6</b> | <b>4.0</b> | <b>4.0</b> | <b>5.0</b> | <b>4.3</b> |

## Clinical without AARP <sup>3.1</sup>



## TOTAL RESEARCH REVENUE <sup>4</sup>

|                                     | 2015-16       | 2016-17       | 2017-18       | 2018-19       | 2019-20       |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|
| CSM                                 | \$167.1M      | \$164.0M      | \$198.3M      | \$213.4M      | \$213.8M      |
| Basic Sciences                      | \$43.7M       | \$41.6M       | \$52.3M       | \$59.7M       | \$62.3M       |
| Clinical w AARP                     | \$65.6M       | \$62.9M       | \$70.1M       | \$76.8M       | \$66.0M       |
| Clinical w/out AARP                 | \$24.2M       | \$27.6M       | \$30.1M       | \$34.5M       | \$36.4M       |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>\$0.5M</b> | <b>\$1.3M</b> | <b>\$0.7M</b> | <b>\$0.9M</b> | <b>\$1.1M</b> |

## RESEARCH REVENUE PER RE <sup>4.1</sup>

|                                     | 2015-16        | 2016-17        | 2017-18        | 2018-19        | 2019-20        |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| CSM                                 | \$0.67M        | \$0.66M        | \$0.73M        | \$0.77M        | \$0.71M        |
| Basic Sciences                      | \$0.65M        | \$0.61M        | \$0.72M        | \$0.75M        | \$0.76M        |
| Clinical with AARP                  | \$0.80M        | \$0.78M        | \$0.84M        | \$0.89M        | \$0.73M        |
| Clinical without AARP               | \$0.47M        | \$0.53M        | \$0.58M        | \$0.60M        | \$0.61M        |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>\$0.13M</b> | <b>\$0.35M</b> | <b>\$0.18M</b> | <b>\$0.22M</b> | <b>\$0.22M</b> |

## TOTAL CIHR REVENUE <sup>5</sup>

|                                     | 2015-16        | 2016-17        | 2017-18        | 2018-19        | 2019-20        |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| CSM                                 | \$30.4M        | \$33.0M        | \$38.7M        | \$45.3M        | \$46.7M        |
| Basic Sciences                      | \$14.6M        | \$14.6M        | \$16.6M        | \$18.1M        | \$19.4M        |
| Clinical w AARP                     | \$12.5M        | \$13.1M        | \$14.9M        | \$19.0M        | \$16.3M        |
| Clinical w/out AARP                 | \$3.3M         | \$5.2M         | \$7.2M         | \$8.3M         | \$11.0M        |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>\$0.08M</b> | <b>\$0.14M</b> | <b>\$0.27M</b> | <b>\$0.38M</b> | <b>\$0.40M</b> |

## CIHR REVENUE PER RE <sup>5.1</sup>

|                                     | 2015-16        | 2016-17        | 2017-18        | 2018-19        | 2019-20        |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| CSM                                 | \$0.15M        | \$0.16M        | \$0.19M        | \$0.20M        | \$0.20M        |
| Basic Sciences                      | \$0.22M        | \$0.22M        | \$0.23M        | \$0.23M        | \$0.24M        |
| Clinical with AARP                  | \$0.15M        | \$0.16M        | \$0.18M        | \$0.22M        | \$0.18M        |
| Clinical without AARP               | \$0.06M        | \$0.10M        | \$0.14M        | \$0.15M        | \$0.19M        |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>\$0.02M</b> | <b>\$0.04M</b> | <b>\$0.07M</b> | <b>\$0.09M</b> | <b>\$0.08M</b> |

## TOTAL CLINICAL RESEARCH REVENUE <sup>6</sup>

|                                     | 2015-16        | 2016-17        | 2017-18        | 2018-19        | 2019-20        |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| CSM                                 | \$23.2M        | \$58.9M        | \$68.0M        | \$67.3M        | \$47.9M        |
| Basic Sciences                      | \$1.8M         | \$6.7M         | \$8.8M         | \$6.7M         | \$4.6M         |
| Clinical w AARP                     | \$16.1M        | \$34.9M        | \$44.3M        | \$45.2M        | \$30.8M        |
| Clinical w/out AARP                 | \$3.9M         | \$16.9M        | \$13.7M        | \$14.2M        | \$11.7M        |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>\$0.20M</b> | <b>\$0.82M</b> | <b>\$0.28M</b> | <b>\$0.62M</b> | <b>\$0.46M</b> |

## CLINICAL RESEARCH REVENUE PER RE <sup>6.1</sup>

|                                     | 2015-16        | 2016-17        | 2017-18        | 2018-19        | 2019-20        |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| CSM                                 | \$0.11M        | \$0.29M        | \$0.32M        | \$0.30M        | \$0.20M        |
| Basic Sciences                      | \$0.03M        | \$0.10M        | \$0.12M        | \$0.08M        | \$0.06M        |
| Clinical with AARP                  | \$0.20M        | \$0.43M        | \$0.53M        | \$0.52M        | \$0.34M        |
| Clinical without AARP               | \$0.08M        | \$0.32M        | \$0.26M        | \$0.25M        | \$0.20M        |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>\$0.05M</b> | <b>\$0.23M</b> | <b>\$0.07M</b> | <b>\$0.15M</b> | <b>\$0.09M</b> |

## RESEARCH SUPPORT FUND <sup>14</sup>

|                                     | 2015-16        | 2016-17        | 2017-18        | 2018-19        | 2019-20        |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| CSM                                 | \$4.92M        | \$5.56M        | \$5.85M        | \$6.04M        | \$6.34M        |
| Basic Sciences                      | \$2.89M        | \$3.10M        | \$3.04M        | \$2.93M        | \$2.97M        |
| Clinical with AARP                  | \$1.40M        | \$1.69M        | \$1.92M        | \$2.06M        | \$2.18M        |
| Clinical w/out AARP                 | \$0.62M        | \$0.75M        | \$0.87M        | \$1.02M        | \$1.18M        |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>\$0.01M</b> | <b>\$0.01M</b> | <b>\$0.01M</b> | <b>\$0.02M</b> | <b>\$0.03M</b> |

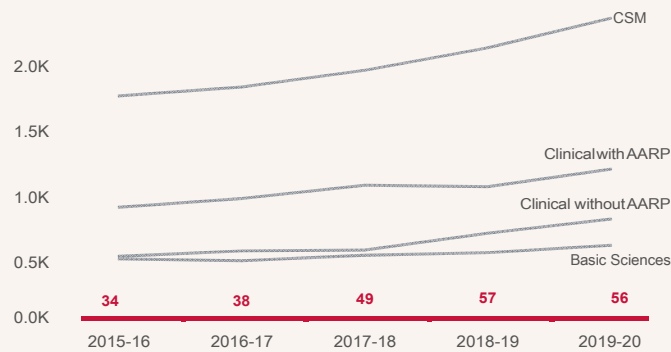
## RESEARCH SUPPORT FUND per RE <sup>14.1</sup>

|                                     | 2015-16       | 2016-17       | 2017-18       | 2018-19       | 2019-20       |
|-------------------------------------|---------------|---------------|---------------|---------------|---------------|
| CSM                                 | \$24.8K       | \$27.7K       | \$28.1K       | \$27.2K       | \$27.4K       |
| Basic Sciences                      | \$43.2K       | \$45.7K       | \$41.6K       | \$36.8K       | \$36.4K       |
| Clinical with AARP                  | \$17.2K       | \$20.9K       | \$23.0K       | \$23.9K       | \$24.3K       |
| Clinical w/out AARP                 | \$12.4K       | \$14.6K       | \$17.2K       | \$18.5K       | \$19.9K       |
| <b>Obstetrics &amp; Gynaecolo..</b> | <b>\$3.7K</b> | <b>\$1.9K</b> | <b>\$3.5K</b> | <b>\$6.0K</b> | <b>\$6.6K</b> |

## 2015-19 FTE BIBLIOMETRICS

## Obstetrics & Gynaecology

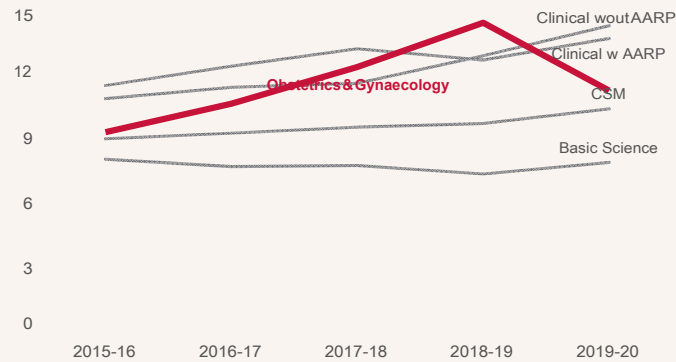
### PUBLICATIONS <sup>7</sup>



### PUBLICATIONS PER FTE <sup>8</sup>

|                          | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|--------------------------|---------|---------|---------|---------|---------|
| CSM                      | 3.5     | 3.6     | 3.8     | 4.1     | 4.5     |
| Basic Sciences           | 4.2     | 4.0     | 4.1     | 4.1     | 4.4     |
| Clinical with AARP       | 4.2     | 4.5     | 4.9     | 5.0     | 5.6     |
| Clinical without AARP    | 3.6     | 3.8     | 3.8     | 4.5     | 5.1     |
| Obstetrics & Gynaecology | 2.8     | 3.2     | 3.5     | 4.1     | 3.5     |

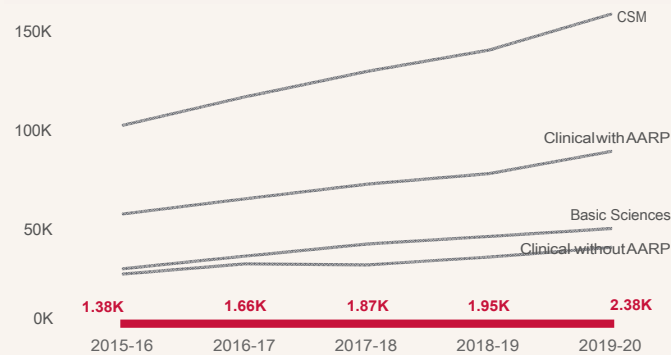
### PUBLICATIONS PER FTE <sup>9</sup>



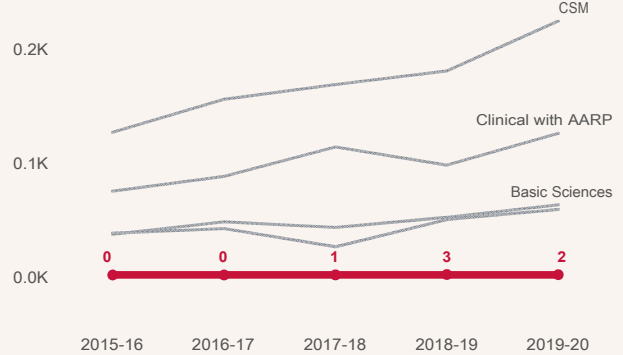
### PUBLICATIONS PER FTE <sup>9</sup>

|                          | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 |
|--------------------------|---------|---------|---------|---------|---------|
| CSM                      | 8.9     | 9.1     | 9.4     | 9.6     | 10.3    |
| Basic Science            | 7.9     | 7.6     | 7.7     | 7.3     | 7.8     |
| Clinical w AARP          | 11.3    | 12.2    | 13.0    | 12.5    | 13.5    |
| Clinical wout AARP       | 10.7    | 11.3    | 11.4    | 12.7    | 14.1    |
| Obstetrics & Gynaecology | 9.2     | 10.5    | 12.2    | 14.2    | 11.1    |

### ANNUAL CITATIONS <sup>10</sup>



### HIGH IMPACT PAPERS (IF > 10) <sup>11</sup>



### # PUBLICATIONS BY 2019/20 FTE FACULTY IN 2019 <sup>12</sup>



### HOT PAPERS <sup>13</sup>

|                          | 2015 | 2016 | 2017 | 2018 | 2019 |
|--------------------------|------|------|------|------|------|
| CSM                      | 356  | 403  | 661  | 671  | 761  |
| Basic Sciences           | 100  | 115  | 199  | 197  | 202  |
| Clinical without AARP    | 88   | 111  | 165  | 181  | 210  |
| Clinical with AARP       | 217  | 238  | 382  | 368  | 427  |
| Obstetrics & Gynaecology | 8    | 6    | 11   | 13   | 11   |



## NOTES and Definitions Cont'd

- 6.1 **Clinical Revenue per RE**  
Annual Clinical Research Revenue (See note 6) divided by the number of Research Equivalents in the same year (See note 3)  
\* For the CSM Total, Revenue assigned to Project Departments not part of the 20 CSM Departments is excluded (e.g. Dean's Department - Operations revenue is excluded)
- 7 **Publications**  
The number of unique papers published by FTE Faculty (see note 2) in the same publication year. (e.g. 2019-20 refers to the number of unique papers published by 2019/20 FTE faculty in the 2019 publication year)  
  
- Only publications of Document Types "Article", "Review", "Editorial", "Case Report", "Clinical Trial" and "Book" are included;  
- Papers co-authored by more than 1 FTE faculty member will be counted once within the same Group.  
  
Source:  
Web of Science; - CV from Authors sent to Office of Faculty Analysis (OFA) in 2015-20
- 8 **Publications per FTE**  
Annual number of Unique Publications (see note 7) divided by the number of FTEs in the same year (see note 2)
- 9 **Annual Publications per RE**  
- Annual number of unique Publications (see note 7) divided by the number of Research Equivalents in the same year (see note 3)
- 10 **Citations**  
The number of times that unique publications by FTE Faculty of a given year have been cited in the same year (e.g. 2018-19 refers to the number of times unique papers published by 2018/19 FTE Faculty were cited in 2018)  
  
- Only publications of Document Types "Article", "Review", "Editorial", "Case Report", "Clinical Trial" and "Book" are included;  
- Papers co-authored by more than 1 FTE faculty member will be counted once within the same Group.  
  
Source:  
Web of Science; - CVs from Authors sent to Office of Faculty Analysis (OFA) in 2015-20
- 11 **High Impact Publications**  
Annual publications (see note 7) in journals with an Impact Factor  $\geq 10$  in a given publication year  
Source:  
<http://webofknowledge.com/icr>
- 12 **# of Publications by 2019-20 Faculty in 2019**  
Histogram of the number of papers published by 2019-20 FTE Faculty in 2019
- 13 **Immediate Impact Papers**  
Unique publications cited > 49 times in a 5 year publication date window (e.g. For 2018-19, sum of unique publications published between 2014-18 by 2018/19 FTE Faculty that were cited in 2014-18 greater than 49 times)  
  
**Research Support Fund**  
  
2016-20 UCalgary Research Support Fund Contribution  
(Portion of Credits) / (Total UCalgary Credits) \* (Annual UCalgary RSF)  
  
- RSF is credited to a Faculty/Department based on the the Primary Appointment of June 2020 UCalgary Faculty, or the oldest start date of UCalgary Faculty who only have multiple Secondary Appointments  
  
**Background:**  
In 2019-20 the University of Calgary was awarded a total of \$13,581,364 in Research Support Funds. Research Support Funds (RSF) are awarded annually by the Tri-council Agencies to cover a portion of the indirect costs of research incurred by the University of Calgary (UC). The RSF amount awarded is based on the amount of CIHR/NSERC/SSHRC funding received by UC researchers. This dashboard shows the total RSF dollars given to the University for grants awarded to the named researchers in comparison to the RSF generated by other department/institute researchers. The table shows the awarding Tri-Council Agency and what role the researcher has on the grant. The information provided demonstrates that RSF earnings are generated for both the role of Principal Investigator and the role of Co-Investigator and highlights the benefit of being included as Co-Investigators on grant applications where the PI is external to the UC (because of the RSF dollars that will flow to UC) as well as being selective about who to include as Co-Investigators (if Co-Investigators are from the UC, the associated RSF dollars will remain at the UC; if Co-Investigators are from other institutions, a portion of the RSF dollars associated with the grant will be shared with these institutions).
- 14.1 **Research Support Fund per RE**  
2016-20 Research Support Fund (see note 14) divided by the annual sum of Research Equivalents (see note 3)



**Pamela Nugent Quality Improvement  
Consultant**

## Quality Improvement / Quality Assurance

### **Accomplishments and Highlights**

#### **Governance for Quality Improvement**

A Framework for improving quality in the Department was implemented. The aim is to provide a supportive infrastructure and balanced portfolio of improvement projects that will promote system-level quality and safety goals. In addition, the Framework is intended to help build quality improvement capability among physicians and staff.

#### **MFM Tele-ultrasound Pilot Project**

The objective is to create a secure, high-quality synchronous tele-ultrasound program that is feasible, care altering and acceptable for users. This allows access to rural sub-specialist services by providing high risk obstetrical ultrasounds with MFM specialist supervision and consultation. Collaboration between medical informatics, biomedical engineering and health care providers in AHS and private medical facilities will occur to develop a communication technology that is reliable, confidential, and embraces patient-focused care.

Implementation of synchronous tele-ultrasound pilot is projected to start during Winter 2021, after simulation and testing.

## **Challenges**

Postpartum Hemorrhage protocols from the Foothills Medical Centre PPH project of 2018 have not been readily adopted by other sites in the Calgary Zone. This is partly due the cost variance of new cone drapes used to quantify actual blood loss versus drapes that were previously used.

## **Workforce Planning**

#### **Data Analyst**

Funding approval was received from the Calgary Health Trust for a Department data analyst for a three year period. This, in addition to the part time data analyst already dedicated to the Postpartum Hemorrhage project, whose term expires at the end of the 2021 calendar year, provides considerable capacity in the Department for identifying systems quality issues and measuring for improvements.

#### **Patient engagement**

A volunteer patient advisor was recruited for the Department. This allows quality improvement decision making to be influenced by the patient's voice.



**Dr. Jackie Thurston Medical Leader,  
Quality Improvement & Quality Assurance**

## Quality Improvement / Quality Assurance

### **Accomplishments and Highlights**

A Quality Improvement Framework for the Department of OBGYN has been introduced and initial committee meetings reviewed terms of reference. An inventory of current quality improvement initiatives and projects is being collated.

### **Quality Improvement**

#### **Governance for Quality Improvement**

A Framework for improving quality in the Department was implemented. The aim is to provide a supportive infrastructure and balanced portfolio of improvement projects that will promote system-level quality and safety goals. In addition, the Framework is intended to help build quality improvement capability among physicians and staff.

### **Challenges**

Data management is a critical area of focus in the early phase of committee development to stimulate improvement ideas, measure, and monitor processes and outcomes. A dashboard for obstetrical outcomes with focus on rates of operative vaginal delivery is established and available to individual practitioners. Creating incentive programs for physicians to regularly audit their data will be expected to improve traffic to the site. There is no current system in place for data sourcing and regular review with respect to gynecologic outcomes. We will submit a plan to utilize NSQIP and ERAS data which currently exist. Development of a gynecologic dashboard will be beneficial for review of outcomes, identification of areas for process improvement, cost analysis, and individual practice improvement initiatives.

Ideas for communication and knowledge translation will be an area of focus within the committee to promote sharing of ideas among sites and department members.

Postpartum Hemorrhage protocols from the Foothills Medical Centre PPH project of 2018 have not been readily adopted by other sites in the Calgary Zone. This is partly due the cost variance of new cone drapes used to quantify actual blood loss versus drapes that were previously used.

### **Workforce planning**

#### **Data Analyst**

Funding approval was received from the Calgary Health Trust for a Department data analyst for a three year period. This, in addition to the part time data analyst already dedicated to the Postpartum Hemorrhage project, whose term expires at the end of the 2021 calendar year, provides considerable capacity in the Department for identifying systems quality issues and measuring for improvements.

#### **Patient engagement**

A volunteer patient advisor was recruited for the Department. This allows quality improvement decision making to be influenced by the patient's voice.

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## WORLD HEALTH



Dr. Simrit Brar Medical Leader Out of Country, Uninsured Program



## Out of Country / Uninsured Patient Program

### Accomplishments and Highlights

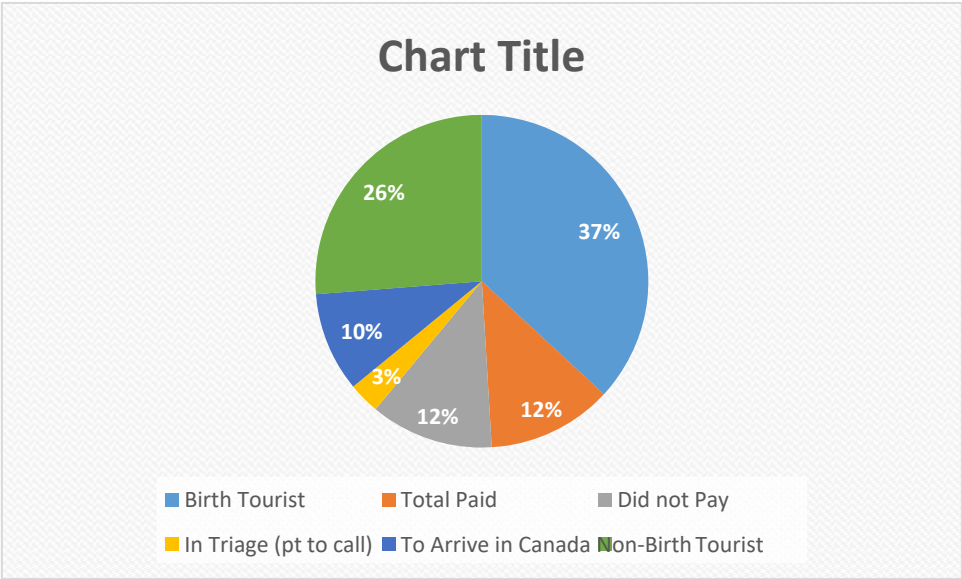
Ethics was obtained for a review article and the paper is in first draft format.

### Challenges

Bypass of Central Triage ongoing in some areas.

### Future Directions and Initiatives

Moving to provincially approved initiative

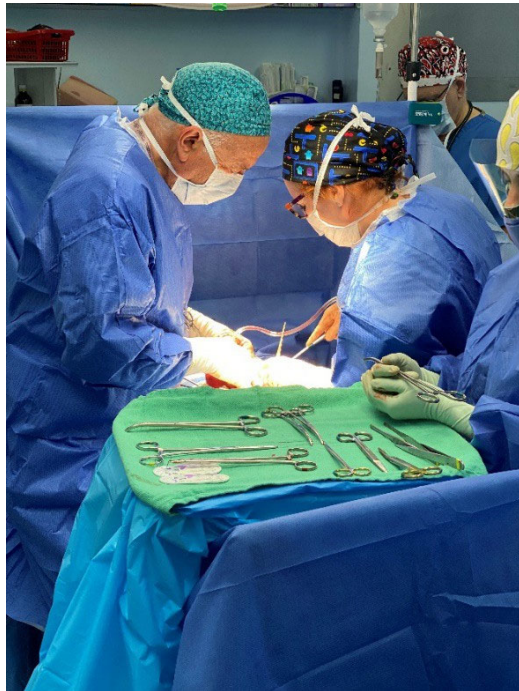


## Global Health



We continue to extend our clinical reach through global projects although travel restrictions have affected involvement. As a department, we are developing a relationship with CUHAS in Tanzania where collaborations have started through virtual means in anticipation of a site visit later in 2021. Programs for research and MIS training are being developed.

