Grand Rounds in Family Medicine

April 7, 2021

Presentation: Is there a role for Family Practice Obstetrics in Smaller Communities?

Scientific Planning Committee Disclosure

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- Relationships with commercial interests:
  No conflicts of interest.

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Disclosure of Commercial Support

- This program has received no in-kind support.
- This program has received no commercial financial support.

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Faculty/Presenter Disclosure

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Relationships with commercial interests:
No conflicts of interest.

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Mitigating Potential Bias

Presenter received a detailed letter from the Organizing Committee outlining the learning objectives and content expectations for each presentation.

Presentation have been reviewed by a member of the Scientific Planning Committee to ensure balance in content and the absence of bias.

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Learning Objectives:

At the conclusion of these Grand Rounds, participants will be able to:

1. Identify the safety and benefits of Family Practice obstetrics programs in smaller communities;
2. Comprehend the unintended consequences of losing obstetrics in smaller communities;
3. Examine the experience of one small urban-adjacent centre;
4. Examine the unique considerations of "urban-adjacent" Family Practice obstetrics program; and
5. Evaluate referral biases by family doctors for obstetrical care.

Case: Kristen, 26-year-old Primip

- Routine visit 20 wk GA. Healthy. No medication. No surgeries.
- Preconception: Took folic acid and stopped alcohol and coffee. She and her husband of 4 years walk the dog daily for 30 min. together.
- They live on the outskirts of London near Kilworth. They use the Strathroy Hospital for ER visits as they like the wait times there and the service compared to going to LHSC.
- They wonder if they should go to Strathroy Hospital to deliver or if they should go to LHSC where their friends delivered as they heard it was safer to deliver there.
- What would you say to them?

Think about this:

Who would you routinely refer your Ob patients to (if you don't do intrapartum Ob)?

- Obstetrician
- FP Ob
- Midwife

Why do you refer to who you do?

- Patient preference?
- Confidence in the person you are referring to?
- Like the person you refer to?
- Not in a group practice (so will likely have that person deliver)?
- Previous experience with having referred to someone in particular?

What is your confidence in referring your Ob patients to:

- An Obstetrician
- A FP Ob
- A Midwife

The Strathroy Obstetrical Program Experience...

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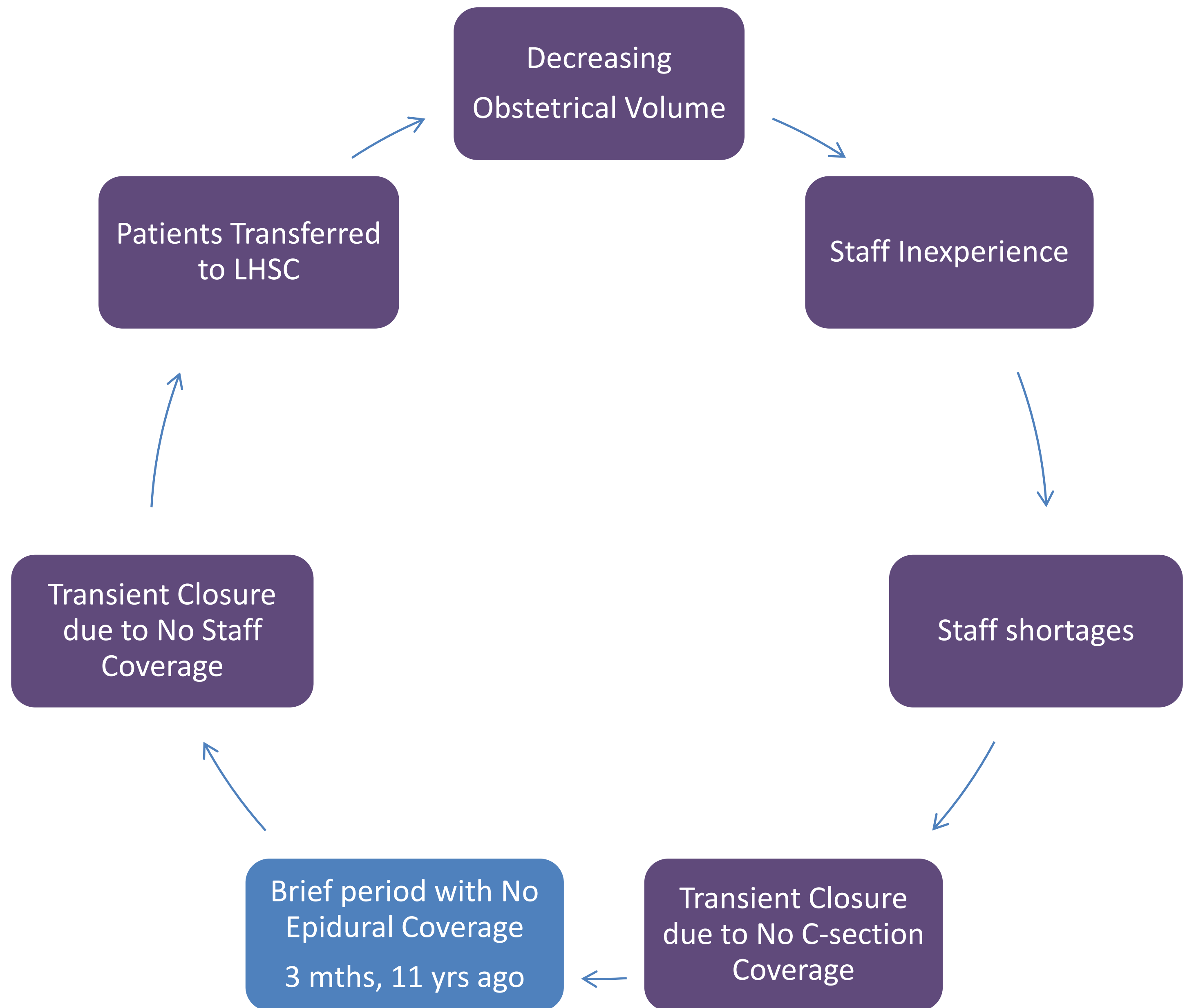
History Strathroy Middlesex General Hospital (SMGH) Obstetrics Program

- As best we can tell, there has been an obstetrical element at SMGH for it's entire 105-year history, though practice has evolved substantially from a past when home birth was the norm
- At the time that the senior member of our team started, care was provided by numerous FPs, mainly to their own patients, signing out to colleagues ad hoc, with cesarean section provided by our general surgeon and urologist
- 15 years ago, we switched to FP Ob group with weekly rotation
- 3 years ago, addition of obstetrician

Trends over the years:



Most recently

- With increasing visible focus on hospital finances, and stronger emphasis on patient safety, and the interplay between these concerns, like many other hospitals, SMGH is discussing closing the obstetrical program

- There has been a constant concern for the program having multiple threats to closure over the years

Small program issues:

- Small/rural programs tend to be FP Ob run; thus, FP’s will be responsible for implementing and updating policies and procedures
- Time commitments for relevant obstetrical and neonatal/paediatric CME can be time consuming
- Friction between colleagues in other departments (ER, surgery, anaesthesia) can occur

Constant need to justify the existence of such a small program especially if it is shrinking naturally!

Is the SMGH Obstetrics Program worth saving?

It depends on many factors:

Are there physicians/staff willing to continue in a low volume program? Can they maintain their