Dr. Jennifer Soucie & Dr. Albert Rosengarten - Guatemala



Dr. Jaelene Mannerfeldt – Laos

## Dr. Susan Baranowski – Afghanistan

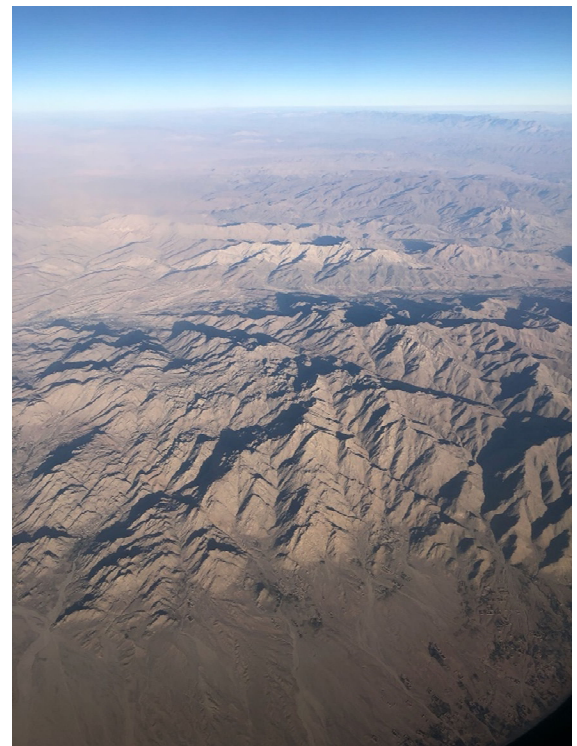


### Photos:

Landscape of the area flying in  
Sue, Zia and Saima, national OB/Gyns  
Sue, Anca and Mirja, Norwegian and German  
OB/Gyns  
Sue in uniform  
A rare quiet afternoon in Khost Maternity  
Hospital  
Quads born vaginally  
Operating theatre

### Sue jostles her routine in Afghanistan

I had the pleasure and challenge of my first Medecins Sans Frontieres (MSF) mission in Afghanistan in October and November of 2020. I went to Khost Maternity Hospital, on the southeastern border with Pakistan. It was opened in 2012 to provide safe, high quality, free maternity and neonatal care. It's one of the busiest maternity hospitals in the world! The project mission is to reduce reproductive health related morbidity and morbidity in Khost province and southeastern Afghanistan. Low risk care is provided at the nearby provincial hospital, while MSF tries to limit scope to higher risk cases including primips, grand multips, women with medical or fetal complications, miscarriage and ectopics. It was a fantastic experience with a perpetual array of perinatal morbidity, obstetric emergencies, and lots of complicated surgery despite a low cesarean section rate of 2-3%. Care is provided by a combination of midwives, and national and expat OB/Gyn specialists. It was a privilege to work with the skilled and resourceful staff, and the strong women of Afghanistan.





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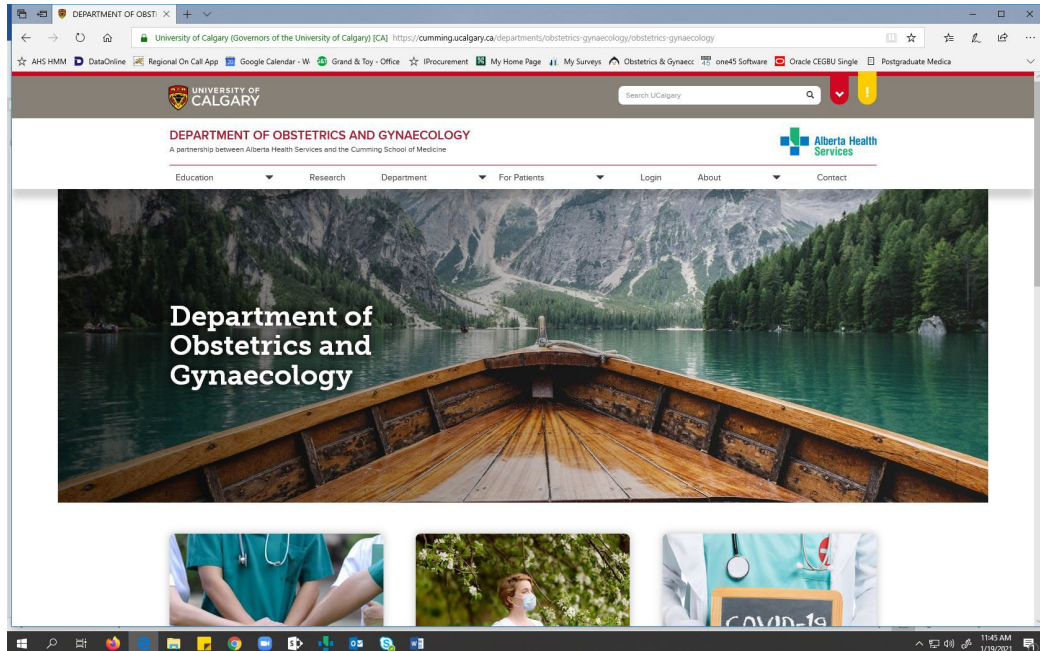
# DIGITAL FOOTPRINT



# DIGITAL FOOTPRINT

## Department Webpage

This year we solidified our place on the web with a live webpage.

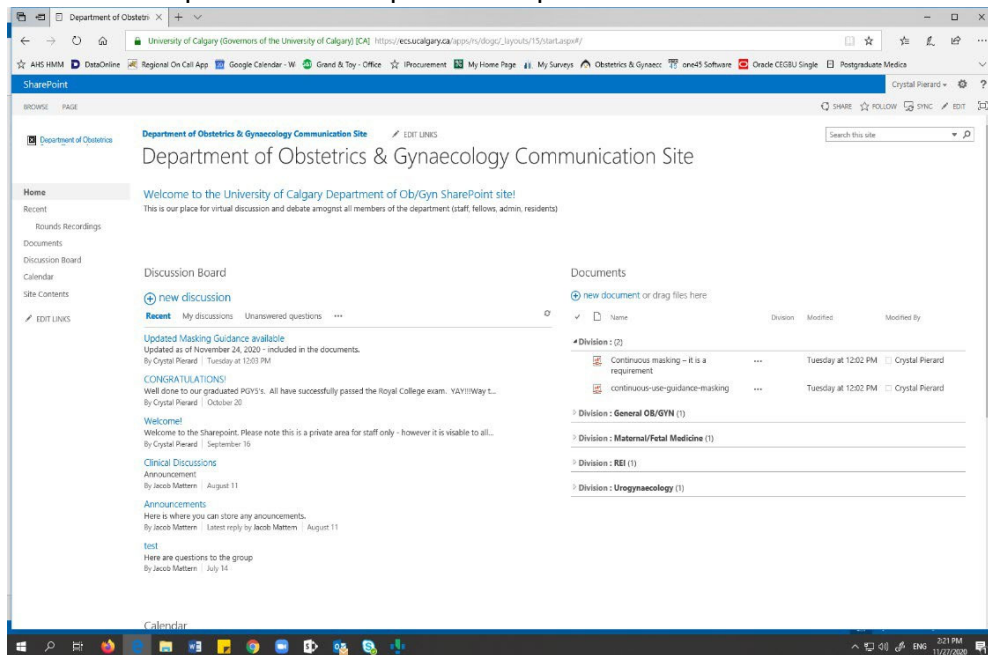


<https://cumming.ucalgary.ca/departments/obstetrics-gynaecology/obstetrics-gynaecology>

The creation of our quarterly newsletter also started this year.



We also incorporated a sharepoint for department communications and reference.



Access to the sharepoint requires U of C credentials which in some cases have been lost. Currently upgrading faculty to new credentials and ensuring access to the sharepoint.



**Dr. Simrit Brar Medical Informatics Lead  
Women's Health Calgary Zone**

## Connect Care

### **Accomplishments and Highlights**

Calgary zone was able to obtain funding for OBIX

### **Challenges**

Ongoing challenges ensuring build is complete.

Disruption to wave rollout with COVID – final wave pending.

Calgary Zone under a crunch due to SCM updates being required soon and the desire to have CC implemented prior.

### **Workforce Planning**

All provincial Area Trainers for Wave 3 and 4 are from Calgary Zone: Wynne Leung, Shunaha Kim-Fine, Charlene Lyndon, Kayla Nelson

Wynne Leung remains the Women's Health Provincial Lead Trainer

### **Future Directions and Initiatives**

During the 'pause' in roll out we are leading the review of a provincially accessed electronic trainer.

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POLICY





**Megan McQuiston Clinical Practice Coordinator**

## Policies Updated

### Accomplishments and Highlights

Clinical service and Medical leadership/ administration)

AHS has initiated a provincial policy clean up as part of the Red Tape initiative. This resulted in 15 acute care policies that were greater than 10 years old being rescinded and replaced (as needed). Those that have not been rescinded will eventually be replaced with documents that are provincial in scope. The Calgary Zone is well positioned for this update, as our recently updated documents are being used as the basis for the provincial documents.

Fetal Health Surveillance was rapidly changed in the Calgary Zone to meet the new SOGC standards. New supporting documents are available on the MNCY website, and more tools are in development. Thank you to the CNE's around the Calgary Zone for implementing this huge change so quickly!

Several new resource documents have been written and posted this year. These include: Postpartum Hypertension Identification and Management; Surrogacy; Immunization of Obstetrical Patients in Acute Care; Induction of Labour with Misoprosolol; Safe Newborn Care and Newborn Temperature Management. Use of Mifepristone for fetal demise

The Calgary Zone Prevention of Peripartum Acquired Group A Streptococcus document was adopted provincially in March.

A Calgary Zone Women's Health COVID-19 SharePoint site was developed to house Calgary specific COVID-19 resources for care of Obstetrical patients. It can be accessed using AHS credentials here <https://extranet.ahsnet.ca/teams/WHCZ/SitePages/Home.aspx>.

## Challenges

Policy work was largely interrupted due to the COVID-19 pandemic. A large focus was creation of documents to support Obstetrical care providers and nurses working with patients in the environment of the novel coronavirus. A number of Obstetricians and other physicians contributed their expertise to these documents. Many were approved for use at the provincial level. Those that were not have been housed on the Women's Health SharePoint site.

A maternity bladder protocol QI project was planned for the fall of 2020. The project was delayed due to unforeseen circumstances, including the second wave of COVID-19. Work is anticipated to resume in the spring of 2021.

## QA/QI and Innovation

Postpartum in Obstetrical triage project launched at PLC April 1 2020. Was planned for June, but early launch d/t onset of COVID. Adopted at SHC in November, FMC & RVH January 2021 (Quynh likely will include this info in hers).

## **Future Directions and Initiatives**

The focus of policy work for the next year will be on provincial alignment of existing policies in preparation for connect care. The first set of policies will be to ensure that nursing is able to work within their scope of practice. Obstetrical Emergencies, Management of Obstetrical Hemorrhage and Hypertension in Pregnancy and Postpartum will be the first 3 protocols to complete.



# DATA

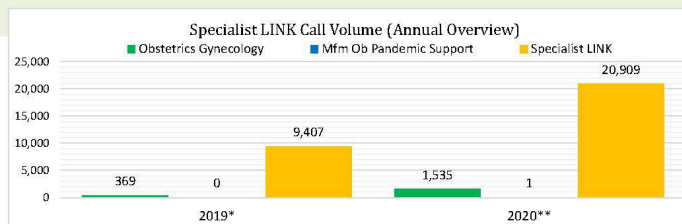
## Specialist Link

### list LINK Call Volume - Obstetrics and gynaecology(ANNUAL OVER

| Fiscal Year | Obstetrics Gynecology | Mfm Ob Pandemic Support | Specialist LINK | # of specialties |
|-------------|-----------------------|-------------------------|-----------------|------------------|
| 2019*       | 369                   | 0                       | 9,407           | 24 specialties   |
| 2020**      | 1,535                 | 1                       | 20,909          | 52 specialties   |

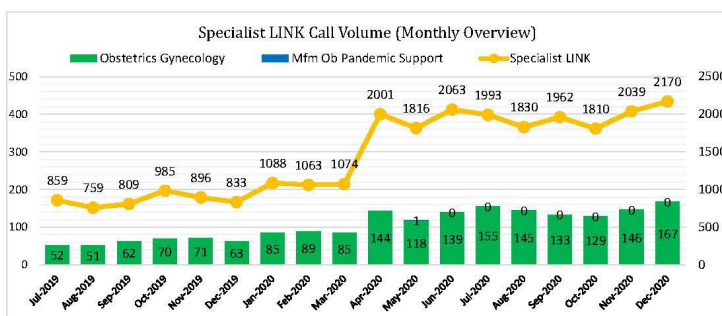
\*Obstetrics Gynecology joined SL in Jul 2019

\*\*MFM Ob Pandemic Support joined SL in May 2020 and D/C in July



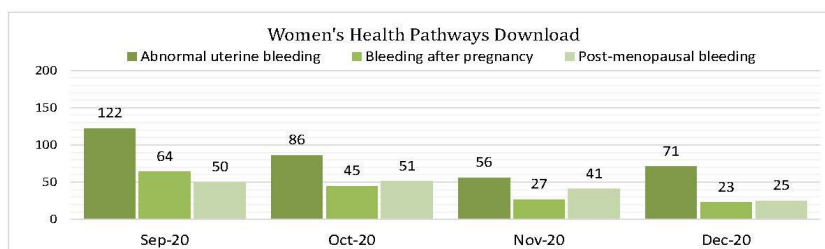
### Specialist LINK Call Volume - Obstetrics and gynaecology (MONTHLY OVERVIEW)

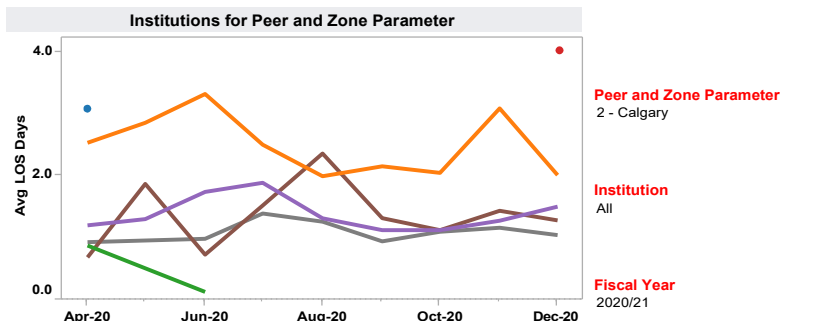
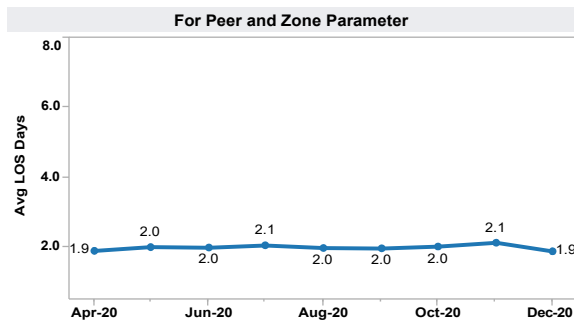
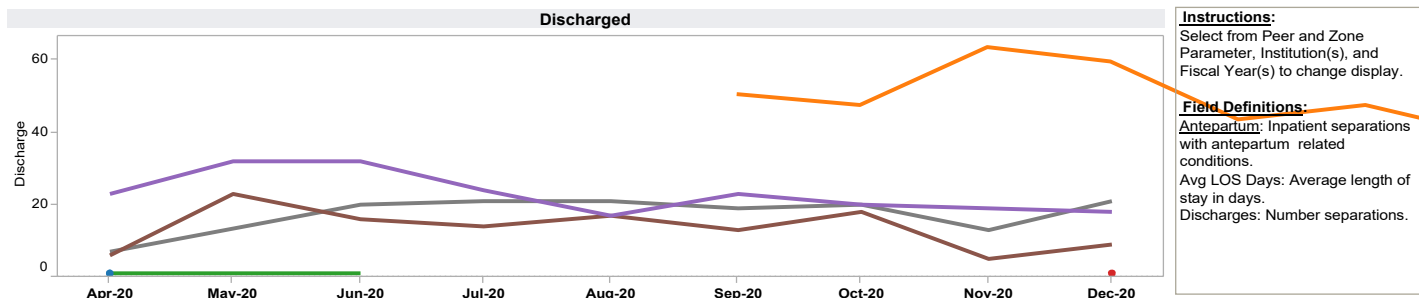
| Month    | Obstetrics Gynecology | Mfm Ob Pandemic Support | Specialist LINK |
|----------|-----------------------|-------------------------|-----------------|
| Jul-2019 | 52                    |                         | 859             |
| Aug-2019 | 51                    |                         | 759             |
| Sep-2019 | 62                    |                         | 809             |
| Oct-2019 | 70                    |                         | 895             |
| Nov-2019 | 71                    |                         | 896             |
| Dec-2019 | 63                    |                         | 833             |
| Jan-2020 | 85                    |                         | 1088            |
| Feb-2020 | 89                    |                         | 1063            |
| Mar-2020 | 85                    |                         | 1074            |
| Apr-2020 | 144                   |                         | 2001            |
| May-2020 | 118                   | 1                       | 1816            |
| Jun-2020 | 139                   | 0                       | 2063            |
| Jul-2020 | 155                   | c/c                     | 1993            |
| Aug-2020 | 145                   | d/c                     | 1830            |
| Sep-2020 | 133                   | d/c                     | 1962            |
| Oct-2020 | 129                   | d/c                     | 1810            |
| Nov-2020 | 146                   | d/c                     | 2039            |
| Dec-2020 | 167                   | d/c                     | 2170            |



### Women's Health Pathways download

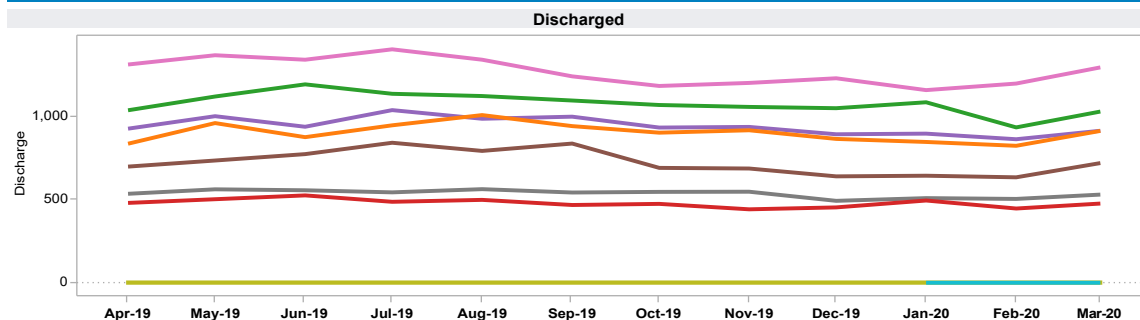
| Month  | Abnormal uterine bleeding | Bleeding after pregnancy | Post-menopausal bleeding |
|--------|---------------------------|--------------------------|--------------------------|
| Jan-20 |                           |                          |                          |
| Feb-20 |                           |                          |                          |
| Mar-20 |                           |                          |                          |
| Apr-20 |                           |                          |                          |
| May-20 |                           |                          |                          |
| Jun-20 |                           |                          |                          |
| Jul-20 |                           |                          |                          |
| Aug-20 |                           |                          |                          |
| Sep-20 | 122                       | 64                       | 50                       |
| Oct-20 | 86                        | 45                       | 51                       |
| Nov-20 | 56                        | 27                       | 41                       |
| Dec-20 | 71                        | 23                       | 25                       |





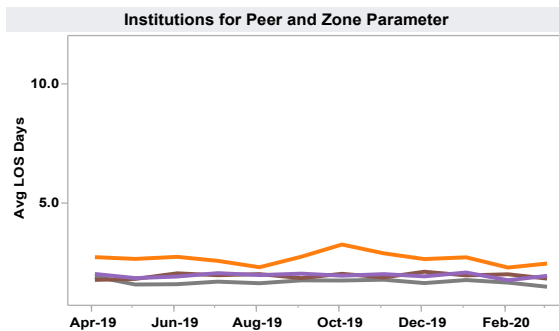
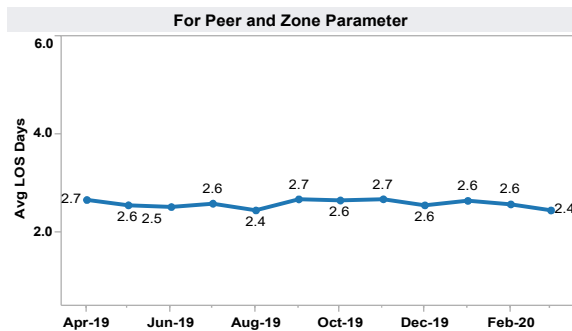
**Facility**

- Clareholm General Hospital
- Foothills Medical Centre
- High River General Hospital
- Oilfields General Hospital
- Peter Lougheed Centre
- Rockyview General Hospital
- South Health Campus



**Instructions:**  
Select from Peer and Zone Parameter, Institution(s), and Fiscal Year(s) to change display.

**Field Definitions:**  
Inpatient separations related to the obstetrical & birth episode of care. (Antepartum, Delivered, Postpartum, Aborted, Livebirth, & Stillbirth)  
Avg LOS Days: Average length of stay in days.  
Discharges: Number separations.



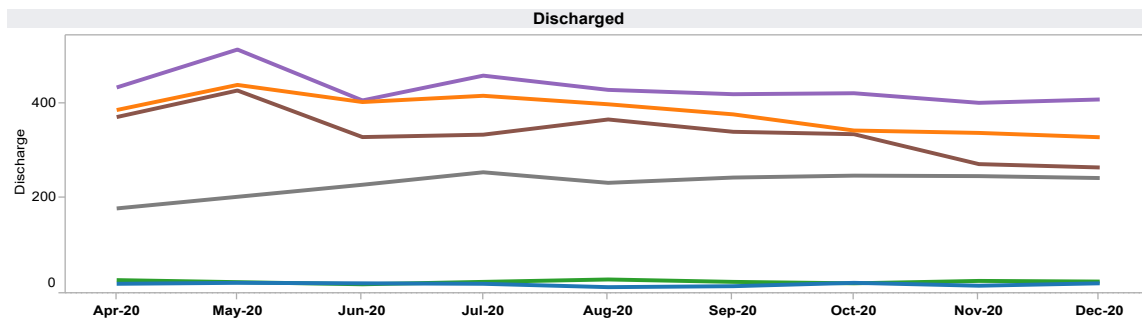
**Peer and Zone Parameter**  
Large Urban & Teaching

**Institution**  
All

**Fiscal Year**  
2019/20

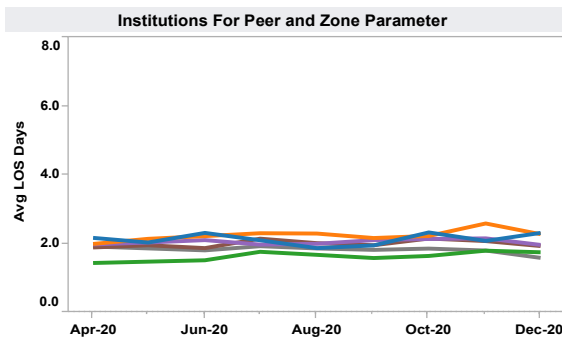
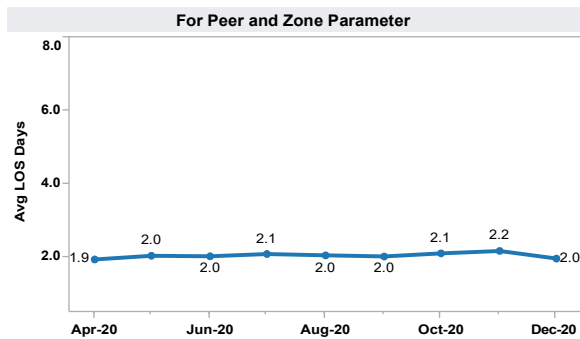
**Facility**

- Foothills Medical Centre
- Grey Nuns Community Hospital
- Misericordia Community Hospital
- Peter Lougheed Centre
- Rockyview General Hospital
- Royal Alexandra Hospital
- South Health Campus
- Stollery Children's Hospital
- University of Alberta Hospital



**Instructions:**  
Select from Peer and Zone Parameter, Institution(s), and Fiscal Year(s) to change display.

**Field Definitions:**  
**Delivered:** Inpatient separations related to the patient's delivery episode of care.  
**Avg LOS Days:** Average length of stay in days.  
**Discharges:** Number separations.



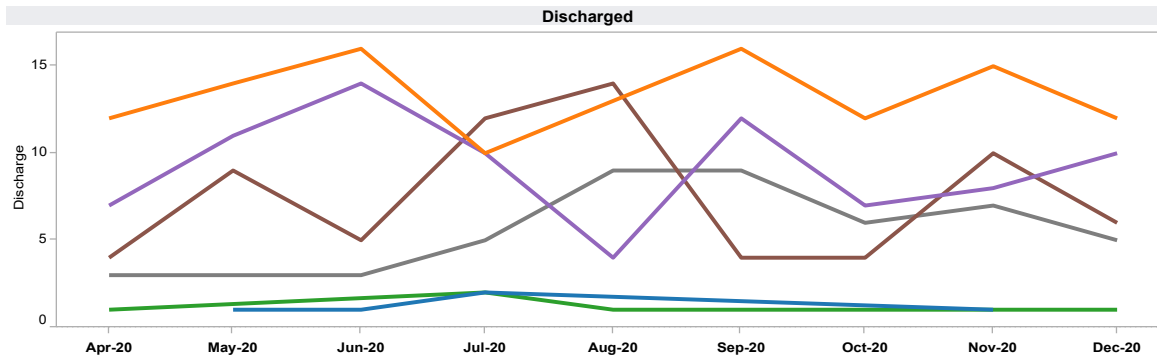
**Peer and Zone Parameter**  
2 - Calgary

**Institution**  
All

**Fiscal Year**  
2020/21

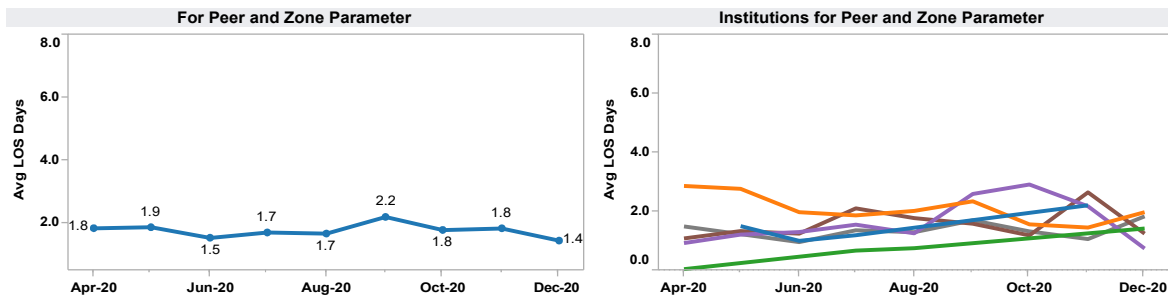
**Facility**

- Canmore General Hospital
- Foothills Medical Centre
- High River General Hospital
- Peter Lougheed Centre
- Rockyview General Hospital
- South Health Campus



**Instructions:**  
Select from Peer and Zone Parameter, Institution(s), and Fiscal Year(s) to change display.

**Field Definitions:**  
**Postpartum:** Inpatient separations with postpartum related conditions.  
**Avg LOS Days:** Average length of stay in days.  
**Discharges:** Number separations.



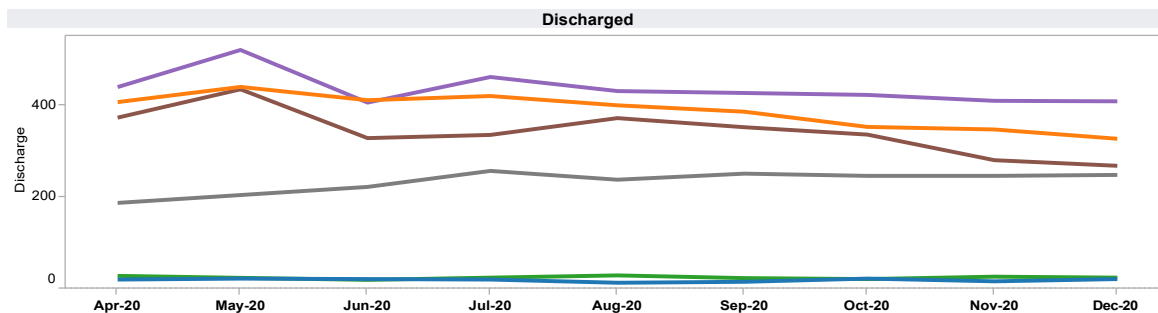
**Peer and Zone Parameter**  
2 - Calgary

**Institution**  
All

**Fiscal Year**  
2020/21

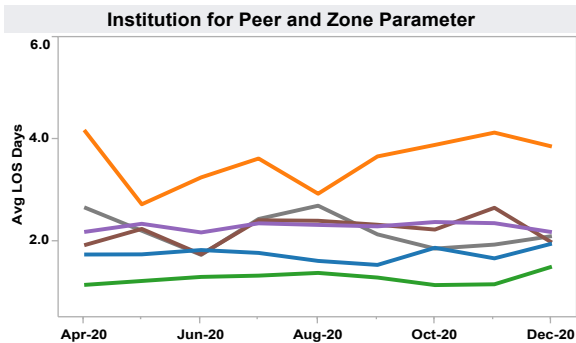
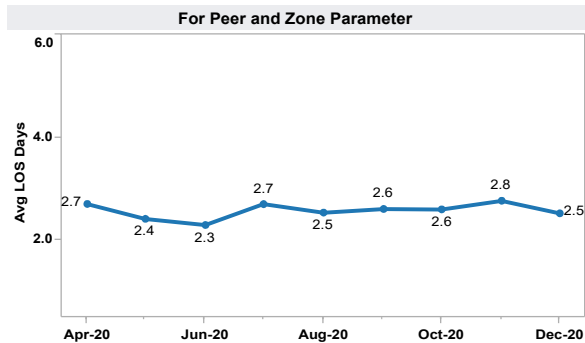
**Facility**

- Canmore General Hospital
- Foothills Medical Centre
- High River General Hospital
- Peter Lougheed Centre
- Rockyview General Hospital
- South Health Campus



**Instructions:**  
Select from Peer and Zone Parameter, Institution(s), and Fiscal Year(s) to change display.

**Field Definitions:**  
Newborn: Inpatient separations related to the newborn birth episode of care. (Livebirths)  
Avg LOS Days: Average length of stay in days.  
Discharges: Number separations.



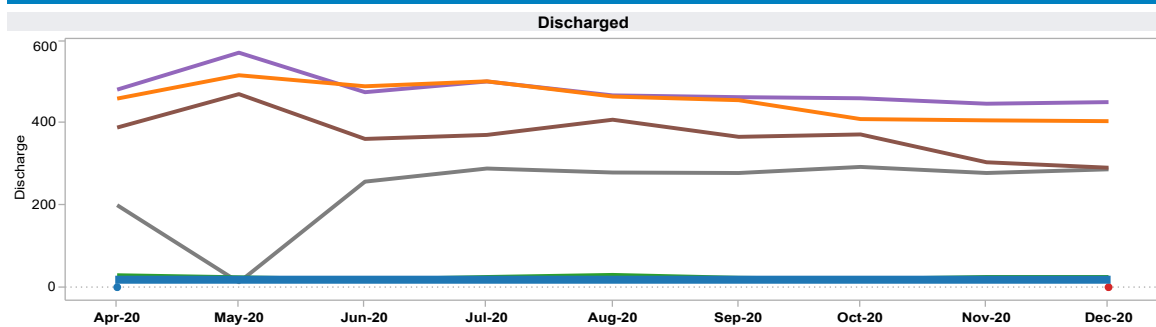
**Peer and Zone Parameter**  
2 - Calgary

**Institution**  
All

**Fiscal Year**  
2020/21

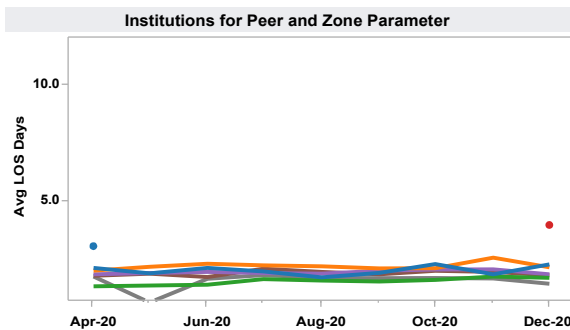
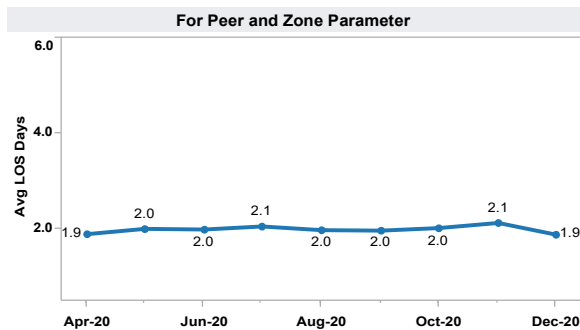
**Facility**

- Canmore General Hospital
- Foothills Medical Centre
- High River General Hospital
- Peter Lougheed Centre
- Rockyview General Hospital
- South Health Campus



**Instructions:**  
Select from Peer and Zone Parameter, Institution(s), and Fiscal Year(s) to change display.

**Field Definitions:**  
Inpatient separations related to the obstetrical episode of care. (Antepartum, Delivered, Postpartum, & Aborted)  
Avg LOS Days: Average length of stay in days.  
Discharges: Number separations.



**Peer and Zone Parameter**  
2 - Calgary

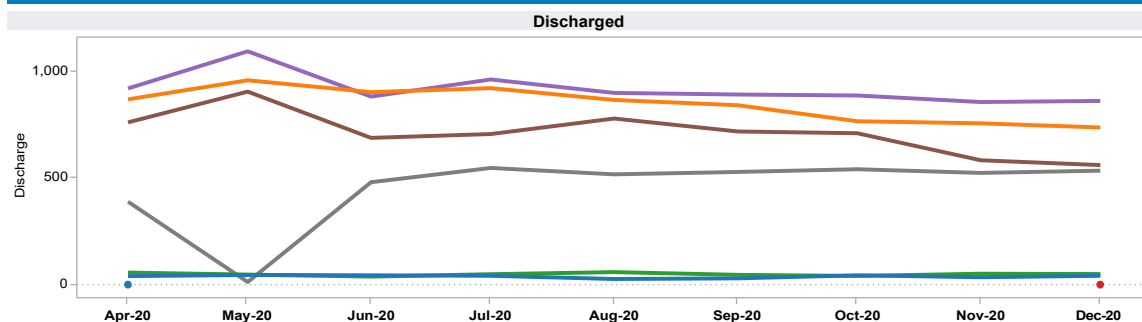
**Institution**  
All

**Fiscal Year**  
2020/21

**Facility**

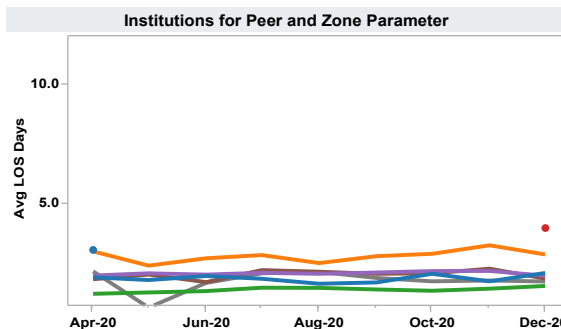
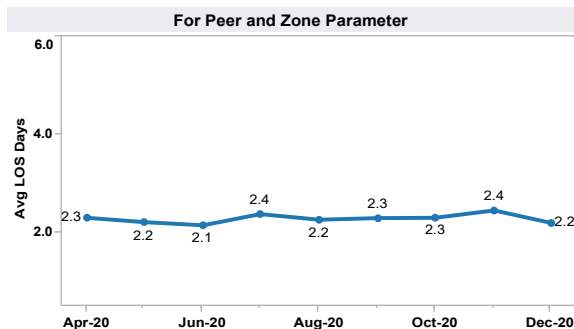
- Canmore General Hospital
- Claresholm General Hospital
- Foothills Medical Centre
- High River General Hospital
- Oilfields General Hospital
- Peter Lougheed Centre
- Rockyview General Hospital

South Health Campus



**Instructions:**  
Select from Peer and Zone Parameter, Institution(s), and Fiscal Year(s) to change display.

**Field Definitions:**  
Inpatient separations related to the obstetrical & birth episode of care. (Antepartum, Delivered, Postpartum, Aborted, Livebirth, & Stillbirth)  
Avg LOS Days: Average length of stay in days.  
Discharges: Number separations.



Peer and Zone Parameter  
2 - Calgary

Institution  
All

Fiscal Year  
2020/21

**Facility**

- Canmore General Hospital
- Claresholm General Hospital
- Foothills Medical Centre
- High River General Hospital
- Oilfields General Hospital
- Peter Lougheed Centre
- Rockyview General Hospital
- South Health Campus

# Non-Obstetric Discharged Inpatient Cases With a Hysterectomy Surgery

(Excludes Delivered, Postpartum, and Aborted Cases)

Fiscal Yr  
Multiple values

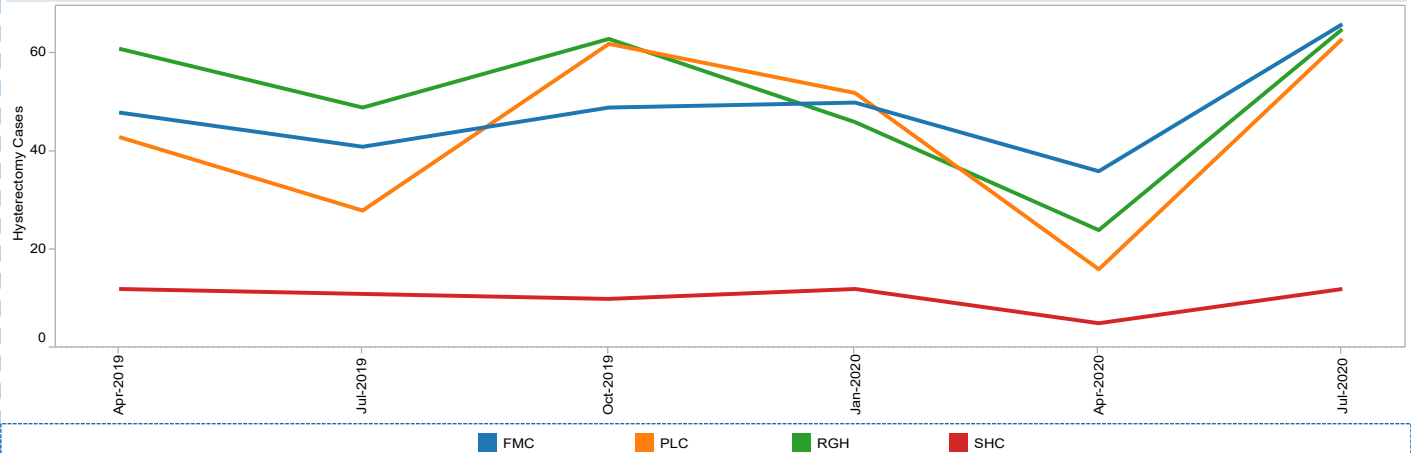
Select Facility  
All

Select Hysterectomy Type  
LAVH

Exclude Procedure Performed by a Gyne/Onc Physician  
Yes

## Hysterectomy Type: LAVH

See Filter Above to change: Procedures Performed by a GyneOnc Physician Excluded - Yes



| Facility | 2019/20 |    |    |    |       | 2020/21 |    |       |
|----------|---------|----|----|----|-------|---------|----|-------|
|          | Q1      | Q2 | Q3 | Q4 | Total | Q1      | Q2 | Total |
| FMC      | 48      | 41 | 49 | 50 | 188   | 36      | 66 | 102   |
| PLC      | 43      | 28 | 62 | 52 | 185   | 16      | 63 | 79    |
| RGH      | 61      | 49 | 63 | 46 | 219   | 24      | 65 | 89    |
| SHC      | 12      | 11 | 10 | 12 | 45    | 5       | 12 | 17    |

# Non-Obstetric Discharged Inpatient Cases With a Hysterectomy Surgery

(Excludes Delivered, Postpartum, and Aborted Cases)

Fiscal Yr  
Multiple values

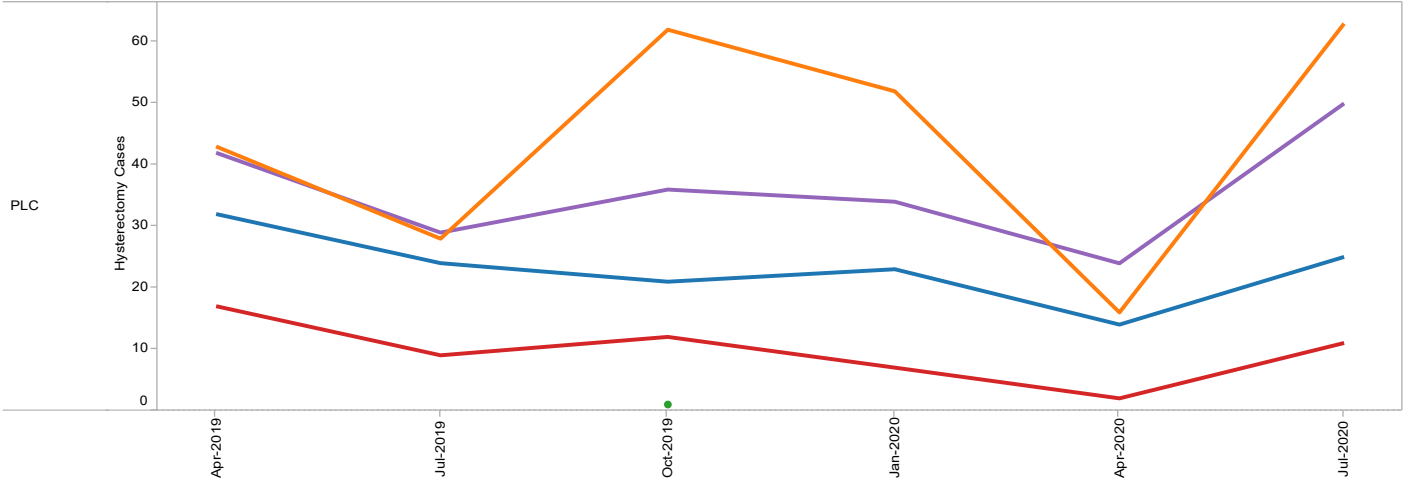
Select Facility  
Peter Lougheed Centre

Exclude Procedure Performed by a Gyne/Onc Physician  
Yes

## Peter Lougheed Centre

Procedures Performed by a GyneOnc Physician Excluded - Yes

Facility



ENDOSCOPIC

LAVH

RADICAL HYSTERECTOMY

TAH

VAGINAL

2019/20

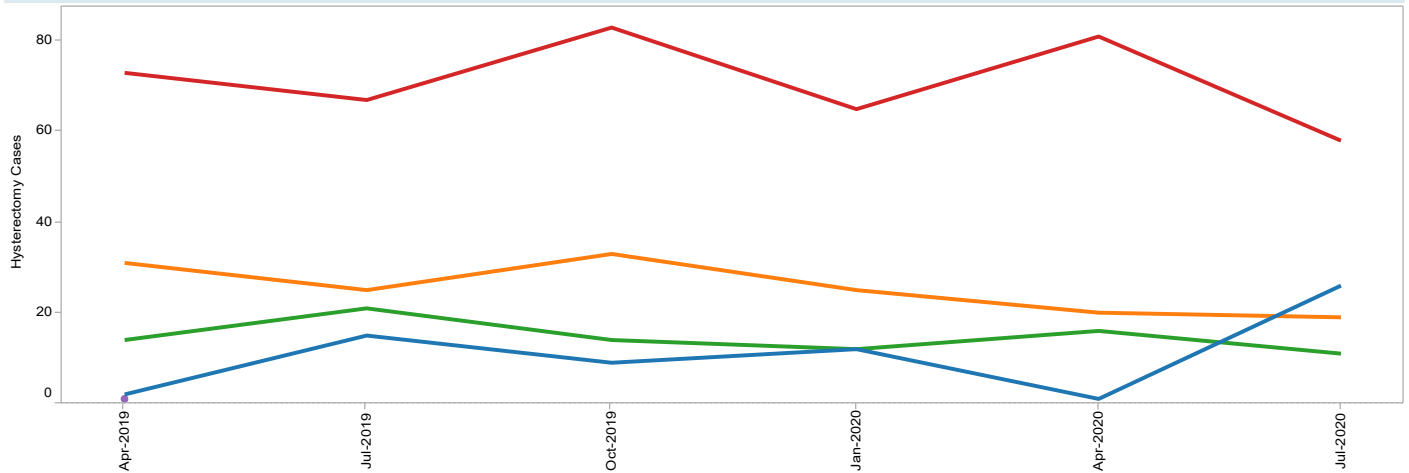
2020/21

| Q1  | Q2 | Q3  | Q4  | Total | Q1 | Q2  | Total |
|-----|----|-----|-----|-------|----|-----|-------|
| 134 | 90 | 132 | 116 | 472   | 56 | 149 | 205   |

# Discharged Non-Obstetric Inpatient Cases With a Hysterectomy Performed By a GyneOnc Physician (Excludes Delivered, Postpartum, and Aborted Cases)

Fiscal Yr  
Multiple values

## Foothills Medical Center



| Hyster Type          | 2019/20 |    |    |    |       | 2020/21 |    |       |
|----------------------|---------|----|----|----|-------|---------|----|-------|
|                      | Q1      | Q2 | Q3 | Q4 | Total | Q1      | Q2 | Total |
| ENDOSCOPIC           | 2       | 15 | 9  | 12 | 38    | 1       | 26 | 27    |
| LAVH                 | 31      | 25 | 33 | 25 | 114   | 20      | 19 | 39    |
| TAH                  | 73      | 67 | 83 | 65 | 288   | 81      | 58 | 139   |
| VAGINAL              | 1       |    |    |    | 1     |         |    |       |
| RADICAL HYSTERECTOMY | 14      | 21 | 14 | 12 | 61    | 16      | 11 | 27    |

Published by: Reporting Services, Analytics | Current User: Crystal Ryszewski

# OBSTETRICAL DELIVERIES BY PHYSICIAN MODEL OF CARE

## Fiscal Year 2020/21

|  | Site   | FAMILY MEDICINE |       |    |    |           | OBSTETRICIAN |       |    |    |           | OBSTETRICIAN & FAMILY MEDICINE COMBINED |       |    |    |           | MIDWIFE |        |    |    |           | OBSTETRICIAN & MIDWIFE |       |    |    |           | OTHER |       |    |
|--|--------|-----------------|-------|----|----|-----------|--------------|-------|----|----|-----------|---|-------|----|----|-----------|---------|--------|----|----|-----------|------------------------|-------|----|----|-----------|-------|-------|----|
|  |        | Q1              | Q2    | Q3 | Q4 | YTD Total | Q1           | Q2    | Q3 | Q4 | YTD Total | Q1                                      | Q2    | Q3 | Q4 | YTD Total | Q1      | Q2     | Q3 | Q4 | YTD Total | Q1                     | Q2    | Q3 | Q4 | YTD Total | Q1    | Q2    | Q3 |
| Deliveries   | FMC    | 298             | 333   |    |    | 631       | 530          | 530   |    |    | 1,060     | 179                                     | 174   |    |    | 353       | 57      | 34     |    |    | 91        | 87                     | 35    |    |    | 122       | 74    | 82    |    |
|  | PLC    | 309             | 324   |    |    | 633       | 788          | 734   |    |    | 1,522     | 207                                     | 201   |    |    | 408       | 7       | 4      |    |    | 11        | 8                      | 14    |    |    | 22        | 30    | 25    |    |
|  | RGH    | 345             | 233   |    |    | 578       | 480          | 486   |    |    | 966       | 181                                     | 151   |    |    | 332       | 37      | 55     |    |    | 92        | 53                     | 90    |    |    | 143       | 28    | 22    |    |
|  | SHC    | 126             | 197   |    |    | 323       | 173          | 348   |    |    | 521       | 59                                      | 103   |    |    | 162       | 16      | 25     |    |    | 41        | 22                     | 29    |    |    | 51        | 10    | 27    |    |
|  | Region | 1,078           | 1,087 |    |    | 2,165     | 1,971        | 2,098 |    |    | 4,069     | 626                                     | 629   |    |    | 1,255     | 117     | 118    |    |    | 235       | 170                    | 168   |    |    | 338       | 142   | 156   |    |
| % of Total Deliveries (% of deliveries by MOC)                             | FMC    | 24.3%           | 28.0% |    |    | 26.2%     | 43.3%        | 44.6% |    |    | 43.9%     | 14.6%                                   | 14.6% |    |    | 14.6%     | 4.7%    | 2.9%   |    |    | 3.8%      | 7.1%                   | 2.9%  |    |    | 5.1%      | 6.0%  | 6.9%  |    |
|  | PLC    | 22.9%           | 24.9% |    |    | 23.9%     | 58.4%        | 56.4% |    |    | 57.4%     | 15.3%                                   | 15.4% |    |    | 15.4%     | 0.5%    | 0.3%   |    |    | 0.4%      | 0.6%                   | 1.1%  |    |    | 0.8%      | 2.2%  | 1.9%  |    |
|  | RGH    | 30.7%           | 22.5% |    |    | 26.7%     | 42.7%        | 46.9% |    |    | 44.7%     | 16.1%                                   | 14.6% |    |    | 15.4%     | 3.3%    | 5.3%   |    |    | 4.3%      | 4.7%                   | 8.7%  |    |    | 6.6%      | 2.5%  | 2.1%  |    |
|  | SHC    | 31.0%           | 27.0% |    |    | 28.5%     | 42.6%        | 47.7% |    |    | 45.9%     | 14.5%                                   | 14.1% |    |    | 14.3%     | 3.9%    | 3.4%   |    |    | 3.6%      | 5.4%                   | 4.0%  |    |    | 4.5%      | 2.5%  | 3.7%  |    |
|  | Region | 26.3%           | 25.5% |    |    | 25.9%     | 48.0%        | 49.3% |    |    | 48.7%     | 15.3%                                   | 14.8% |    |    | 15.0%     | 2.9%    | 2.8%   |    |    | 2.8%      | 4.1%                   | 3.9%  |    |    | 4.0%      | 3.5%  | 3.7%  |    |
| % of Total MOC Deliveries  | FMC    | 27.6%           | 30.6% |    |    | 29.1%     | 26.9%        | 25.3% |    |    | 26.1%     | 28.6%                                   | 27.7% |    |    | 28.1%     | 48.7%   | 28.8%  |    |    | 38.7%     | 51.2%                  | 20.8% |    |    | 36.1%     | 52.1% | 52.6% |    |
|  | PLC    | 28.7%           | 29.8% |    |    | 29.2%     | 40.0%        | 35.0% |    |    | 37.4%     | 33.1%                                   | 32.0% |    |    | 32.5%     | 6.0%    | 3.4%   |    |    | 4.7%      | 4.7%                   | 8.3%  |    |    | 6.5%      | 21.1% | 16.0% |    |
|  | RGH    | 32.0%           | 21.4% |    |    | 26.7%     | 24.4%        | 23.2% |    |    | 23.7%     | 28.9%                                   | 24.0% |    |    | 26.5%     | 31.6%   | 46.6%  |    |    | 39.1%     | 31.2%                  | 53.6% |    |    | 42.3%     | 19.7% | 14.1% |    |
|  | SHC    | 11.7%           | 18.1% |    |    | 14.9%     | 8.8%         | 16.6% |    |    | 12.8%     | 9.4%                                    | 16.4% |    |    | 12.9%     | 13.7%   | 21.2%  |    |    | 17.4%     | 12.9%                  | 17.3% |    |    | 15.1%     | 7.0%  | 17.3% |    |
|  | Region |                 |       |    |    |           |              |       |    |    |           |   |       |    |    |           |         |        |    |    |           |                        |       |    |    |           |       |       |    |
| Avg LOS (in Days)  | FMC    | 1.5             | 1.5   |    |    | 1.5       | 2.1          | 2.2   |    |    | 2.1       | 2.2                                     | 2.3   |    |    | 2.2       | 1.0     | 1.1    |    |    | 1.0       | 1.5                    | 1.5   |    |    | 1.5       | 4.4   | 5.1   |    |
|  | PLC    | 1.6             | 1.5   |    |    | 1.5       | 1.9          | 2.0   |    |    | 2.0       | 2.3                                     | 2.2   |    |    | 2.3       | 1.0     | 1.0    |    |    | 1.0       | 1.3                    | 1.4   |    |    | 1.3       | 3.4   | 2.4   |    |
|  | RGH    | 1.5             | 1.5   |    |    | 1.5       | 2.0          | 2.1   |    |    | 2.0       | 2.0                                     | 2.3   |    |    | 2.1       | 1.1     | 1.1    |    |    | 1.1       | 1.5                    | 1.6   |    |    | 1.5       | 3.1   | 5.1   |    |
|  | SHC    | 1.5             | 1.5   |    |    | 1.5       | 2.1          | 1.9   |    |    | 2.0       | 2.0                                     | 2.2   |    |    | 2.1       | 1.1     | 1.1    |    |    | 1.1       | 1.5                    | 1.6   |    |    | 1.5       | 3.0   | 2.1   |    |
|  | Region | 1.5             | 1.5   |    |    | 1.5       | 2.0          | 2.0   |    |    | 2.0       | 2.2                                     | 2.2   |    |    | 2.2       | 1.1     | 1.1    |    |    | 1.1       | 1.5                    | 1.5   |    |    | 1.5       | 3.8   | 4.1   |    |
| # C-Section Deliveries   | FMC    |                 |       |    |    |           | 266          | 264   |    |    | 530       | 67                                      | 70    |    |    | 137       |         |        |    |    |           | 10                     | 7     |    |    | 17        | 37    | 45    |    |
|  | PLC    |                 |       |    |    |           | 363          | 336   |    |    | 699       | 76                                      | 74    |    |    | 150       |         |        |    |    |           | 1                      | 4     |    |    | 5         | 13    | 10    |    |
|  | RGH    | 1               |       |    |    | 1         | 243          | 228   |    |    | 471       | 62                                      | 44    |    |    | 106       |         |        |    |    |           | 13                     | 27    |    |    | 40        | 7     | 12    |    |
|  | SHC    |                 |       |    |    |           | 70           | 161   |    |    | 231       | 18                                      | 39    |    |    | 57        |         |        |    |    |           | 5                      | 8     |    |    | 13        | 4     | 12    |    |
|  | Region | 1               |       |    |    | 1         | 942          | 989   |    |    | 1,931     | 223                                     | 227   |    |    | 450       |         |        |    |    |           | 29                     | 46    |    |    | 75        | 61    | 79    |    |
| C-Section Rate (% of deliveries)   | FMC    |                 |       |    |    |           | 50.2%        | 49.8% |    |    | 50.0%     | 37.4%                                   | 40.2% |    |    | 38.8%     |         |        |    |    |           | 11.5%                  | 20.0% |    |    | 13.9%     | 50.0% | 54.9% |    |
|  | PLC    |                 |       |    |    |           | 46.1%        | 45.8% |    |    | 45.9%     | 36.7%                                   | 36.8% |    |    | 36.8%     |         |        |    |    |           | 12.5%                  | 28.6% |    |    | 22.7%     | 43.3% | 40.0% |    |
|  | RGH    | 0.3%            |       |    |    | 0.2%      | 50.6%        | 46.9% |    |    | 48.8%     | 34.3%                                   | 29.1% |    |    | 31.9%     |         |        |    |    |           | 24.5%                  | 30.0% |    |    | 28.0%     | 25.0% | 54.5% |    |
|  | SHC    |                 |       |    |    |           | 40.5%        | 46.3% |    |    | 44.3%     | 30.5%                                   | 37.9% |    |    | 35.2%     |         |        |    |    |           | 22.7%                  | 27.6% |    |    | 25.5%     | 40.0% | 44.4% |    |
|  | Region | 0.1%            |       |    |    | 0.0%      | 47.8%        | 47.1% |    |    | 47.5%     | 35.6%                                   | 36.1% |    |    | 35.9%     |         |        |    |    |           | 17.1%                  | 27.4% |    |    | 22.2%     | 43.0% | 50.6% |    |
| # Spontaneous Vaginal Deliveries (exclude forcep/vacuum deliveries)        | FMC    | 290             | 313   |    |    | 603       | 228          | 231   |    |    | 459       | 66                                      | 50    |    |    | 116       | 57      | 34     |    |    | 91        | 63                     | 23    |    |    | 86        | 28    | 32    |    |
|  | PLC    | 292             | 310   |    |    | 602       | 299          | 297   |    |    | 596       | 52                                      | 53    |    |    | 105       | 7       | 4      |    |    | 11        | 3                      | 8     |    |    | 11        | 13    | 6     |    |
|  | RGH    | 315             | 219   |    |    | 534       | 191          | 209   |    |    | 400       | 65                                      | 56    |    |    | 121       | 37      | 55     |    |    | 92        | 27                     | 49    |    |    | 76        | 17    | 6     |    |
|  | SHC    | 120             | 187   |    |    | 307       | 90           | 164   |    |    | 254       | 26                                      | 38    |    |    | 64        | 16      | 25     |    |    | 41        | 11                     | 17    |    |    | 28        | 4     | 12    |    |
|  | Region | 1,017           | 1,029 |    |    | 2,046     | 808          | 901   |    |    | 1,709     | 209                                     | 197   |    |    | 406       | 117     | 118    |    |    | 235       | 104                    | 97    |    |    | 201       | 62    | 56    |    |
| % Spontaneous Vaginal Deliveries excludes forceps/vacuum (% of deliveries) | FMC    | 97.3%           | 94.0% |    |    | 95.6%     | 43.0%        | 43.6% |    |    | 43.3%     | 36.9%                                   | 28.7% |    |    | 32.9%     | 100.0%  | 100.0% |    |    | 100.0%    | 72.4%                  | 65.7% |    |    | 70.5%     | 37.8% | 39.0% |    |
|  | PLC    | 94.5%           | 95.7% |    |    | 95.1%     | 37.9%        | 40.5% |    |    | 39.2%     | 25.1%                                   | 26.4% |    |    | 25.7%     | 100.0%  | 100.0% |    |    | 100.0%    | 37.5%                  | 57.1% |    |    | 50.0%     | 43.3% | 24.0% |    |
|  | RGH    | 91.3%           | 94.0% |    |    | 92.4%     | 39.8%        | 43.0% |    |    | 41.4%     | 35.9%                                   | 37.1% |    |    | 36.4%     | 100.0%  | 100.0% |    |    | 100.0%    | 50.9%                  | 54.4% |    |    | 53.1%     | 60.7% | 27.3% |    |
|  | SHC    | 95.2%           | 94.9% |    |    | 95.0%     | 52.0%        | 47.1% |    |    | 48.8%     | 44.1%                                   | 36.9% |    |    | 39.5%     | 100.0%  | 100.0% |    |    | 100.0%    | 50.0%                  | 58.6% |    |    | 54.9%     | 40.0% | 44.4% |    |
|  | Region | 94.3%           | 94.7% |    |    | 94.5%     | 41.0%        | 42.9% |    |    | 42.0%     | 33.4%                                   | 31.3% |    |    | 32.4%     | 100.0%  | 100.0% |    |    | 100.0%    | 61.2%                  | 57.7% |    |    | 59.5%     | 43.7% | 35.9% |    |
| # Vaginal Deliveries by Forceps or Vacuum extraction                       | FMC    | 8               | 20    |    |    | 28        | 36           | 35    |    |    | 71        | 46                                      | 54    |    |    | 100       |         |        |    |    |           | 14                     | 5     |    |    | 19        | 9     | 5     |    |
|  | PLC    | 17              | 14    |    |    | 31        | 126          | 101   |    |    | 227       | 79                                      | 74    |    |    | 153       |         |        |    |    |           | 4                      | 2     |    |    | 6         | 4     | 9     |    |
|  | RGH    | 29              | 14    |    |    | 43        | 46           | 49    |    |    | 95        | 54                                      | 51    |    |    | 105       |         |        |    |    |           | 13                     | 14    |    |    | 27        | 4     | 4     |    |
|  | SHC    | 6               | 10    |    |    | 16        | 13           | 23    |    |    | 36        | 15                                      | 26    |    |    | 41        |         |        |    |    |           | 6                      | 4     |    |    | 10        | 2     | 3     |    |
|  | Region | 60              | 58    |    |    | 118       | 221          | 208   |    |    | 429       | 194                                     | 205   |    |    | 399       |         |        |    |    |           | 37                     | 25    |    |    | 62        | 19    | 21    |    |
| % Vaginal Deliveries by Forceps or Vacuum extract (% of total deliveries)  | FMC    | 2.7%            | 6.0%  |    |    | 4.4%      | 6.8%         | 6.6%  |    |    | 6.7%      | 25.7%                                   | 31.0% |    |    | 28.3%     |         |        |    |    |           | 16.1%                  | 14.3% |    |    | 15.6%     | 12.2% | 6.1%  |    |
|  | PLC    | 5.5%            | 4.3%  |    |    | 4.9%      | 16.0%        | 13.8% |    |    | 14.9%     | 38.2%                                   | 36.8% |    |    | 37.5%     |         |        |    |    |           | 50.0%                  | 14.3% |    |    | 27.3%     | 13.3% | 36.0% |    |
|  | RGH    | 8.4%            | 6.0%  |    |    | 7.4%      | 9.6%         | 10.1% |    |    | 9.8%      | 29.8%                                   | 33.8% |    |    | 31.6%     |         |        |    |    |           | 24.5%                  | 15.6% |    |    | 18.9%     | 14.3% | 18.2% |    |
|  | SHC    | 4.8%            | 5.1%  |    |    | 5.0%      | 7.5%         | 6.6%  |    |    | 6.9%      | 25.4%                                   | 25.2% |    |    | 25.3%     |         |        |    |    |           | 27.3%                  | 13.8% |    |    | 19.6%     | 20.0% | 11.1% |    |
|  | Region | 5.6%            | 5.3%  |    |    | 5.5%      | 11.2%        | 9.9%  |    |    | 10.5%     | 31.0%                                   | 32.6% |    |    | 31.8%     |         |        |    |    |           | 21.8%                  | 14.9% |    |    | 18.3%     | 13.4% | 13.5% |    |
| Inductions (Includes those done before admit)                              | FMC    | 122             | 150   |    |    | 272       | 196          | 227   |    |    | 423       | 120                                     | 103   |    |    | 223       | 2       | 0      |    |    | 2         | 37                     | 6     |    |    | 43        | 34    | 25    |    |
|  | PLC    | 143             | 169   |    |    | 312       | 332          | 313   |    |    | 645       | 135                                     | 131   |    |    | 266       | 2       | 1      |    |    | 3         | 1                      | 4     |    |    | 5         | 14    | 9     |    |
|  | RGH    | 136             | 88    |    |    | 224       | 159          | 194   |    |    | 353       | 91                                      | 91    |    |    | 182       | 6       | 3      |    |    | 9         | 18                     | 28    |    |    | 46        | 10    | 10    |    |
|  | SHC    | 51              | 85    |    |    | 136       | 77           | 155   |    |    | 232       | 30                                      | 45    |    |    | 75        | 1       | 3      |    |    | 4         | 8                      | 13    |    |    | 21        | 6     | 12    |    |
|  | Region | 452             | 492   |    |    | 944       | 764          | 889   |    |    | 1,653     | 376                                     | 370   |    |    |           |         |        |    |    |           |                        |       |    |    |           |       |       |    |

**OBSTETRICAL DELIVERIES BY PHYSICIAN MODEL OF CARE**  
**Fiscal Year 2020/21**

|  | Site   | OTHER |           | TOTAL DELIVERIES |       |    |    |           |
|--|--------|-------|-----------|------------------|-------|----|----|-----------|
|  |        | Q4    | YTD Total | Q1               | Q2    | Q3 | Q4 | YTD Total |
| Deliveries   | FMC    |       | 156       | 1,225            | 1,188 |    |    | 2,413     |
|  | PLC    |       | 55        | 1,349            | 1,302 |    |    | 2,651     |
|  | RGH    |       | 50        | 1,124            | 1,037 |    |    | 2,161     |
|  | SHC    |       | 37        | 406              | 729   |    |    | 1,135     |
|  | Region |       | 298       | 4,104            | 4,256 |    |    | 8,360     |
| % of Total Deliveries (% of deliveries by MOC)                             | FMC    |       | 6.5%      |                  |       |    |    |           |
|  | PLC    |       | 2.1%      |                  |       |    |    |           |
|  | RGH    |       | 2.3%      |                  |       |    |    |           |
|  | SHC    |       | 3.3%      |                  |       |    |    |           |
|  | Region |       | 3.6%      |                  |       |    |    |           |
| % of Total MOC Deliveries  | FMC    |       | 52.3%     | 29.8%            | 27.9% |    |    | 28.9%     |
|  | PLC    |       | 18.5%     | 32.9%            | 30.6% |    |    | 31.7%     |
|  | RGH    |       | 16.8%     | 27.4%            | 24.4% |    |    | 25.8%     |
|  | SHC    |       | 12.4%     | 9.9%             | 17.1% |    |    | 13.6%     |
|  | Region |       |           |                  |       |    |    |           |
| Avg LOS (in Days)  | FMC    |       | 4.8       | 2.0              | 2.1   |    |    | 2.1       |
|  | PLC    |       | 2.9       | 1.9              | 1.9   |    |    | 1.9       |
|  | RGH    |       | 4.0       | 1.8              | 1.9   |    |    | 1.9       |
|  | SHC    |       | 2.4       | 1.8              | 1.8   |    |    | 1.8       |
|  | Region |       | 4.0       | 1.9              | 2.0   |    |    | 1.9       |
| # C-Section Deliveries   | FMC    |       | 82        | 380              | 386   |    |    | 766       |
|  | PLC    |       | 23        | 453              | 424   |    |    | 877       |
|  | RGH    |       | 19        | 326              | 311   |    |    | 637       |
|  | SHC    |       | 16        | 97               | 220   |    |    | 317       |
|  | Region |       | 140       | 1,256            | 1,341 |    |    | 2,597     |
| C-Section Rate (% of deliveries)   | FMC    |       | 52.6%     | 31.0%            | 32.5% |    |    | 31.7%     |
|  | PLC    |       | 41.8%     | 33.6%            | 32.6% |    |    | 33.1%     |
|  | RGH    |       | 38.0%     | 29.0%            | 30.0% |    |    | 29.5%     |
|  | SHC    |       | 43.2%     | 23.9%            | 30.2% |    |    | 27.9%     |
|  | Region |       | 47.0%     | 30.6%            | 31.5% |    |    | 31.1%     |
| # Spontaneous Vaginal Deliveries (exclude forcep/vacuum deliveries)        | FMC    |       | 60        | 732              | 683   |    |    | 1,415     |
|  | PLC    |       | 19        | 666              | 678   |    |    | 1,344     |
|  | RGH    |       | 23        | 652              | 594   |    |    | 1,246     |
|  | SHC    |       | 16        | 267              | 443   |    |    | 710       |
|  | Region |       | 118       | 2,317            | 2,398 |    |    | 4,715     |
| % Spontaneous Vaginal Deliveries excludes forceps/vacuum (% of deliveries) | FMC    |       | 38.5%     | 59.8%            | 57.5% |    |    | 58.6%     |
|  | PLC    |       | 34.5%     | 49.4%            | 52.1% |    |    | 50.7%     |
|  | RGH    |       | 46.0%     | 58.0%            | 57.3% |    |    | 57.7%     |
|  | SHC    |       | 43.2%     | 65.8%            | 60.8% |    |    | 62.6%     |
|  | Region |       | 39.6%     | 56.5%            | 56.3% |    |    | 56.4%     |
| # Vaginal Deliveries by Forceps or Vacuum extraction                       | FMC    |       | 14        | 113              | 119   |    |    | 232       |
|  | PLC    |       | 13        | 230              | 200   |    |    | 430       |
|  | RGH    |       | 8         | 146              | 132   |    |    | 278       |
|  | SHC    |       | 5         | 42               | 66    |    |    | 108       |
|  | Region |       | 40        | 531              | 517   |    |    | 1,048     |
| % Vaginal Deliveries by Forceps or Vacuum extract(% of total deliveries)   | FMC    |       | 9.0%      | 9.2%             | 10.0% |    |    | 9.6%      |
|  | PLC    |       | 23.6%     | 17.0%            | 15.4% |    |    | 16.2%     |
|  | RGH    |       | 16.0%     | 13.0%            | 12.7% |    |    | 12.9%     |
|  | SHC    |       | 13.5%     | 10.3%            | 9.1%  |    |    | 9.5%      |
|  | Region |       | 13.4%     | 12.9%            | 12.1% |    |    | 12.5%     |
| Inductions (Includes those done before admit)                              | FMC    |       | 59        | 511              | 511   |    |    | 1,022     |
|  | PLC    |       | 23        | 627              | 627   |    |    | 1,254     |
|  | RGH    |       | 20        | 420              | 414   |    |    | 834       |
|  | SHC    |       | 18        | 173              | 313   |    |    | 486       |
|  | Region |       | 120       | 1,731            | 1,865 |    |    | 3,596     |
| Induction Rate (% of total deliveries)                                     | FMC    |       | 37.8%     | 41.7%            | 43.0% |    |    | 42.4%     |
|  | PLC    |       | 41.8%     | 46.5%            | 48.2% |    |    | 47.3%     |
|  | RGH    |       | 40.0%     | 37.4%            | 39.9% |    |    | 38.6%     |
|  | SHC    |       | 48.6%     | 42.6%            | 42.9% |    |    | 42.8%     |
|  | Region |       | 40.3%     | 42.2%            | 43.8% |    |    | 43.0%     |
| # Pts with Prev C-Section  | FMC    |       | 26        | 202              | 191   |    |    | 393       |
|  | PLC    |       | 14        | 281              | 263   |    |    | 544       |
|  | RGH    |       | 10        | 191              | 169   |    |    | 360       |
|  | SHC    |       | 10        | 59               | 131   |    |    | 190       |
|  | Region |       | 60        | 733              | 754   |    |    | 1,487     |
| # Pts with Elective Repeat C-Section                                       | FMC    |       |           |                  |       |    |    |           |
|  | PLC    |       |           |                  |       |    |    |           |
|  | RGH    |       |           |                  |       |    |    |           |
|  | SHC    |       |           |                  |       |    |    |           |
|  | Region |       |           |                  |       |    |    |           |
| # Vaginal Birth After C-Section (VBAC)                                     | FMC    |       | 4         | 42               | 39    |    |    | 81        |
|  | PLC    |       | 1         | 60               | 41    |    |    | 101       |
|  | RGH    |       | 4         | 35               | 37    |    |    | 72        |
|  | SHC    |       | 2         | 18               | 34    |    |    | 52        |
|  | Region |       | 11        | 155              | 151   |    |    | 306       |
| VBAC Rate (% successful vag deliveries/trial of labor)                     | FMC    |       | 100.0%    | 85.7%            | 81.3% |    |    | 83.5%     |
|  | PLC    |       | 100.0%    | 74.1%            | 69.5% |    |    | 72.1%     |
|  | RGH    |       | 100.0%    | 81.4%            | 88.1% |    |    | 84.7%     |
|  | SHC    |       | 66.7%     | 85.7%            | 94.4% |    |    | 91.2%     |
|  | Region |       | 91.7%     | 79.9%            | 81.6% |    |    | 80.7%     |
| # of Unsuccessful VBAC (failed trial of labor)                             | FMC    |       |           | 7                | 9     |    |    | 16        |
|  | PLC    |       |           | 21               | 18    |    |    | 39        |
|  | RGH    |       |           | 8                | 5     |    |    | 13        |
|  | SHC    |       | 1         | 3                | 2     |    |    | 5         |
|  | Region |       | 1         | 39               | 34    |    |    | 73        |
| % of Failed VBAC attempts (failed TOL / trial of labor)                    | FMC    |       |           | 14.3%            | 18.8% |    |    | 16.5%     |
|  | PLC    |       |           | 25.9%            | 30.5% |    |    | 27.9%     |
|  | RGH    |       |           | 18.6%            | 11.9% |    |    | 15.3%     |
|  | SHC    |       | 33.3%     | 14.3%            | 5.6%  |    |    | 8.8%      |
|  | Region |       |           |                  |       |    |    |           |

# OBSTETRICAL DELIVERIES BY PHYSICIAN MODEL OF CARE

## Fiscal Year 2020/21

|   |        | FAMILY MEDICINE |       |    |    |           | OBSTETRICIAN |       |    |    |           | OBSTETRICIAN & FAMILY MEDICINE COMBINED |       |    |    |           | MIDWIFE |        |    |    |           | OBSTETRICIAN & MIDWIFE |       |    |    |           | OTHER |       |    |
|---|--------|-----------------|-------|----|----|-----------|--------------|-------|----|----|-----------|---|-------|----|----|-----------|---------|--------|----|----|-----------|------------------------|-------|----|----|-----------|-------|-------|----|
|   | Site   | Q1              | Q2    | Q3 | Q4 | YTD Total | Q1           | Q2    | Q3 | Q4 | YTD Total | Q1                                      | Q2    | Q3 | Q4 | YTD Total | Q1      | Q2     | Q3 | Q4 | YTD Total | Q1                     | Q2    | Q3 | Q4 | YTD Total | Q1    | Q2    | Q3 |
| attempts (range TOL / trial of labor)   | Region |                 |       |    |    |           | 20.0%        | 18.5% |    |    | 19.3%     | 40.9%                                   | 41.2% |    |    | 41.0%     |         |        |    |    |           | 18.2%                  | 18.2% |    |    | 18.2%     | 20.0% |       |    |
| # Spontaneous Vag Deliveries (excl forceps/vacuum)                              | FMC    | 72              | 75    |    |    | 147       | 60           | 43    |    |    | 103       | 8                                       | 8     |    |    | 16        | 46      | 27     |    |    | 73        | 36                     | 12    |    |    | 48        | 6     | 2     |    |
|   | PLC    | 46              | 64    |    |    | 110       | 61           | 59    |    |    | 120       | 4                                       | 2     |    |    | 6         | 7       | 3      |    |    | 10        | 3                      | 6     |    |    | 9         | 2     | 0     |    |
|   | RGH    | 108             | 70    |    |    | 178       | 56           | 52    |    |    | 108       | 16                                      | 9     |    |    | 25        | 34      | 51     |    |    | 85        | 19                     | 32    |    |    | 51        | 3     | 0     |    |
|   | SHC    | 43              | 38    |    |    | 81        | 24           | 47    |    |    | 71        | 4                                       | 11    |    |    | 15        | 15      | 20     |    |    | 35        | 10                     | 10    |    |    | 20        | 3     | 2     |    |
|   | Region | 269             | 247   |    |    | 516       | 201          | 201   |    |    | 402       | 32                                      | 30    |    |    | 62        | 102     | 101    |    |    | 203       | 68                     | 60    |    |    | 128       | 14    | 4     |    |
| % Spontaneous Vag Deliveries Disch <= 24 hrs PP(excl forceps/vacuum deliveries) | FMC    | 24.8%           | 24.0% |    |    | 24.4%     | 26.3%        | 18.6% |    |    | 22.4%     | 12.1%                                   | 16.0% |    |    | 13.8%     | 80.7%   | 79.4%  |    |    | 80.2%     | 57.1%                  | 52.2% |    |    | 55.8%     | 21.4% | 6.3%  |    |
|   | PLC    | 15.8%           | 20.6% |    |    | 18.3%     | 20.4%        | 19.9% |    |    | 20.1%     | 7.7%                                    | 3.8%  |    |    | 5.7%      | 100.0%  | 75.0%  |    |    | 90.9%     | 100.0%                 | 75.0% |    |    | 81.8%     | 15.4% | 0.0%  |    |
|   | RGH    | 34.3%           | 32.0% |    |    | 33.3%     | 29.3%        | 24.9% |    |    | 27.0%     | 24.6%                                   | 16.1% |    |    | 20.7%     | 91.9%   | 92.7%  |    |    | 92.4%     | 70.4%                  | 65.3% |    |    | 67.1%     | 17.6% | 0.0%  |    |
|   | SHC    | 35.8%           | 20.3% |    |    | 26.4%     | 26.7%        | 28.7% |    |    | 28.0%     | 15.4%                                   | 28.9% |    |    | 23.4%     | 93.8%   | 80.0%  |    |    | 85.4%     | 90.9%                  | 58.8% |    |    | 71.4%     | 75.0% | 16.7% |    |
|   | Region | 26.5%           | 24.0% |    |    | 25.2%     | 24.9%        | 22.3% |    |    | 23.5%     | 15.3%                                   | 15.2% |    |    | 15.3%     | 87.2%   | 85.6%  |    |    | 86.4%     | 65.4%                  | 61.9% |    |    | 63.7%     | 22.6% | 7.1%  |    |
| # All Deliveries Discharged <= 24 hrs Postpartum                                | FMC    | 72              | 76    |    |    | 148       | 67           | 48    |    |    | 115       | 11                                      | 10    |    |    | 21        | 46      | 27     |    |    | 73        | 42                     | 13    |    |    | 55        | 7     | 2     |    |
|   | PLC    | 46              | 65    |    |    | 111       | 75           | 66    |    |    | 141       | 7                                       | 7     |    |    | 14        | 7       | 3      |    |    | 10        | 6                      | 7     |    |    | 13        | 2     | 0     |    |
|   | RGH    | 112             | 71    |    |    | 183       | 66           | 63    |    |    | 129       | 25                                      | 14    |    |    | 39        | 34      | 51     |    |    | 85        | 26                     | 42    |    |    | 68        | 3     | 0     |    |
|   | SHC    | 46              | 43    |    |    | 89        | 25           | 52    |    |    | 77        | 8                                       | 15    |    |    | 23        | 15      | 20     |    |    | 35        | 15                     | 12    |    |    | 27        | 3     | 3     |    |
|   | Region | 276             | 255   |    |    | 531       | 233          | 229   |    |    | 462       | 51                                      | 46    |    |    | 97        | 102     | 101    |    |    | 203       | 89                     | 74    |    |    | 163       | 15    | 5     |    |
| % All Deliveries Discharged <= 24 hrs Postpartum                                | FMC    | 24.2%           | 22.8% |    |    | 23.5%     | 12.6%        | 9.1%  |    |    | 10.8%     | 6.1%                                    | 5.7%  |    |    | 5.9%      | 80.7%   | 79.4%  |    |    | 80.2%     | 48.3%                  | 37.1% |    |    | 45.1%     | 9.5%  | 2.4%  |    |
|   | PLC    | 14.9%           | 20.1% |    |    | 17.5%     | 9.5%         | 9.0%  |    |    | 9.3%      | 3.4%                                    | 3.5%  |    |    | 3.4%      | 100.0%  | 75.0%  |    |    | 90.9%     | 75.0%                  | 50.0% |    |    | 59.1%     | 6.7%  | 0.0%  |    |
|   | RGH    | 32.5%           | 30.5% |    |    | 31.7%     | 13.8%        | 13.0% |    |    | 13.4%     | 13.8%                                   | 9.3%  |    |    | 11.7%     | 91.9%   | 92.7%  |    |    | 92.4%     | 49.1%                  | 46.7% |    |    | 47.6%     | 10.7% | 0.0%  |    |
|   | SHC    | 36.5%           | 21.8% |    |    | 27.6%     | 14.5%        | 14.9% |    |    | 14.8%     | 13.6%                                   | 14.6% |    |    | 14.2%     | 93.8%   | 80.0%  |    |    | 85.4%     | 68.2%                  | 41.4% |    |    | 52.9%     | 30.0% | 11.1% |    |
|   | Region | 25.6%           | 23.5% |    |    | 24.5%     | 11.8%        | 10.9% |    |    | 11.4%     | 8.1%                                    | 7.3%  |    |    | 7.7%      | 87.2%   | 85.6%  |    |    | 86.4%     | 52.4%                  | 44.0% |    |    | 48.2%     | 10.6% | 3.2%  |    |
| Postpartum Average LOS (Hrs)  | FMC    | 32.3            | 32.4  |    |    | 32.4      | 43.3         | 45.3  |    |    | 44.3      | 43.9                                    | 45.7  |    |    | 44.8      | 9.5     | 10.1   |    |    | 9.7       | 24.5                   | 29.6  |    |    | 26.0      | 56.9  | 61.6  |    |
|   | PLC    | 31.9            | 31.2  |    |    | 31.5      | 41.1         | 41.4  |    |    | 41.2      | 43.0                                    | 43.3  |    |    | 43.1      | 4.8     | 20.6   |    |    | 10.5      | 16.9                   | 25.7  |    |    | 22.5      | 69.5  | 47.5  |    |
|   | RGH    | 29.6            | 29.9  |    |    | 29.7      | 40.1         | 42.4  |    |    | 41.3      | 38.9                                    | 41.8  |    |    | 40.2      | 8.3     | 7.5    |    |    | 7.8       | 25.1                   | 28.0  |    |    | 26.9      | 50.3  | 59.6  |    |
|   | SHC    | 26.9            | 29.0  |    |    | 28.2      | 39.4         | 38.0  |    |    | 38.5      | 35.9                                    | 39.7  |    |    | 38.3      | 9.3     | 11.9   |    |    | 10.9      | 20.3                   | 28.4  |    |    | 24.9      | 59.7  | 42.0  |    |
|   | Region | 30.7            | 30.9  |    |    | 30.8      | 41.3         | 42.1  |    |    | 41.7      | 41.4                                    | 43.0  |    |    | 42.2      | 8.8     | 9.6    |    |    | 9.2       | 23.8                   | 28.2  |    |    | 26.0      | 58.5  | 55.7  |    |
| # of Deliveries by Risk Score "LOW" 0-2   | FMC    | 225             | 256   |    |    | 481       | 184          | 164   |    |    | 348       | 129                                     | 124   |    |    | 253       | 51      | 29     |    |    | 80        | 66                     | 28    |    |    | 94        | 16    | 11    |    |
|   | PLC    | 239             | 250   |    |    | 489       | 398          | 335   |    |    | 733       | 147                                     | 138   |    |    | 285       | 7       | 4      |    |    | 11        | 5                      | 8     |    |    | 13        | 8     | 10    |    |
|   | RGH    | 273             | 177   |    |    | 450       | 201          | 175   |    |    | 376       | 113                                     | 113   |    |    | 226       | 29      | 47     |    |    | 76        | 38                     | 65    |    |    | 103       | 10    | 4     |    |
|   | SHC    | 101             | 162   |    |    | 263       | 80           | 136   |    |    | 216       | 46                                      | 69    |    |    | 115       | 15      | 17     |    |    | 32        | 14                     | 19    |    |    | 33        | 4     | 19    |    |
|   | Region | 838             | 845   |    |    | 1,683     | 863          | 810   |    |    | 1,673     | 435                                     | 444   |    |    | 879       | 102     | 97     |    |    | 199       | 123                    | 120   |    |    | 243       | 38    | 44    |    |
| # of Deliveries by Risk Score "MODERATE" 3-6                                    | FMC    | 71              | 73    |    |    | 144       | 259          | 272   |    |    | 531       | 47                                      | 47    |    |    | 94        | 6       | 5      |    |    | 11        | 21                     | 6     |    |    | 27        | 30    | 42    |    |
|   | PLC    | 70              | 67    |    |    | 137       | 310          | 306   |    |    | 616       | 55                                      | 55    |    |    | 110       |         |        |    |    |           | 3                      | 6     |    |    | 9         | 11    | 9     |    |
|   | RGH    | 69              | 53    |    |    | 122       | 230          | 250   |    |    | 480       | 63                                      | 31    |    |    | 94        | 6       | 7      |    |    | 13        | 15                     | 24    |    |    | 39        | 13    | 11    |    |
|   | SHC    | 21              | 34    |    |    | 55        | 74           | 161   |    |    | 235       | 12                                      | 30    |    |    | 42        | 1       | 8      |    |    | 9         | 8                      | 10    |    |    | 18        | 6     | 5     |    |
|   | Region | 231             | 227   |    |    | 458       | 873          | 989   |    |    | 1,862     | 177                                     | 163   |    |    | 340       | 13      | 20     |    |    | 33        | 47                     | 46    |    |    | 93        | 60    | 67    |    |
| # of Deliveries by Risk Score "HIGH" >6   | FMC    | 2               | 4     |    |    | 6         | 87           | 94    |    |    | 181       | 3                                       | 3     |    |    | 6         |         |        |    |    |           | 1                      |       |    |    | 1         | 28    | 29    |    |
|   | PLC    |                 | 7     |    |    | 7         | 80           | 93    |    |    | 173       | 5                                       | 8     |    |    | 13        |         |        |    |    |           |                        |       |    |    |           | 11    | 6     |    |
|   | RGH    | 3               | 3     |    |    | 6         | 49           | 61    |    |    | 110       | 5                                       | 7     |    |    | 12        | 2       | 1      |    |    | 3         | 1                      |       |    | 1  | 5         | 7     |       |    |
|   | SHC    | 4               | 1     |    |    | 5         | 19           | 51    |    |    | 70        | 1                                       | 4     |    |    | 5         |         |        |    |    |           | 47                     | 46    |    |    |           |       | 3     |    |
|   | Region | 9               | 15    |    |    | 24        | 235          | 299   |    |    | 534       | 14                                      | 22    |    |    | 36        | 2       | 1      |    |    | 3         | 2                      |       |    | 2  | 44        | 45    |       |    |
| % of Deliveries by Risk Score LOW 0-2   | FMC    | 75.5%           | 76.9% |    |    | 76.2%     | 34.7%        | 30.9% |    |    | 32.8%     | 72.1%                                   | 71.3% |    |    | 71.7%     | 89.5%   | 85.3%  |    |    | 87.9%     | 75.9%                  | 80.0% |    |    | 77.0%     | 21.6% | 13.4% |    |
|   | PLC    | 77.3%           | 77.2% |    |    | 77.3%     | 50.5%        | 45.6% |    |    | 48.2%     | 71.0%                                   | 68.7% |    |    | 69.9%     | 100.0%  | 100.0% |    |    | 100.0%    | 62.5%                  | 57.1% |    |    | 59.1%     | 26.7% | 40.0% |    |
|   | RGH    | 79.1%           | 76.0% |    |    | 77.9%     | 41.9%        | 36.0% |    |    | 38.9%     | 62.4%                                   | 74.8% |    |    | 68.1%     | 78.4%   | 85.5%  |    |    | 82.6%     | 71.7%                  | 72.2% |    |    | 72.0%     | 35.7% | 18.2% |    |
|   | SHC    | 80.2%           | 82.2% |    |    | 81.4%     | 46.2%        | 39.1% |    |    | 41.5%     | 78.0%                                   | 67.0% |    |    | 71.0%     | 93.8%   | 68.0%  |    |    | 78.0%     | 63.6%                  | 65.5% |    |    | 64.7%     | 40.0% | 70.4% |    |
|   | Region | 77.7%           | 77.7% |    |    | 77.7%     | 43.8%        | 38.6% |    |    | 41.1%     | 69.5%                                   | 70.6% |    |    | 70.0%     | 87.2%   | 82.2%  |    |    | 84.7%     | 72.4%                  | 71.4% |    |    | 71.9%     | 26.8% | 28.2% |    |
| % of Deliveries by Risk Score MODERATE 3-6                                      | FMC    | 23.8%           | 21.9% |    |    | 22.8%     | 48.9%        | 51.3% |    |    | 50.1%     | 26.3%                                   | 27.0% |    |    | 26.6%     | 10.5%   | 14.7%  |    |    | 12.1%     | 24.1%                  | 17.1% |    |    | 22.1%     | 40.5% | 51.2% |    |
|   | PLC    | 22.7%           | 20.7% |    |    | 21.6%     | 39.3%        | 41.7% |    |    | 40.5%     | 26.6%                                   | 27.4% |    |    | 27.0%     |         |        |    |    |           | 37.5%                  | 42.9% |    |    | 40.9%     | 36.7% | 36.0% |    |
|   | RGH    | 20.0%           | 22.7% |    |    | 21.1%     | 47.9%        | 51.4% |    |    | 49.7%     | 34.8%                                   | 20.5% |    |    | 28.3%     | 16.2%   | 12.7%  |    |    | 14.1%     | 28.3%                  | 26.7% |    |    | 27.3%     | 46.4% | 50.0% |    |
|   | SHC    | 16.7%           | 17.3% |    |    | 17.0%     | 42.8%        | 46.3% |    |    | 45.1%     | 20.3%                                   | 29.1% |    |    | 25.9%     | 6.3%    | 32.0%  |    |    | 22.0%     | 36.4%                  | 34.5% |    |    | 35.3%     | 60.0% | 18.5% |    |
|   | Region | 21.4%           | 20.9% |    |    | 21.2%     | 44.3%        | 47.1% |    |    | 45.8%     | 28.3%                                   | 25.9% |    |    | 27.1%     | 11.1%   | 16.9%  |    |    | 14.0%     | 27.6%                  | 27.4% |    |    | 27.5%     | 42.3% | 32.9% |    |
| % of Deliveries by Risk Score HIGH >6   | FMC    | 0.7%            | 1.2%  |    |    | 1.0%      | 16.4%        | 17.7% |    |    | 17.1%     | 1.7%                                    | 1.7%  |    |    | 1.7%      |         |        |    |    |           | 2.9%                   |       |    |    | 0.8%      | 37.8% | 45.4% |    |
|   | PLC    |                 | 2.2%  |    |    | 1.1%      | 10.2%        | 12.7% |    |    | 11.4%     | 2.4%                                    | 4.0%  |    |    | 3.2%      |         |        |    |    |           |                        |       |    |    |           | 36.7% | 24.0% |    |
|   | RGH    |                 |       |    |    |           |              |       |    |    |           |   |       |    |    |           |         |        |    |    |           |                        |       |    |    |           |       |       |    |

**OBSTETRICAL DELIVERIES BY PHYSICIAN MODEL OF CARE**  
**Fiscal Year 2020/21**

|   | Site   | OTHER | TOTAL DELIVERIES |       |       |    |       |
|---|--------|-------|------------------|-------|-------|----|-------|
|   |        | Q4    | YTD Total        | Q1    | Q2    | Q3 | Q4    |
| Spontaneous Vaginal Deliveries (incl. TOL / trial of labor)                     | Region |       | 8.3%             | 20.1% | 18.4% |    | 19.3% |
| # Spontaneous Vag Deliveries (excl forceps/vacuum)                              | FMC    |       | 8                | 228   | 167   |    | 395   |
|   | PLC    |       | 2                | 123   | 134   |    | 257   |
|   | RGH    |       | 3                | 236   | 214   |    | 450   |
| Discharged <= 24 Hrs PP   | SHC    |       | 5                | 99    | 128   |    | 227   |
|   | Region |       | 18               | 686   | 643   |    | 1,329 |
| % Spontaneous Vag Deliveries Disch <= 24 hrs PP(excl forceps/vacuum deliveries) | FMC    |       | 13.3%            | 31.1% | 24.5% |    | 27.9% |
|   | PLC    |       | 10.5%            | 18.5% | 19.8% |    | 19.1% |
|   | RGH    |       | 13.0%            | 36.2% | 36.0% |    | 36.1% |
|   | SHC    |       | 31.3%            | 37.1% | 28.9% |    | 32.0% |
|   | Region |       | 15.3%            | 29.6% | 26.8% |    | 28.2% |
| # All Deliveries Discharged <= 24 hrs Postpartum                                | FMC    |       | 9                | 245   | 176   |    | 421   |
|   | PLC    |       | 2                | 143   | 148   |    | 291   |
|   | RGH    |       | 3                | 266   | 241   |    | 507   |
|   | SHC    |       | 6                | 112   | 145   |    | 257   |
|   | Region |       | 20               | 766   | 710   |    | 1,476 |
| % All Deliveries Discharged <= 24 hrs Postpartum                                | FMC    |       | 5.8%             | 20.0% | 14.8% |    | 17.4% |
|   | PLC    |       | 3.6%             | 10.6% | 11.4% |    | 11.0% |
|   | RGH    |       | 6.0%             | 23.7% | 23.2% |    | 23.5% |
|   | SHC    |       | 16.2%            | 27.6% | 19.9% |    | 22.6% |
|   | Region |       | 6.7%             | 18.7% | 16.7% |    | 17.7% |
| Postpartum Average LOS (Hrs)  | FMC    |       | 59.4             | 38.6  | 41.4  |    | 40.0  |
|   | PLC    |       | 59.5             | 39.6  | 39.0  |    | 39.3  |
|   | RGH    |       | 54.4             | 35.2  | 36.8  |    | 36.0  |
|   | SHC    |       | 46.8             | 33.3  | 34.7  |    | 34.2  |
|   | Region |       | 57.0             | 37.5  | 38.4  |    | 37.9  |
| # of Deliveries by Risk Score "LOW" 0-2   | FMC    |       | 27               | 671   | 612   |    | 1,283 |
|   | PLC    |       | 18               | 804   | 745   |    | 1,549 |
|   | RGH    |       | 14               | 664   | 581   |    | 1,245 |
|   | SHC    |       | 23               | 260   | 422   |    | 682   |
|   | Region |       | 82               | 2,399 | 2,360 |    | 4,759 |
| # of Deliveries by Risk Score "MODERATE" 3-6                                    | FMC    |       | 72               | 434   | 445   |    | 879   |
|   | PLC    |       | 20               | 449   | 443   |    | 892   |
|   | RGH    |       | 24               | 396   | 376   |    | 772   |
|   | SHC    |       | 11               | 122   | 248   |    | 370   |
|   | Region |       | 127              | 1,401 | 1,512 |    | 2,913 |
| # of Deliveries by Risk Score "HIGH" >6   | FMC    |       | 57               | 120   | 131   |    | 251   |
|   | PLC    |       | 17               | 96    | 114   |    | 210   |
|   | RGH    |       | 12               | 64    | 80    |    | 144   |
|   | SHC    |       | 3                | 24    | 59    |    | 83    |
|   | Region |       | 89               | 304   | 384   |    | 688   |
| % of Deliveries by Risk Score LOW 0-2   | FMC    |       | 17.3%            | 54.8% | 51.5% |    | 53.2% |
|   | PLC    |       | 32.7%            | 59.6% | 57.2% |    | 58.4% |
|   | RGH    |       | 28.0%            | 59.1% | 56.0% |    | 57.6% |
|   | SHC    |       | 62.2%            | 64.0% | 57.9% |    | 60.1% |
|   | Region |       | 27.5%            | 58.5% | 55.5% |    | 56.9% |
| % of Deliveries by Risk Score MODERATE 3-6                                      | FMC    |       | 46.2%            | 35.4% | 37.5% |    | 36.4% |
|   | PLC    |       | 36.4%            | 33.3% | 34.0% |    | 33.6% |
|   | RGH    |       | 48.0%            | 35.2% | 36.3% |    | 35.7% |
|   | SHC    |       | 29.7%            | 30.0% | 34.0% |    | 32.6% |
|   | Region |       | 42.6%            | 34.1% | 35.5% |    | 34.8% |
| % of Deliveries by Risk Score HIGH >6   | FMC    |       | 36.5%            | 9.8%  | 11.0% |    | 10.4% |
|   | PLC    |       | 30.9%            | 7.1%  | 8.8%  |    | 7.9%  |
|   | RGH    |       | 24.0%            | 5.7%  | 7.7%  |    | 6.7%  |
|   | SHC    |       | 8.1%             | 5.9%  | 8.1%  |    | 7.3%  |
|   | Region |       | 29.9%            | 7.4%  | 9.0%  |    | 8.2%  |
| # of Spon Vag Deliveries by Risk Score LOW 0-2                                  | FMC    |       | 11               | 474   | 420   |    | 894   |
|   | PLC    |       | 8                | 459   | 456   |    | 915   |
|   | RGH    |       | 8                | 464   | 384   |    | 848   |
|   | SHC    |       | 11               | 181   | 289   |    | 470   |
|   | Region |       | 38               | 1,578 | 1,549 |    | 3,127 |
| # of Spon Vag Deliveries by Risk Score Moderate 3-6                             | FMC    |       | 34               | 217   | 222   |    | 439   |
|   | PLC    |       | 6                | 180   | 185   |    | 365   |
|   | RGH    |       | 11               | 173   | 177   |    | 350   |
|   | SHC    |       | 4                | 70    | 133   |    | 203   |
|   | Region |       | 55               | 640   | 717   |    | 1,357 |
| # of Spon Vag Deliveries by Risk Score High >6                                  | FMC    |       | 15               | 41    | 41    |    | 82    |
|   | PLC    |       | 5                | 27    | 37    |    | 64    |
|   | RGH    |       | 4                | 15    | 33    |    | 48    |
|   | SHC    |       | 1                | 16    | 21    |    | 37    |
|   | Region |       | 25               | 99    | 132   |    | 231   |
| % Spon Vag Deliveries, by Risk Score LOW 0-2                                    | FMC    |       | 40.7%            | 70.6% | 68.6% |    | 69.7% |
|   | PLC    |       | 44.4%            | 57.1% | 61.2% |    | 59.1% |
|   | RGH    |       | 57.1%            | 69.9% | 66.1% |    | 68.1% |
|   | SHC    |       | 47.8%            | 69.6% | 68.5% |    | 68.9% |
|   | Region |       | 46.3%            | 65.8% | 65.6% |    | 65.7% |
| % Spon Vag Deliveries, by Risk Score MODERATE 3-6                               | FMC    |       | 47.2%            | 50.0% | 49.9% |    | 49.9% |
|   | PLC    |       | 30.0%            | 40.1% | 41.8% |    | 40.9% |
|   | RGH    |       | 45.8%            | 43.7% | 47.1% |    | 45.3% |
|   | SHC    |       | 36.4%            | 57.4% | 53.6% |    | 54.9% |
|   | Region |       | 43.3%            | 45.7% | 47.4% |    | 46.6% |
| % Spon Vag Deliveries, by Risk Score HIGH >6                                    | FMC    |       | 26.3%            | 34.2% | 31.3% |    | 32.7% |
|   | PLC    |       | 29.4%            | 28.1% | 32.5% |    | 30.5% |
|   | RGH    |       | 33.3%            | 23.4% | 41.3% |    | 33.3% |
|   | SHC    |       | 33.3%            | 66.7% | 35.6% |    | 44.6% |
|   | Region |       | 28.1%            | 32.6% | 34.4% |    | 33.6% |
| # of C-Section Deliveries by Risk Score LOW 0-2                                 | FMC    |       | 9                | 127   | 115   |    | 242   |
|   | PLC    |       | 5                | 183   | 161   |    | 344   |
|   | RGH    |       | 3                | 100   | 105   |    | 205   |

# OBSTETRICAL DELIVERIES BY PHYSICIAN MODEL OF CARE Fiscal Year 2020/21

|   |        | FAMILY MEDICINE |       |    |    |           | OBSTETRICIAN |       |    |    |           | OBSTETRICIAN & FAMILY MEDICINE COMBINED |       |    |    |           | MIDWIFE |      |    |    |           | OBSTETRICIAN & MIDWIFE |       |    |    |           | OTHER  |       |    |
|---|--------|-----------------|-------|----|----|-----------|--------------|-------|----|----|-----------|---|-------|----|----|-----------|---------|------|----|----|-----------|------------------------|-------|----|----|-----------|--------|-------|----|
|   | Site   | Q1              | Q2    | Q3 | Q4 | YTD Total | Q1           | Q2    | Q3 | Q4 | YTD Total | Q1                                      | Q2    | Q3 | Q4 | YTD Total | Q1      | Q2   | Q3 | Q4 | YTD Total | Q1                     | Q2    | Q3 | Q4 | YTD Total | Q1     | Q2    | Q3 |
| # of C-Section Deliveries by Risk Score LOW 0-2                 | SHC    |                 |       |    |    |           | 30           | 48    |    |    | 78        | 10                                      | 23    |    |    | 33        |         |      |    |    |           | 3                      | 6     |    |    | 9         | 2      | 7     |    |
|   | Region |                 |       |    |    |           | 291          | 269   |    |    | 560       | 136                                     | 149   |    |    | 285       |         |      |    |    |           | 18                     | 31    |    |    | 49        | 10     | 16    |    |
|   | FMC    |                 |       |    |    |           | 139          | 143   |    |    | 282       | 23                                      | 23    |    |    | 46        |         |      |    |    |           | 3                      |       |    |    | 3         | 14     | 20    |    |
|   | PLC    |                 |       |    |    |           | 186          | 176   |    |    | 362       | 25                                      | 21    |    |    | 46        |         |      |    |    |           |                        | 2     |    |    |           | 2      | 4     | 4  |
|   | RGH    | 1               |       |    |    | 1         | 145          | 138   |    |    | 283       | 26                                      | 10    |    |    | 36        |         |      |    |    |           | 6                      | 10    |    |    | 16        | 3      | 7     |    |
| # of C-Section Deliveries by Risk Score MODERATE 3-6            | SHC    |                 |       |    |    |           | 33           | 84    |    |    | 117       | 7                                       | 13    |    |    | 20        |         |      |    |    |           | 2                      | 2     |    |    | 4         | 2      | 3     |    |
|   | Region | 1               |       |    |    | 1         | 503          | 541   |    |    | 1,044     | 81                                      | 67    |    |    | 148       |         |      |    |    |           | 11                     | 14    |    |    | 25        | 23     | 34    |    |
|   | FMC    |                 |       |    |    |           | 54           | 63    |    |    | 117       | 1                                       | 1     |    |    | 2         |         |      |    |    |           |                        | 1     |    |    | 1         | 19     | 20    |    |
|   | PLC    |                 |       |    |    |           | 47           | 53    |    |    | 100       | 2                                       | 3     |    |    | 5         |         |      |    |    |           |                        |       |    |    |           | 6      | 4     |    |
|   | RGH    |                 |       |    |    |           | 40           | 34    |    |    | 74        | 2                                       | 4     |    |    | 6         |         |      |    |    |           |                        |       |    |    |           | 3      | 3     |    |
| # of C-Section Deliveries by Risk Score HIGH >6                 | SHC    |                 |       |    |    |           | 7            | 29    |    |    | 36        | 1                                       | 3     |    |    | 4         |         |      |    |    |           |                        |       |    |    |           |        | 2     |    |
|   | Region |                 |       |    |    |           | 148          | 179   |    |    | 327       | 6                                       | 11    |    |    | 17        |         |      |    |    |           |                        | 1     |    |    | 1         | 28     | 29    |    |
|   | FMC    |                 |       |    |    |           | 39.7%        | 35.4% |    |    | 37.6%     | 33.3%                                   | 37.1% |    |    | 35.2%     |         |      |    |    |           | 10.6%                  | 21.4% |    |    | 13.8%     | 25.0%  | 45.5% |    |
|   | PLC    |                 |       |    |    |           | 32.7%        | 31.9% |    |    | 32.3%     | 33.3%                                   | 36.2% |    |    | 34.7%     |         |      |    |    |           | 20.0%                  | 25.0% |    |    | 23.1%     | 37.5%  | 20.0% |    |
|   | RGH    |                 |       |    |    |           | 28.9%        | 32.0% |    |    | 30.3%     | 30.1%                                   | 26.5% |    |    | 28.3%     |         |      |    |    |           | 18.4%                  | 26.2% |    |    | 23.3%     | 10.0%  | 50.0% |    |
| % C-Section Deliveries, by Risk Score LOW 0-2                   | SHC    |                 |       |    |    |           | 37.5%        | 35.3% |    |    | 36.1%     | 21.7%                                   | 33.3% |    |    | 28.7%     |         |      |    |    |           | 21.4%                  | 31.6% |    |    | 27.3%     | 50.0%  | 36.8% |    |
|   | Region |                 |       |    |    |           | 33.7%        | 33.2% |    |    | 33.5%     | 31.3%                                   | 33.6% |    |    | 32.4%     |         |      |    |    |           | 14.6%                  | 25.8% |    |    | 20.2%     | 26.3%  | 36.4% |    |
|   | FMC    |                 |       |    |    |           | 53.7%        | 52.6% |    |    | 53.1%     | 48.9%                                   | 48.9% |    |    | 48.9%     |         |      |    |    |           | 14.3%                  |       |    |    | 11.1%     | 46.7%  | 47.6% |    |
|   | PLC    |                 |       |    |    |           | 60.0%        | 57.5% |    |    | 58.8%     | 45.5%                                   | 38.2% |    |    | 41.8%     |         |      |    |    |           |                        | 33.3% |    |    | 22.2%     | 36.4%  | 44.4% |    |
|   | RGH    | 1.4%            |       |    |    | 0.8%      | 63.0%        | 55.2% |    |    | 59.0%     | 41.3%                                   | 32.3% |    |    | 38.3%     |         |      |    |    |           | 40.0%                  | 41.7% |    |    | 41.0%     | 23.1%  | 63.6% |    |
| % C-Section Deliveries, by Risk Score MODERATE 3-6              | SHC    |                 |       |    |    |           | 44.6%        | 52.2% |    |    | 49.8%     | 58.3%                                   | 43.3% |    |    | 47.6%     |         |      |    |    |           | 25.0%                  | 20.0% |    |    | 22.2%     | 33.3%  | 60.0% |    |
|   | Region | 0.4%            |       |    |    | 0.2%      | 57.6%        | 54.7% |    |    | 56.1%     | 45.8%                                   | 41.1% |    |    | 43.5%     |         |      |    |    |           | 23.4%                  | 30.4% |    |    | 26.9%     | 38.3%  | 50.7% |    |
|   | FMC    |                 |       |    |    |           | 62.1%        | 67.0% |    |    | 64.6%     | 33.3%                                   | 33.3% |    |    | 33.3%     |         |      |    |    |           | 100.0%                 |       |    |    | 100.0%    | 67.9%  | 69.0% |    |
|   | PLC    |                 |       |    |    |           | 58.8%        | 57.0% |    |    | 57.8%     | 40.0%                                   | 37.5% |    |    | 38.5%     |         |      |    |    |           |                        |       |    |    |           | 54.5%  | 66.7% |    |
|   | RGH    |                 |       |    |    |           | 81.6%        | 55.7% |    |    | 67.3%     | 40.0%                                   | 57.1% |    |    | 50.0%     |         |      |    |    |           |                        |       |    |    |           | 60.0%  | 42.9% |    |
| % C-Section Deliveries, by Risk Score HIGH >6                   | SHC    |                 |       |    |    |           | 36.8%        | 56.9% |    |    | 51.4%     | 100.0%                                  | 75.0% |    |    | 80.0%     |         |      |    |    |           |                        |       |    |    |           |        | 66.7% |    |
|   | Region |                 |       |    |    |           | 63.0%        | 59.9% |    |    | 61.2%     | 42.9%                                   | 50.0% |    |    | 47.2%     |         |      |    |    |           | 50.0%                  |       |    |    | 50.0%     | 63.6%  | 64.4% |    |
|   | FMC    |                 |       |    |    |           | 7            | 10    |    |    | 17        | 2                                       | 3     |    |    | 5         | 1       | 0    |    |    | 1         | 3                      | 2     |    |    | 5         | 0      | 0     |    |
|   | PLC    |                 |       |    |    |           | 15           | 11    |    |    | 26        | 1                                       | 2     |    |    | 3         | 0       | 0    |    |    | 0         | 0                      | 0     |    |    | 0         | 0      | 1     |    |
|   | RGH    |                 |       |    |    |           | 13           | 8     |    |    | 21        | 0                                       | 6     |    |    | 6         | 0       | 0    |    |    | 0         | 0                      | 0     |    |    | 0         | 1      | 0     |    |
| # of Episiotomies Spontaneous Vaginal Deliveries                | SHC    |                 |       |    |    |           | 7            | 6     |    |    | 13        | 0                                       | 8     |    |    | 11        | 0       | 0    |    |    | 0         | 0                      | 0     |    |    | 0         | 1      | 0     |    |
|   | Region | 47              | 43    |    |    | 90        | 29           | 33    |    |    | 62        | 13                                      | 13    |    |    | 26        | 2       | 2    |    |    | 4         | 6                      | 3     |    |    | 9         | 1      | 1     |    |
|   | FMC    |                 |       |    |    |           | 0            | 5     |    |    | 5         | 9                                       | 13    |    |    | 22        | 15      | 19   |    |    |           | 6                      | 1     |    |    | 7         | 2      | 1     |    |
|   | PLC    |                 |       |    |    |           | 3            | 5     |    |    | 8         | 31                                      | 29    |    |    | 60        | 30      | 28   |    |    |           | 0                      | 0     |    |    | 0         | 3      | 1     |    |
|   | RGH    |                 |       |    |    |           | 5            | 6     |    |    | 11        | 16                                      | 13    |    |    | 29        | 24      | 21   |    |    |           | 1                      | 6     |    |    | 7         | 1      | 2     |    |
| # of Episiotomies Assisted Forceps/Vacuum                       | SHC    |                 |       |    |    |           | 3            | 1     |    |    | 4         | 3                                       | 2     |    |    | 5         | 3       | 8    |    |    |           | 1                      | 1     |    |    | 2         | 2      | 1     |    |
|   | Region | 11              | 17    |    |    | 28        | 59           | 57    |    |    | 116       | 72                                      | 76    |    |    | 148       |         |      |    |    |           | 8                      | 8     |    |    | 16        | 8      | 5     |    |
|   | FMC    |                 |       |    |    |           | 12           | 23    |    |    | 35        | 16                                      | 23    |    |    | 39        | 17      | 22   |    |    | 1         | 9                      | 3     |    |    | 12        | 2      | 1     |    |
|   | PLC    |                 |       |    |    |           | 18           | 17    |    |    | 35        | 46                                      | 40    |    |    | 86        | 31      | 30   |    |    | 0         | 0                      | 0     |    |    | 0         | 3      | 2     |    |
|   | RGH    |                 |       |    |    |           | 18           | 13    |    |    | 31        | 20                                      | 17    |    |    | 37        | 34      | 23   |    |    | 3         | 4                      | 7     |    |    | 11        | 1      | 2     |    |
| # of Episiotomies Total   | SHC    |                 |       |    |    |           | 10           | 7     |    |    | 17        | 6                                       | 10    |    |    | 16        | 3       | 14   |    |    | 0         | 1                      | 1     |    |    | 2         | 3      | 1     |    |
|   | Region | 58              | 60    |    |    | 118       | 88           | 90    |    |    | 178       | 85                                      | 89    |    |    | 174       | 2       | 2    |    |    | 4         | 14                     | 11    |    |    | 25        | 9      | 6     |    |
|   | FMC    | 4.1%            | 5.8%  |    |    | 5.0%      | 3.1%         | 4.3%  |    |    | 3.7%      | 3.0%                                    | 6.0%  |    |    | 4.3%      | 1.8%    | 0.0% |    |    | 1.1%      | 4.8%                   | 8.7%  |    |    | 5.8%      | 0.0%   | 0.0%  |    |
|   | PLC    | 5.1%            | 3.9%  |    |    | 4.5%      | 5.0%         | 3.7%  |    |    | 4.4%      | 1.9%                                    | 3.8%  |    |    | 2.9%      | 0.0%    | 0.0% |    |    | 0.0%      | 0.0%                   | 0.0%  |    |    | 0.0%      | 0.0%   | 16.7% |    |
|   | RGH    | 4.1%            | 3.2%  |    |    | 3.7%      | 2.1%         | 1.9%  |    |    | 2.0%      | 15.4%                                   | 3.6%  |    |    | 9.9%      | 2.7%    | 3.6% |    |    | 3.3%      | 11.1%                  | 2.0%  |    |    | 5.3%      | 0.0%   | 0.0%  |    |
| % of Episiotomies Spontaneous Vaginal Deliveries (% of Vag Del) | SHC    | 5.8%            | 3.2%  |    |    | 4.2%      | 3.3%         | 4.9%  |    |    | 4.3%      | 0.0%                                    | 15.8% |    |    | 9.4%      | 0.0%    | 0.0% |    |    | 0.0%      | 0.0%                   | 0.0%  |    |    | 0.0%      | 25.0%  | 0.0%  |    |
|   | Region | 4.6%            | 4.2%  |    |    | 4.4%      | 3.6%         | 3.7%  |    |    | 3.6%      | 6.2%                                    | 6.6%  |    |    | 6.4%      | 1.7%    | 1.7% |    |    | 1.7%      | 5.8%                   | 3.1%  |    |    | 4.5%      | 1.6%   | 1.8%  |    |
|   | FMC    | 0.0%            | 25.0% |    |    | 17.9%     | 25.0%        | 37.1% |    |    | 31.0%     | 32.6%                                   | 35.2% |    |    | 34.0%     |         |      |    |    | 42.9%     | 20.0%                  |       |    |    | 36.8%     | 22.2%  | 20.0% |    |
|   | PLC    | 17.6%           | 35.7% |    |    | 25.8%     | 24.6%        | 28.7% |    |    | 26.4%     | 38.0%                                   | 37.8% |    |    | 37.9%     |         |      |    |    | 0.0%      | 0.0%                   |       |    |    | 0.0%      | 75.0%  | 11.1% |    |
|   | RGH    | 17.2%           | 42.9% |    |    | 25.6%     | 34.8%        | 26.5% |    |    | 30.5%     | 44.4%                                   | 41.2% |    |    | 42.9%     |         |      |    |    | 7.7%      | 42.9%                  |       |    |    | 25.9%     | 25.0%  | 50.0% |    |
| % of Episiotomies Assisted Forceps/Vacuum (% of Vag Del)        | SHC    | 50.0%           | 10.0% |    |    | 25.0%     | 23.1%        | 8.7%  |    |    | 13.9%     | 20.0%                                   | 30.8% |    |    | 26.8%     |         |      |    |    | 16.7%     | 25.0%                  |       |    |    | 20.0%     | 100.0% | 33.3% |    |
|   | Region | 18.3%           | 29.3% |    |    | 23.7%     | 26.7%        | 27.4% |    |    | 27.0%     | 37.1%                                   | 37.1% |    |    | 37.1%     |         |      |    |    | 21.6%     | 32.0%                  |       |    |    | 25.8%     | 42.1%  | 23.8% |    |
|   | FMC    | 4.0%            | 6.9%  |    |    | 5.5%      | 6.1%         | 8.6%  |    |    | 7.4%      | 15.2%                                   | 21.2% |    |    | 18.1%     | 1.8%    | 0.0% |    |    | 1.1%      | 11.7%                  | 10.7% |    |    | 11.4%     | 5.4%   | 2.7%  |    |
|   | PLC    | 5.8%            | 5.2%  |    |    | 5.5%      | 10.8%        | 10.1% |    |    | 10.4%     | 23.7%                                   | 23.6% |    |    | 23.6%     | 0.0%    | 0.0% |    |    | 0.0%      | 0.0%                   | 0.0%  |    |    | 0.0%      | 17.6%  | 13.3% |    |
|   | RGH    | 5.2%            | 5.6%  |    |    | 5.4%      | 8.4%         | 6.6%  |    |    | 7.5%      | 28.6%                                   | 21.5% |    |    | 25.2%     | 2.7%    | 3.6% |    |    | 3.3%      | 10.0%                  | 11.1% |    |    | 10.7%     | 4.8%   | 20.0% |    |
| % of Episiotomies Total (% Vag Del)                             | SHC    | 7.9%            | 3.6%  |    |    | 5.3%      | 5.8%         | 5.3%  |    |    | 5.5%      | 7.3%                                    | 21.9% |    |    | 16.2%     | 0.0%    | 0.0% |    |    | 0.0%      | 5.9%                   | 4.8%  |    |    | 5.3%      | 50.0%  | 6.7%  |    |
|   | Region | 5.4%            | 5.5%  |    |    | 5.5%      | 8.6%         | 8.1%  |    |    | 8.3%      | 21.1%                                   | 22.1% |    |    | 21.6%     | 1.7%    | 1.7% |    |    | 1.7%      | 9.9%                   | 9.0%  |    |    | 9.5%      | 11.1%  | 7.8%  |    |
|   | FMC    | 147             | 162   |    |    | 309       | 102          | 89    |    |    | 191       | 111                                     | 103   |    |    | 214       | 15      | 0    |    |    | 15        | 53                     | 18    |    |    | 71        | 13     | 6     |    |
|   | PLC    | 150             | 143   |    |    | 293       | 247          | 183   |    |    | 430       | 115                                     | 113   |    |    | 228       | 4       | 0    |    |    | 4         | 2                      | 4     |    |    | 6         | 4      |       |    |

**OBSTETRICAL DELIVERIES BY PHYSICIAN MODEL OF CARE**  
**Fiscal Year 2020/21**

|   |        | OTHER | TOTAL DELIVERIES |       |       |    |    |           |
|---|--------|-------|------------------|-------|-------|----|----|-----------|
|   | Site   | Q4    | YTD Total        | Q1    | Q2    | Q3 | Q4 | YTD Total |
| # of C-Section Deliveries by Risk Score LOW 0-2                 | SHC    |       | 9                | 45    | 84    |    |    | 129       |
|   | Region |       | 26               | 455   | 465   |    |    | 920       |
| # of C-Section Deliveries by Risk Score MODERATE 3-6            | FMC    |       | 34               | 179   | 186   |    |    | 365       |
|   | PLC    |       | 8                | 215   | 203   |    |    | 418       |
|   | RGH    |       | 10               | 181   | 165   |    |    | 346       |
|   | SHC    |       | 5                | 44    | 102   |    |    | 146       |
|   | Region |       | 57               | 619   | 656   |    |    | 1,275     |
| # of C-Section Deliveries by Risk Score HIGH >6                 | FMC    |       | 39               | 74    | 85    |    |    | 159       |
|   | PLC    |       | 10               | 55    | 60    |    |    | 115       |
|   | RGH    |       | 6                | 45    | 41    |    |    | 86        |
|   | SHC    |       | 2                | 8     | 34    |    |    | 42        |
|   | Region |       | 57               | 182   | 220   |    |    | 402       |
| % C-Section Deliveries, by Risk Score LOW 0-2                   | FMC    |       | 33.3%            | 18.9% | 18.8% |    |    | 18.9%     |
|   | PLC    |       | 27.8%            | 22.8% | 21.6% |    |    | 22.2%     |
|   | RGH    |       | 21.4%            | 15.1% | 18.1% |    |    | 16.5%     |
|   | SHC    |       | 39.1%            | 17.3% | 19.9% |    |    | 18.9%     |
|   | Region |       | 31.7%            | 19.0% | 19.7% |    |    | 19.3%     |
| % C-Section Deliveries, by Risk Score MODERATE 3-6              | FMC    |       | 47.2%            | 41.2% | 41.8% |    |    | 41.5%     |
|   | PLC    |       | 40.0%            | 47.9% | 45.8% |    |    | 46.9%     |
|   | RGH    |       | 41.7%            | 45.7% | 43.9% |    |    | 44.8%     |
|   | SHC    |       | 45.5%            | 36.1% | 41.1% |    |    | 39.5%     |
|   | Region |       | 44.9%            | 44.2% | 43.4% |    |    | 43.8%     |
| % C-Section Deliveries, by Risk Score HIGH >6                   | FMC    |       | 68.4%            | 61.7% | 64.9% |    |    | 63.3%     |
|   | PLC    |       | 58.8%            | 57.3% | 52.6% |    |    | 54.8%     |
|   | RGH    |       | 50.0%            | 70.3% | 51.3% |    |    | 59.7%     |
|   | SHC    |       | 66.7%            | 33.3% | 57.6% |    |    | 50.6%     |
|   | Region |       | 64.0%            | 59.9% | 57.3% |    |    | 58.4%     |
| # of Episiotomies Spontaneous Vaginal Deliveries                | FMC    |       | 0                | 25    | 33    |    |    | 58        |
|   | PLC    |       | 1                | 31    | 26    |    |    | 57        |
|   | RGH    |       | 0                | 31    | 16    |    |    | 47        |
|   | SHC    |       | 1                | 11    | 20    |    |    | 31        |
|   | Region |       | 2                | 98    | 95    |    |    | 193       |
| # of Episiotomies Assisted Forceps/Vacuum                       | FMC    |       | 3                | 32    | 39    |    |    | 71        |
|   | PLC    |       | 4                | 67    | 63    |    |    | 130       |
|   | RGH    |       | 3                | 47    | 48    |    |    | 95        |
|   | SHC    |       | 3                | 12    | 13    |    |    | 25        |
|   | Region |       | 13               | 158   | 163   |    |    | 321       |
| # of Episiotomies Total   | FMC    |       | 3                | 57    | 72    |    |    | 129       |
|   | PLC    |       | 5                | 98    | 89    |    |    | 187       |
|   | RGH    |       | 3                | 78    | 64    |    |    | 142       |
|   | SHC    |       | 4                | 23    | 33    |    |    | 56        |
|   | Region |       | 15               | 256   | 258   |    |    | 514       |
| % of Episiotomies Spontaneous Vaginal Deliveries (% of Vag Del) | FMC    |       | 0.0%             | 3.4%  | 4.8%  |    |    | 4.1%      |
|   | PLC    |       | 5.3%             | 4.7%  | 3.8%  |    |    | 4.2%      |
|   | RGH    |       | 0.0%             | 4.8%  | 2.7%  |    |    | 3.8%      |
|   | SHC    |       | 6.3%             | 4.1%  | 4.5%  |    |    | 4.4%      |
|   | Region |       | 1.7%             | 4.2%  | 4.0%  |    |    | 4.1%      |
| % of Episiotomies Assisted Forceps/Vacuum (% of Vag Del)        | FMC    |       | 21.4%            | 28.3% | 32.8% |    |    | 30.6%     |
|   | PLC    |       | 30.8%            | 29.1% | 31.5% |    |    | 30.2%     |
|   | RGH    |       | 37.5%            | 32.2% | 36.4% |    |    | 34.2%     |
|   | SHC    |       | 60.0%            | 28.6% | 19.7% |    |    | 23.1%     |
|   | Region |       | 32.5%            | 29.8% | 31.5% |    |    | 30.6%     |
| % of Episiotomies Total (% Vag Del)                             | FMC    |       | 4.1%             | 6.7%  | 9.0%  |    |    | 7.8%      |
|   | PLC    |       | 15.6%            | 10.9% | 10.1% |    |    | 10.5%     |
|   | RGH    |       | 9.7%             | 9.8%  | 8.8%  |    |    | 9.3%      |
|   | SHC    |       | 19.0%            | 7.4%  | 6.5%  |    |    | 6.8%      |
|   | Region |       | 9.5%             | 9.0%  | 8.9%  |    |    | 8.9%      |
| # of Epidural In Labor by Risk Score LOW 0-2                    | FMC    |       | 19               | 441   | 378   |    |    | 819       |
|   | PLC    |       | 10               | 522   | 449   |    |    | 971       |
|   | RGH    |       | 8                | 472   | 395   |    |    | 867       |
|   | SHC    |       | 17               | 181   | 291   |    |    | 472       |
|   | Region |       | 54               | 1,616 | 1,513 |    |    | 3,129     |
| # of Epidural In Labor by Risk Score MODERATE 3-6               | FMC    |       | 42               | 228   | 229   |    |    | 457       |
|   | PLC    |       | 10               | 240   | 221   |    |    | 461       |
|   | RGH    |       | 15               | 205   | 195   |    |    | 400       |
|   | SHC    |       | 7                | 72    | 131   |    |    | 203       |
|   | Region |       | 74               | 745   | 776   |    |    | 1,521     |
| # of Epidural In Labor by Risk Score HIGH >6                    | FMC    |       | 20               | 42    | 51    |    |    | 93        |
|   | PLC    |       | 5                | 42    | 57    |    |    | 99        |
|   | RGH    |       | 4                | 23    | 41    |    |    | 64        |
|   | SHC    |       | 2                | 15    | 26    |    |    | 41        |
|   | Region |       | 31               | 122   | 175   |    |    | 297       |
| % of Epidural In Labor by Risk Score LOW 0-2                    | FMC    |       | 70.4%            | 65.7% | 61.8% |    |    | 63.8%     |
|   | PLC    |       | 55.6%            | 64.9% | 60.3% |    |    | 62.7%     |
|   | RGH    |       | 57.1%            | 71.1% | 68.0% |    |    | 69.6%     |
|   | SHC    |       | 73.9%            | 69.6% | 69.0% |    |    | 69.2%     |
|   | Region |       | 65.9%            | 67.4% | 64.1% |    |    | 65.7%     |
| % of Epidural In Labor by Risk Score MODERATE 3-6               | FMC    |       | 58.3%            | 52.5% | 51.5% |    |    | 52.0%     |
|   | PLC    |       | 50.0%            | 53.5% | 49.9% |    |    | 51.7%     |
|   | RGH    |       | 62.5%            | 51.8% | 51.9% |    |    | 51.8%     |
|   | SHC    |       | 63.6%            | 59.0% | 52.8% |    |    | 54.9%     |
|   | Region |       | 58.3%            | 53.2% | 51.3% |    |    | 52.2%     |
| % of Epidural In Labor by Risk Score HIGH >6                    | FMC    |       | 35.1%            | 35.0% | 38.9% |    |    | 37.1%     |
|   | PLC    |       | 29.4%            | 43.8% | 50.0% |    |    | 47.1%     |
|   | RGH    |       | 33.3%            | 35.9% | 51.3% |    |    | 44.4%     |
|   | SHC    |       | 66.7%            | 62.5% | 44.1% |    |    | 49.4%     |
|   | Region |       | 34.8%            | 40.1% | 45.6% |    |    | 43.2%     |
| # of Second Stage Of Labor > 180 mins                           | FMC    |       | 13               | 115   | 94    |    |    | 209       |
|   | PLC    |       | 7                | 102   | 85    |    |    | 187       |

**OBSTETRICAL DELIVERIES BY PHYSICIAN MODEL OF CARE**  
**Fiscal Year 2020/21**

|   |        | FAMILY MEDICINE |       |    |    |           | OBSTETRICIAN |       |    |    |           | OBSTETRICIAN & FAMILY MEDICINE COMBINED |       |    |    |           | MIDWIFE |      |    |    |           | OBSTETRICIAN & MIDWIFE |       |    |    |           | OTHER |       |    |
|---|--------|-----------------|-------|----|----|-----------|--------------|-------|----|----|-----------|---|-------|----|----|-----------|---------|------|----|----|-----------|------------------------|-------|----|----|-----------|-------|-------|----|
|   | Site   | Q1              | Q2    | Q3 | Q4 | YTD Total | Q1           | Q2    | Q3 | Q4 | YTD Total | Q1                                      | Q2    | Q3 | Q4 | YTD Total | Q1      | Q2   | Q3 | Q4 | YTD Total | Q1                     | Q2    | Q3 | Q4 | YTD Total | Q1    | Q2    | Q3 |
| # of Second Stage Of Labor > 180 mins               | RGH    | 24              | 30    |    |    | 54        | 29           | 44    |    |    | 73        | 42                                      | 34    |    |    | 76        | 1       | 1    |    |    | 2         | 11                     | 13    |    |    | 24        | 3     | 3     |    |
|   | SHC    | 14              | 16    |    |    | 30        | 13           | 32    |    |    | 45        | 18                                      | 31    |    |    | 49        | 0       | 1    |    |    | 1         | 7                      | 3     |    |    | 10        | 1     | 4     |    |
|   | Region | 65              | 78    |    |    | 143       | 118          | 124   |    |    | 242       | 144                                     | 146   |    |    | 290       | 3       | 4    |    |    | 7         | 34                     | 24    |    |    | 58        | 16    | 15    |    |
| % of Laboring Women with Long Second Stage Of Labor | FMC    | 5.4%            | 6.3%  |    |    | 5.9%      | 7.9%         | 4.4%  |    |    | 6.1%      | 24.6%                                   | 24.9% |    |    | 24.7%     | 3.5%    | 5.9% |    |    | 4.4%      | 18.4%                  | 20.6% |    |    | 19.0%     | 11.1% | 6.5%  |    |
|   | PLC    | 3.6%            | 3.4%  |    |    | 3.5%      | 8.0%         | 5.8%  |    |    | 7.0%      | 19.5%                                   | 19.5% |    |    | 19.5%     | 0.0%    | 0.0% |    |    | 0.0%      | 0.0%                   | 7.1%  |    |    | 4.5%      | 15.4% | 14.3% |    |
|   | RGH    | 7.0%            | 12.9% |    |    | 9.4%      | 9.4%         | 13.0% |    |    | 11.3%     | 23.6%                                   | 22.7% |    |    | 23.2%     | 2.7%    | 1.8% |    |    | 2.2%      | 20.8%                  | 14.8% |    |    | 17.0%     | 12.5% | 15.0% |    |
|   | SHC    | 11.1%           | 8.1%  |    |    | 9.3%      | 10.2%        | 13.0% |    |    | 12.0%     | 30.5%                                   | 32.0% |    |    | 31.4%     | 0.0%    | 4.0% |    |    | 2.4%      | 31.8%                  | 11.1% |    |    | 20.4%     | 11.1% | 20.0% |    |
|   | Region | 6.0%            | 7.2%  |    |    | 6.6%      | 8.5%         | 8.3%  |    |    | 8.4%      | 23.2%                                   | 23.7% |    |    | 23.4%     | 2.6%    | 3.4% |    |    | 3.0%      | 20.0%                  | 14.7% |    |    | 17.4%     | 12.2% | 10.9% |    |

**OBSTETRICAL DELIVERIES BY PHYSICIAN MODEL OF CARE**  
**Fiscal Year 2020/21**

|   | Site   | OTHER |           | TOTAL DELIVERIES |     |    |    |           |  |
|---|--------|-------|-----------|------------------|-----|----|----|-----------|--|
|   |        | Q4    | YTD Total | Q1               | Q2  | Q3 | Q4 | YTD Total |  |
| # of Second Stage Of Labor > 180 mins               | RGH    |       | 6         | 110              | 125 |    |    | 235       |  |
|   | SHC    |       | 5         | 53               | 87  |    |    | 140       |  |
|   | Region |       | 31        | 380              | 391 |    |    | 771       |  |
| % of Laboring Women with Long Second Stage Of Labor | FMC    | 8.7%  | 10.8%     | 9.1%             |     |    |    | 10.0%     |  |
|   | PLC    | 14.9% | 8.9%      | 7.8%             |     |    |    | 8.3%      |  |
|   | RGH    | 13.6% | 11.6%     | 14.1%            |     |    |    | 12.8%     |  |
|   | SHC    | 17.2% | 14.8%     | 14.2%            |     |    |    | 14.4%     |  |
|   | Region | 11.5% | 10.8%     | 10.8%            |     |    |    | 10.8%     |  |

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## PUBLICATION AND GRANTS



# PUBLICATIONS AND GRANTS

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## Department Publications 2020

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### **Universal Testing to Identify Lynch Syndrome Among Women With Newly Diagnosed Endometrial Carcinoma**

Anna Cameron, Helene Chiarella-Redfern, Pamela Chu, Renee Perrier, Máire A. Duggan -p137–143  
Published online: October 31, 2019

### **Potential Impact of Guidelines for the Prevention of Cesarean Deliveries in a Contemporary Canadian Population**

Janice Skiffington MSc<sup>1</sup>, Amy Metcalfe PhD<sup>1,2,3</sup>, Selphee Tang BSc<sup>1</sup>, Stephen L. Wood MD, MSc<sup>1,2</sup>

### **Recommendations from the ERAS® Society for standards for the development of enhanced recovery after surgery guidelines**

M. Brindle<sup>1,2</sup>, G. Nelson<sup>3</sup>, D. N. Lobo<sup>4,5</sup>, O. Ljungqvist<sup>6,7</sup> and U. O. Gustafsson<sup>8</sup>

### **Defining the short-term disease recurrence after loop electrosurgical excision procedure (LEEP )**

Nicholas Papalia<sup>1\*</sup>, Amanda Rohla<sup>1</sup>, Selphee Tang<sup>2</sup>, Jill Nation<sup>1</sup> and Gregg Nelson<sup>1</sup>

### **Surgical errors and complications following cesarean delivery in the United States**

Manal S. Sheikh, MSc; Gregg Nelson, MD, PhD; Stephen L. Wood, MD, MSc; Amy Metcalfe, PhD

### **Gynecology Providers: Should We Maintain Care into Adulthood? Difficulties in Transition of Care from Pediatric to Adult**

Christine Osborne MD, MSc, FRCSC 1,2,\* , Jaelene Mannerfeldt MD, FRCSC 1,2, Philippa Brain MD, FRCSC 1,2, Sarah K. McQuillan MD, FRCSC 1,2, 1 Department of Obstetrics and Gynecology, University of Calgary, Calgary, AB, Canada. 2 Department of Pediatric and Adolescent Gynecology, Alberta Children's Hospital, Calgary, AB, Canada

### **Antenatal Diagnosis of Marginal and Velamentous Placental Cord Insertion and Pregnancy Outcomes**

Candace O'Quinn, MD, FRCSC, Stephanie Cooper, MD, FRCSC, Selphee Tang, BSc, and Stephen Wood, MD, FRCSC

### **Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC) in pregnancy: a case series of nine patients and review of literature**

Fang Yuan Luo, Rati Chadha, Christine Osborne & Angela Kealey

## **Acute Perinatal Infection and the Evidenced-Based Risk of Intrauterine Diagnostic Testing: A Structured Review**

R. Douglas Wilson

Department of Obstetrics and Gynecology, Cumming School of Medicine, University of Calgary/Alberta Health

Services, Calgary, AB, Canada

## **Prospective cohort study of metabolic syndrome and endometrial cancer survival**

Renée L. Kokts-Porietis a,b, Jessica McNeil b, Gregg Nelson c, Kerry S. Courneya d,

Linda S. Cook a,e, Christine M. Friedenreich a,b,c,\*

## **Female Pelvic Medicine and Reconstructive Surgery challenges on behalf of the Collaborative Research in Pelvic Surgery Consortium: managing complicated cases Series 5: management of recurrent stress urinary incontinence after midurethral sling exposure**

Erin A. Brennand<sup>1</sup> & Funda G. Ugurlucan<sup>2</sup> & Heidi W. Brown<sup>3</sup> & Stephen Jeffery<sup>4</sup> & Patrick Campbell<sup>5</sup> & Cara L. Grimes<sup>6</sup> & Ladin A. Yurteri-Kaplan<sup>7</sup>

## **Enhanced Recovery After Cesarean (ERAC) – Beyond The Pain Scores International Journal of Obstetric Anesthesia**

L. Bollag, G. Nelson

## **Difficulties in Transition of Care from Pediatric to Adult Gynecology Providers: Should We Maintain Care into Adulthood?**

Christine Osborne MD, MSc, FRCSC 1,2,\* , Jaelene Mannerfeldt MD, FRCSC 1,2, Philippa Brain MD, FRCSC 1,2, Sarah K. McQuillan MD, FRCSC 1,2

1 Department of Obstetrics and Gynecology, University of Calgary, Calgary, AB, Canada 2 Department of Pediatric and Adolescent Gynecology, Alberta Children's Hospital, Calgary, AB, Canada

## **Exploring international differences in ovarian cancer treatment: a comparison of clinical practice guidelines and patterns of care**

Charles H Norell,<sup>1</sup> John Butler,<sup>1,2</sup> Rhonda Farrell,<sup>3</sup> Alon Altman,<sup>4</sup> James Bentley,<sup>5</sup> Citadel J Cabasag,<sup>6</sup> Paul A Cohen,<sup>7</sup> Scott Fegan,<sup>8</sup> Michael Fung-Kee-Fung,<sup>9</sup> Charlie Gourley,<sup>10</sup> Neville F Hacker,<sup>11,12</sup> Louise Hanna,<sup>13</sup> Claus Kim Hogdall,<sup>14</sup> Gunnar Kristensen,<sup>15</sup> Janice Kwon,<sup>16</sup> Orla McNally,<sup>17</sup> Gregg Nelson,<sup>18</sup> Andy Nordin,<sup>19</sup> Dearbhaile O'Donnell,<sup>20</sup> Tine Schnack,<sup>21</sup> Peter H Sykes,<sup>22</sup> Ewa Zotow,<sup>23</sup> Samantha Harrison<sup>23</sup>

## **Validation in Alberta of an administrative data algorithm to identify cancer recurrence**

Z.F. Cairncross mph,\* G. Nelson md phd,\* L. Shack phd,† and A. Metcalfe phd\*

### **Nevertheless, They Persisted: How Women Experience Gender-Based Discrimination During Postgraduate Surgical Training**

Allison Brown, PhD,<sup>\*,†</sup>, Gabrielle Bonneville, MDCM,<sup>‡</sup> and Sarah Glaze, MD, FRCSC<sup>‡,x</sup>

### **Preventing postpartum venous thromboembolism: A call to action to reduce undue maternal morbidity and mortality**

Lauren Andrewa, Fionnuala Ní Áinleib,<sup>f</sup>, Marc Blondon<sup>c</sup>, Marc A. Rodger<sup>d</sup>, Leslie Skeithe,<sup>\*</sup>

### **Enhanced Recovery After Surgery (ERAS) in gynecologic oncology: an international survey of peri-operative practice**

Geetu Prakash Bhandoria,<sup>1</sup> Prashant Bhandarkar,<sup>2</sup> Vijay Ahuja,<sup>3</sup> Amita Maheshwari,<sup>4</sup>

Rupinder K Sekhon,<sup>5</sup> Murat Gultekin,<sup>6</sup> Ali Ayhan,<sup>7</sup> Fuat Demirkiran,<sup>8</sup> Ilker Kahramanoglu,<sup>8</sup> Yee-Loi Louise Wan,<sup>9</sup> Pawel Knapp,<sup>10</sup> Jakub Dobroch,<sup>11</sup> Andrzej Zmaczyński,<sup>12</sup> Robert Jach,<sup>13</sup> Gregg Nelson<sup>14</sup>

### **The Post COVID-19 Surgical Backlog: Now is the Time to Implement Enhanced Recovery After Surgery (ERAS)**

Olle Ljungqvist<sup>1</sup> Gregg Nelson<sup>2</sup> Nicolas Demartines<sup>3</sup>

### **Two Intraoperative Techniques for Midurethral Sling Tensioning A Randomized Controlled Trial**

Erin A. Brennand, MD, MSc, Guosong Wu, MSc, Sara Houlihan, MD, Dobrochna Globerman, MD, Louise-Helene Gagnon, MD, MScCH, Colin Birch, MD, Momoe Hyakutake, MD, MET, Kevin V. Carlson, MD, Hanan Al-Shankiti, MD, Magali Robert, MD, MSc, Darren Lazare, MD, and Shunaha Kim-Fine, MD, MSc, For the Calgary Women's Pelvic Health Research Group

### **Cytology positive pericardial effusion causing tamponade in patients with high grade serous carcinoma of the ovary**

Author links open overlay panel: Joni Kooy, Rachelle Findley<sup>1</sup>, Gregg Nelson, Pamela Chu

### **Guidelines for vulvar and vaginal surgery: Enhanced Recovery After Surgery Society recommendations**

Alon D. Altman, HBSch, MD; Magali Robert, MD, MSc; Robert Armbrust, MD; William J. Fawcett, MBBS, FRCA, FFPMRCA; Mikio Nihira, MD, MPH; Chris N. Jones, MBBS, FRCA; Karl Tamussino, MD; Jalid Sehouli, MD; Sean C. Dowdy, MD<sup>1</sup>; Gregg Nelson, MD, PhD<sup>1</sup>

### **Guidelines for Perioperative Care in Cytoreductive Surgery (CRS) with or without hyperthermic IntraPeritoneal chemotherapy (HIPEC): Enhanced Recovery After Surgery (ERAS®) Society Recommendations- Part II: Postoperative management and special considerations**

Martin Hübner a, \*, 1, Shigeki Kusamura b, 1, Laurent Villeneuve c, d, Ahmed Al-Niaimi e, Mohammad Alyami f, Konstantin Balonov g, John Bell h, Robert Bristow i, Delia Cortes Guiral j, Anna Fagotti k, l, Luiz Fernando R. Falcão m, Olivier Glehen n, d, Laura Lambert o, Lloyd Mack p, Tino Muenster q, Pompiliu Piso r, Marc Pocard s, Beate Rau t, Olivia Sgarbura u, v, S.P. Somashekhar w, Anupama Wadhwa x, Alon Altman y, William Fawcett z, Julia Veerapong aa, Gregg Nelson ab  
a Department of Visceral Surgery, Lausanne University Hospital CHUV, University of Lausanne

**Level I evidence establishes enhanced recovery after surgery as standard of care in gynecologic surgery: now is the time to implement!**

Gregg Nelson, MD, PhD; Sean C. Dowdy, MD

**Efficacy of pre-operative pharmacologic thromboprophylaxis on incidence of venous thromboembolism following major gynecologic and gynecologic oncology surgery: a systematic review and meta-analysis**

Steven Bisch,<sup>1</sup> Rachelle Findley,<sup>1</sup> Christina Ince,<sup>1</sup> Maria Nardell,<sup>2</sup> Gregg Nelson<sup>1</sup>

**Botulinum toxin injection for chronic pelvic pain: A systematic review**

Fang Yuan Luo, Maryam Nasr-Esfahani, John Jarrell, Magali Robert

**Perinatal outcome and prognostic factors of fetal megacystis diagnosed at 11-14 week's gestation**

Cindy Kao<sup>1</sup>, Julie Lauzon<sup>2</sup>, Marie-Anne Brundler<sup>3</sup>, Selphee Tang<sup>1</sup>, David Somerset<sup>1</sup>

**Return on investment of the Enhanced Recovery After Surgery (ERAS) multiguide, multisite implementation in Alberta, Canada**

Nguyen X. Thanh, MD, PhD, Alison Nelson, MN, RN, Xiaoming Wang, PhD, Peter Faris, PhD, Tracy Wasylak, MSc, Leah Gramlich,\* MD, Gregg Nelson,\* MD, PhD

**Mucinous Cancer of the Ovary: Overview and Current Status.** Babaier A, Ghatage P. Diagnostics (Basel). 2020 Jan 19;

**Clinical and pathological associations of PTEN expression in ovarian cancer: a multicentre study from the Ovarian Tumour Tissue Analysis Consortium.** Martins FC, Couturier DL, Paterson A, Karnezis AN, Chow C, Nazeran TM, Odunsi A, Gentry-Maharaj A, Vriilo A, Hein A, Talhouk A, Osorio A, Hartkopf AD, Brooks-Wilson A, DeFazio A, Fischer A, Hartmann A, Hernandez BY, McCauley BM, Karpinskyj C, de Sousa CB, Høgdall C, Tiezzi DG, Herpel E, Taran FA, Modugno F, Keeney G, Nelson G, Steed H, Song H, Luk H, Benitez J, Alsop J, Koziak JM, Lester J, Rothstein JH, de Andrade JM, Lundvall L, Paz-Ares L, Robles-Díaz L, Wilkens LR, Garcia MJ, Intermaggio MP, Alcaraz ML, Brett MA, Beckmann MW, Jimenez-Linan M, Anglesio M, Carney ME, Schneider M, Traficante N, Pejovic N, Singh N, Le N, Sinn P, Ghatage P, Erber R, Edwards R, Vierkant R, Ness RB, Leung S, Orsulic S, Brucker SY, Kaufmann SH, Fereday S, Gayther S, Winham SJ, Kommoss S, Pejovic T, Longacre TA, McGuire V, Rhenius V, Sieh W, Shvetsov

YB, Whittemore AS, Staebler A, Karlan BY, Rodriguez-Antona C, Bowtell DD, Goode EL, Høgdall E, Candido Dos Reis FJ, Gronwald J, Chang-Claude J, Moysich KB, Kelemen LE, Cook LS, Goodman MT, Fasching PA, Crawford R, Deen S, Menon U, Huntsman DG, Köbel M, Ramus SJ, Pharoah PDP, Brenton JD. Br J Cancer.

**Phase II Trial of Cabozantinib in Recurrent/Metastatic Endometrial Cancer: A Study of the Princess Margaret, Chicago, and California Consortia (NCI9322/PHL86).** Dhani NC, Hirte HW, Wang L, Burnier JV, Jain A, Butler MO, Welch S, Fleming GF, Hurteau J, Matsuo K, Matei D, Jimenez W, Johnston C, Cristea M, Tonkin K, Ghatage P, Lheureux S, Mehta A, Quintos J, Tan Q, Kamel-Reid S, Ludkovski O, Tsao MS, Wright JJ, Oza AM. Clin Cancer Res. 2020

**State of the art and up-and-coming angiogenesis inhibitors for ovarian cancer.** Singh N, Badrun D, Ghatage P.

**Etiology, Clinical Features, and Diagnosis of Vulvar Lichen Sclerosus: A Scoping Review.** Singh N, Ghatage P.

**PIK3CA mutation and CNV status and post-chemoradiotherapy survival in patients with cervical cancer.** Martell K, McIntyre JB, Kornaga EN, Chan AMY, Phan T, Köbel M, Enwere EK, Dean ML, Ghatage P, Lees-Miller SP, Doll CM.

**Patient-Reported Symptom Burden Near the End of Life in Patients With Gynaecologic Cancers.** Singh N, Batra A, Yang L, Boyne DJ, Harper A, Ghatage P, Cuthbert CA, Cheung WY

**Equivalent Survival of p53 Mutated Endometrial Endometrioid Carcinoma Grade 3 and Endometrial Serous Carcinoma.** Brett MA, Atenafu EG, Singh N, Ghatage P, Clarke BA, Nelson GS, Bernardini MQ, Köbel M. Int J Gynecol Pathol.

**Factors Affecting Overall Survival in Premenopausal Women With Uterine Leiomyosarcoma: A Retrospective Analysis With Long-Term Follow-Up.** Singh N, Al-Ruwaisan M, Batra A, Itani D, Ghatage P. J Obstet Gynaecol

**Long-Term Toxicity and Health-Related Quality of Life After Adjuvant Chemoradiation Therapy or Radiation Therapy Alone for High-Risk Endometrial Cancer in the Randomized PORTEC-3 Trial.** Post CCB, de Boer SM, Powell ME, Mileskin L, Katsaros D, Bessette P, Haie-Meder C, Ottevanger NPB, Ledermann JA, Khaw P, D'Amico R, Fyles A, Baron MH, Kitchener HC, Nijman HW, Lutgens LCHW, Brooks S, Jürgenliemk-Schulz IM, Feeney A, Goss G, Fossati R, Ghatage P, Leary A, Do V, Lissoni AA, McCormack M, Nout RA, Verhoeven-Adema KW, Smit VTHBM, Putter H, Creutzberg CL.

**A single gestational weight gain recommendation is possible for all classes of pregnant women with obesity**

Charleen Salmon<sup>1</sup>, Reginald S Sauve<sup>2</sup>, Caroline LeJour<sup>3</sup>, Tanis Fenton<sup>4</sup>, Amy Metcalfe<sup>5</sup>

**A guide for urogynecologic patient care utilizing telemedicine during the COVID-19 pandemic: review of existing evidence**

Cara L. Grimes, Ethan M. Balk, Catrina C. Crisp, Danielle D. Antosh, Miles Murphy, Gabriela E. Halder, Peter C. Jeppson, Emily E. Weber LeBrun, Sonali Raman, Shunaha Kim-Fine, Cheryl Iglesia, Alexis A. Dieter, Ladin Yurteri-Kaplan, Gaelen Adam & Kate V. Meriwether

**The Effect of Fetal Trisomy 21 on Adverse Perinatal Obstetrical Outcomes in Nova Scotia, 2000–2019**

Jo-Ann K. Brock, MD, PhD;<sup>1,2</sup> Jennifer D. Walsh, MD, MSc;<sup>3</sup> Victoria M. Allen, MD, MSc<sup>2</sup>

<sup>1</sup>Department of Pathology and Laboratory Medicine, Dalhousie University, Halifax, NS

<sup>2</sup>Department of Obstetrics and Gynaecology, Dalhousie University, Halifax, NS

<sup>3</sup>Department of Obstetrics and Gynaecology, University of Calgary, Calgary, AB

**Stillbirth and large for gestational age at birth. Journal of Maternal Fetal and Neonatal Medicine. 33(12): 1974-9. , Wood S, Tang S. (2020).**

**Severe neonatal hypoglycemia and intrapartum glycaemic control in pregnancies complicated by Type 1, type 2 and gestational diabetes.**

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**Thyroid laboratory testing and management in women with hypothyroidism prior to pregnancy and associated pregnancy outcomes. In press Thyroid**

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**Combinations of modifiable lifestyle behaviours drive colorectal cancer risk in the Alberta Tomorrow Project. In press Scientific Reports**

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**Maternal, pregnancy, and neonatal outcomes for women with Marfan Syndrome. Birth Defects Research Part A**

Ramage K, Grabowska K, Silversides C, Quan H, Metcalfe A. 2020.

**Viewpoint: validation of self-reported anxiety screening scales in perinatal populations – outstanding issues in the validation research agenda. In press Canadian Journal of Nursing Research**

Adhikari K, Bright K, Metcalfe A, Patten SB. 2020

**Trends in adolescent rapid repeat pregnancy in Canada. In press Journal of Obstetrics and Gynecology Canada**

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**Prenatal psychological distress as a risk factor for hypertensive disorders of pregnancy: a meta-analysis. In press Psychological Medicine**

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**Disorders and subsequent suicide events in a representative community population.**

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**Monitoring maternal near miss/severe maternal morbidity: a systematic review.**

England N, Madill J, Metcalfe A, Magee L, Cooper S, Salmon C, Adhikari K. 2020

**Age-period-cohort effects in pre-existing and pregnancy-associated diseases amongst primiparous women.**

Biology of Sex Differences 11:19 Metcalfe A, Ahmed S, Nerenberg K. 2020.

**Empowering knowledge generation through an international data network: the IMeCCHI-DATANETWORK.**

International Journal of Population Data Science 5(1):05 Otero Varela L, Le Pogam MA, Metcalfe A, Kjaer Kristensen P, Hider P, Patel A, Kim H, Carlini E, Perego R, Gini R. 2020.

**Letter: Pregnant women with IBD are more likely to be adherent to biologic therapies than other medications – authors' reply.**

Alimentary Pharmacology and Therapeutics 51(9):916-917 Lee S, Seow CH, Adhikari K, Metcalfe A. 2020.

**Postpartum hypertensive disorders in the emergency department – a retrospective review of local practice in Calgary, Alberta. Pregnancy Hypertension**

Mahajan A, Kemp A, Metcalfe A, Hawkins TLA, Dowling S, Nerenberg K. 2020. 19:212-217

**Surgery for inflammatory bowel disease has unclear impact on female fertility: a Cochrane Collaboration systematic review.**

In press Journal of the Canadian Association for Gastroenterology ,Lee S, Crowe M, Seow CH, Kotze P, Kaplan GG, Metcalfe A, Ricciuto A, Benchimol EI, Kuenzig ME. 2020.

**Timing of delivery in women with diabetes: a population-based study.**

Acta Obstetrica et Gynecologica Scandinavica 99(3):341-349 Metcalfe A, Hutcheon JA, Sabr Y, Lyons J, Burrows J, Joseph KS. 2020

**Pregnant women with IBD are more likely to be adherent to biologic therapies than other medications.**

Alimentary Pharmacology and Therapeutics 51:544-552 Lee S, Seow C, Adhikari K, Metcalfe A. 2020.

**Physiological and psychological stress in pregnant women with quiescent inflammatory bowel disease: a pilot study using salivary biomarkers.**

Journal of Gastroenterology and Hepatology Open 4:692-697 Khil J, Picardo S, Seow CH, Leung Y, Metcalfe A, Campbell T, Letourneau N, Dewey D, Giesbrecht G. 2020.

**Oral misoprostal for induction of labour in term PROM: a systematic review.**

Padayachee L, Kale M, Mannerfeldt J, Metcalfe A. 2020. Cairncross Z, Nelson G, Shack L, 2020.

Validation in Alberta of an administrative data algorithm to identify cancer recurrence. Current Oncology 27(3):e343-e346

**Neighbourhood socioeconomic status modifies the association between anxiety and depression during pregnancy and preterm birth: a community-based Canadian cohort study.**

Adhikari K, Patten SB, Williamson T, Patel AB, Premji S, Tough S, Letourneau N, Giesbrecht G, Metcalfe A. 2020.

**Assessment of anxiety during pregnancy: are existing multiple anxiety scales suitable and comparable in measuring anxiety during pregnancy?**

Adhikari K, Patten SB, Williamson T, Patel AB, Premji S, Tough S, Letourneau N, Giesbrecht G, Metcalfe A. 2020. In press Journal of Psychosomatic Obstetrics and Gynecology

**Validity and reliability of the Arabic version of Muller's Prenatal Attachment Inventory.**

Arafah D, Thomas B, Fenton TR, Sabr Y, Metcalfe A. 2020. In press Journal of Psychosomatic Obstetrics and Gynecology

**Roles of the underlying cause of delivery and gestational ages on long-term child health.**

Cairncross ZF, Chaput K, McMorris C, Ospina M, Brown HK, Metcalfe A. 2020. Pediatric and Perinatal Epidemiology 334(3):331-340

**Pregnancy complications and risk of preterm birth according to maternal age: a population-based study of delivery hospitalizations in Alberta.**

Scime NV, Chaput KH, Faris PE, Quan H, Tough SC, Metcalfe A. 2020 Acta Obstetrica et Gynecologica Scandinavica

**Antenatal care utilization and obstetric and newborn outcomes among pregnant refugee and claimant women attending a dedicated refugee clinic in Calgary, Canada.**

Malebranche M, Norrie E, Hao S, Talavlikar R, Hull A, deVetten G, Nerenberg K, Metcalfe A, Fabreau G. 2020 Journal of Immigrant and Minority

**A realist synthesis of quality improvement curricula in undergraduate and postgraduate medical education: what works, for whom, and in what contexts?**

Allison Brown ,1,2 Kyle Lafreniere,3 David Freedman,4 Aditya Nidumolu,5 Matthew Mancuso,6 Kent Hecker,2,7 Aliya Kassam 2,8

**“Prevalence of pelvic floor disorders in the fibromyalgia population: a systematic review”.**

Thornton, KGS, Robert, M. J Obstet Gynaecol Can. 2020.

**Uterine Defect after Open Maternal-fetal Surgery.**

Ting P, Sanders AP. Journal of Minimally Invasive Gynecology 2020

**Tranexamic acid in gynecologic surgery. Current Medical Research and Opinion 2020**

Zakhari A, Sanders AP, Solnik MJ.

**Parasitic fibroid involving the external iliac vessels.**

Sanders AP, Shirreff L. Journal of Obstetrics and Gynaecology Canada 2020

**Returning to Work Following Minimally Invasive Hysterectomy.**

Sanders AP, Amir H, Fong CJ, Murji A, Solnik MJ. Journal of Obstetrics and Gynaecology Canada 2020;42(1):80-83

**Reproductive outcomes following uterine artery occlusion at the time of myomectomy: systematic review and meta-analysis.**

Sanders AP, Norris S, Tulandi T, Murji A. Journal of Obstetrics and Gynaecology Canada 2020

**Intranasal Oxytocin as a Treatment for Women's Chronic Pelvic Pain: A Randomized Feasibility Study.**

Flynn, M. J., Campbell, T. S., Robert, M., Nasr-Esfahani, M. & Rash, J. A. International Journal of Gynecology and Obstetrics. Oct 2020.

**Vaginal Pessary Use**

Guideline No. 411: Harvey MA, Lemieux MC, Robert M, Shulz J.

**Intranasal Oxytocin as a Treatment for Women's Chronic Pelvic Pain: A Randomized Feasibility Study.**

Flynn, M. J., Campbell, T. S., Robert, M., Nasr-Esfahani, M. & Rash, J. A. International Journal of Gynecology and Obstetrics. Oct 2020.

**Methamphetamine Use in Pregnancy: A Call for Action.** Lisa Graves, Courtney Green, Magali Robert, Jocelyn Cook ( accepted JOGC)

**From anatomy to patient experience in pelvic floor surgery: Mindlines, evidence, responsibility and transvaginal mesh.**

Ariel Ducey, Claudia Donoso, Sue Ross, Magali Robert

**Computed-Tomography Body Composition Analysis Complements Pre-Operative Nutrition Screening in Colorectal Cancer Patients on an Enhanced Recovery after Surgery Pathway.**

Klassen P, Baracos V, Gramlich L, Nelson G, Mazurak V, Martin L.

**Improved Outcomes With an Enhanced Recovery Approach to Cesarean Delivery.**

Nelson G. Obstet Gynecol. 2020 Dec

**SWI/SNF-deficiency defines highly aggressive undifferentiated endometrial carcinoma.**

Tessier-Cloutier B, Coatham M, Carey M, Nelson GS, Hamilton S, Lum A, Soslow RA, Stewart CJ, Postovit LM, Köbel M, Lee CH.

**Randomised controlled trial confirms benefit of enhanced recovery after surgery on length of stay in ovarian cancer: How low can we go?**

Bisch S, Nelson G.

**Expanding Pharmacotherapy Data Collection, Analysis, and Implementation in ERAS® Programs- The Methodology of an Exploratory Feasibility Study.**

Johnson E, Parrish Li R, Nelson G, Elias K, Kramer B, Gaviola M

**Enhanced Recovery After Surgery (ERAS) in gynecologic oncology: an international survey of peri-operative practice.**

Bhandoria GP, Bhandarkar P, Ahuja V, Maheshwari A, Sekhon RK, Gultekin M, Ayhan A, Demirkiran F, Kahramanoglu I, Wan YL, Knapp P, Dobroch J, Zmaczyński A, Jach R, Nelson G

**Guidelines for vulvar and vaginal surgery: Enhanced Recovery After Surgery Society recommendations.**

Altman AD, Robert M, Armbrust R, Fawcett WJ, Nihira M, Jones CN, Tamussino K, Sehouli J, Dowdy SC, Nelson G.

**New approaches to cancer care in a COVID-19 world.**

Butler J, Finley C, Norell CH, Harrison S, Bryant H, Achiam MP, Altman AD, Baxter N, Bentley J, Cohen PA, Chaudry MA, Dixon E, Farrell R, Fegan S, Hashmi S, Hogdall C, Jenkins JT, Kwon J, Mala T, McNally O, Merrett N, Nelson G, Nordin A, Park J, Porter G, Reynolds J, Schieman C, Schnack T, Spigelman A, Svendsen LB, Sykes P, Thomas R.

**Enhanced Recovery After Cesarean (ERAC) - beyond the pain scores.**

Bollag L, Nelson G

**Enhanced recovery after cesarean delivery: is protocol compliance the missing link?**

Nelson G, Wilson RD.

**Consensus Guidelines for Perioperative Care in Neonatal Intestinal Surgery: Enhanced Recovery After Surgery (ERAS®) Society Recommendations.**

Brindle ME, McDiarmid C, Short K, Miller K, MacRobie A, Lam JYK, Brockel M, Raval MV, Howlett A, Lee KS, Offringa M, Wong K, de Beer D, Wester T, Skarsgard ED, Wales PW, Fecteau A, Haliburton B, Goobie SM, Nelson G.

**ERAS protocols in gynecologic oncology during COVID-19 pandemic.**

Thomakos N, Pandrakis A, Bisch SP, Rodolakis A, Nelson G.

**Moving enhanced recovery after surgery from implementation to sustainability across a health system: a qualitative assessment of leadership perspectives.**

Gramlich L, Nelson G, Nelson A, Lagendyk L, Gilmour LE, Wasylak T.

## Funding and Grants of 2020

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### **Dr. Erin Brennand**

CIHR Operating Grant: Women's Health Clinical Mentorship Grant - \$50K

MSI Foundation Research Grant - \$100K

### **Dr. Stephen Wood**

Alberta Surveillance Program for Moderate-Severe Hypoxic Ischemic Encephalopathy. \$17,000 (2 years so \$8750 2020) Funder: HIROC PI

The REDUCED Trial \$229,350 (2020) CIHR PI

Uterine Quiescence and Contraction \$125,00 2020 CIHR Co-I

### **Dr. Verena Kuret**

CIHR / PHAC grants ~ 125,000.00 (based on number of covid cases)

Pregnancy During the COVID-19 Pandemic:

Maternal-Infant Dyad Epidemiology, Co-morbidities and Outcomes in Alberta, Canada

### **Dr. Gregg Nelson**

Implementation of BE FIT (elder-friendly Bedside reconditioning for Functional Improvements) following Surgery Study

Partnership for Research and Innovation in the Health System (PRIHS) Competition

Alberta Innovates

\$947,735 (Apr 1, 2020 – Mar 31, 2024), Co-Lead

### **Dr. Amy Metcalfe**

2020 Netherlands Organisation for Health Research and Development (ZonMw)

(1 application)

2020 New Frontiers in Research Fund - Exploration (2 applications)

**2020-2024 Canadian Institutes of Health Research Project Scheme**

Amount Received: \$612,000

Oncofertility among adolescent and young adult cancer survivors in Alberta: a mixed methods study

PI: Miranda Fidler-Benaoudia

Co-Is: Ronald Barr, Susan Crawford, Kirsten Fiest, Shu Foong, Ellen Greenblatt, Cynthia Maxwell, Sarah McKilop, **Amy Metcalfe**, Jason Pole, Peter Przybylski, Jeff Roberts, Lauren Walker

Collaborators: L Griffith, M Lang, J Scheidl, E Trobiak

**2020-2021 Calgary Centre for Clinical Research – Seed Grant**

Amount Received: \$10,000

An anonymous survey to generate a valid estimate of the prevalence of cannabis use in pregnancy in Alberta: building foundations for future research and public health strategies

PI: Katie Chaput

Co-I: Carly McMorris, Deb McNeil, **Amy Metcalfe**, Stephen Wood

**2020-2021 Canadian Institutes of Health Research COVID-19 Rapid Research Funding Opportunity**

Amount Received: \$313,415

Uncovering longitudinal patterns of resilience and vulnerability in a pandemic: the All Our Families COVID-19 impact study

PI: Sheila McDonald, Suzanne Tough

Co-Is: Sarah Edwards, Susan Graham, Erin Hetherington, **Amy Metcalfe**

Collaborators/Knowledge Users: Farah Bandali, Jason Cabaj, Jan Fox, Deb McNeil, Liz O'Neill, Stacey Pinney

**2020-2022 MSI Foundation**

Amount Received: \$100,000

Uterine preservation versus hysterectomy for pelvic organ prolapse surgery

PI: Erin Brennand

Co-I: Colin Birch, Katie Chaput, Ariel Ducey, Shunaha Kim-Fine, **Amy Metcalfe**, Magali Robert, Natalie Scime

2020-2025 **Calgary Health Trust Newborn-Maternal Health Research Initiative**

Amount Received: \$5,000,000

Prediction, Prevention, and interventions for Preterm birth: the P3 cohort

PI: **Amy Metcalfe**, Donna Slater, Lara Leijser

Co-Is: Ayman Abou Mehrem, Sofia Ahmed, Dave Anderson, Amina Benlamri, Karen Benzies, Simrit Brar, Meredith Brockway, David Campbell, Katie Chaput, Wendy Dean, Giselle DeVetten, Michael Esser, Nils Forkert, Julio Garcia Flores, Susan Graham, Myriam Hemberger, Leonora Hendson, Erin Hetherington, Kylie Hornaday, Jo-Ann Johnson, Cyne Johnston, Elizabeth Keys, Catherine Lebel, Mary Malebrache, Sheila McDonald, Carly McMorris, Deb McNeil, Aleksandra Mineyko, Khorshid Mohammad, Kara Nerenberg, Raylene Reimer, Cynthia Seow, Amy Shafey, Nikki Stephenson, Laura Sycuro, Lianne Tomfohr-Madsen, Suzanne Tough, Stephen Wood, Hussein Zein

Collaborators: Farah Bandali, Signe Bray, Sarah Edwards, Xing-Chang Wei

2020-2023 **Canadian Institutes of Health Research – Early Career Investigator Operating Grant in Maternal, Reproductive, Child and Youth Health**

Amount Received: \$210,000

Perinatal complications and outcomes in female survivors of adolescent and young adult cancer: a population-based study on the impact of cancer on pregnancy in Canada

PI: Miranda Fidler-Benaoudia

Co-I: Ronald Barr, Winson Cheung, Ellen Greenblatt, Cynthia Maxwell, **Amy Metcalfe**

2019-2021 **Alva Foundation**

Amount Received: \$35,000

The Motherhood and Chronic Illness (MaCI) project

PI: Katie Chaput

Co-I: **Amy Metcalfe**, Alberto Nettel-Aguirre, Natalie Scime, Suzanne Tough

2019-2021 **Canadian Institutes of Health Research Project Scheme**

Amount Received: \$455,175

A pilot study assessing the feasibility of a randomized controlled trial evaluating aspirin in postpartum women at risk of developing venous thromboembolism (pilot PAPS: Postpartum Aspirin Prophylaxis Study)

PI: Leslie Skeith, Marc Rodger

Co-I: Shannon Bates, Wee Chan, Lisa Duffett, Paul Gibson, Susan Kahn, **Amy Metcalfe**, Stephen Wood

2019-2020     **Department of Obstetrics and Gynecology Departmental Education and Research Fund**

Amount Received: \$4,066

Early warning systems and maternal sepsis

PI: Eliana Castillo, Ariela Rozenek

Co-I: **Amy Metcalfe**, Kara Nerenberg

2019-2021     **New Frontiers in Research Fund: A Tri-Agency Initiative (CIHR, NSERC, SSHRC)**

Amount Received: \$250,000

Impact of residential proximity to hydraulic fracturing on human reproduction and child development

PI: Carly McMorris, **Amy Metcalfe**

Co-I: Stefania Bertazzon, Jason Cabaj, Gil Kaplan, Lucija Muehlenbachs, Nickie Nikolaou, Cathryn Ryan, Ron Wong

2019-2021     **University of Calgary, Department of Pediatrics Innovation Award**

Amount Received: \$25,000

Breastfeeding intentions, outcomes, and perceptions of support in women with pre-existing conditions: the Motherhood and Chronic Illness (MaCI) mixed methods cohort study.

PI: Alberto Nettel-Aguirre

Co-I: Katie Chaput, **Amy Metcalfe**, Natalie Scime, Suzanne Tough

2019-2021     **Alberta Children's Hospital Research Institute Healthy Outcomes Theme Collaborative Research Grant**

Amount Received: \$24,971

Promoting appropriate utilization of thyroid laboratory tests in pregnancy

PI: Lois Donovan

Co-I: Alex Chin, Karmon Helmle, Rshmi Khurana, **Amy Metcalfe**, Kara Nerenberg, Jennifer Yamamoto

Knowledge Users: Monica Sargious, Linda Slocombe, Norma Spence

2019-2022 **Canadian Institutes of Health Research – Early Career Investigator Operating Grant in Maternal, Reproductive, Child and Youth Health**

Amount Received: \$209,950

Sleeping for Two: a randomized controlled trial of cognitive behaviour therapy for insomnia experienced during pregnancy

PI: Lianne Tomfohr

Co-I: Tavis Campbell, Gerry Giesbrecht, Elizabeth Keys, Joshua Madsen, **Amy Metcalfe**, Kelly Mrklas, Tyler Williamson

2018-2021 **Canadian Institutes of Health Research – Project Scheme**

Amount Received: \$306,001

Impact of maternal cancer and in-utero exposure to chemotherapy on long-term child health

PI: **Amy Metcalfe**

Co-I: Deshayne Fell, Christine Friedenreich, Sarka Lisonkova, Carly McMorris, Gregg Nelson, Joel Ray, Lorraine Shack, Khokan Sidkar

2018-2021 **Canadian Institutes of Health Research Operating Grant for New Investigators in Maternal, Reproductive, Child and Youth Health**

Amount Received: \$135,000

Survival, recurrence, and subsequent obstetrical outcomes following pregnancy-associated and post-partum cancer

PI: **Amy Metcalfe**

Co-I: Deshayne Fell, Christine Friedenreich, Sarka Lisonkova, Gregg Nelson, Joel Ray, Lorraine Shack, Khokan Sidkar

Knowledge Users: Barabara O'Neill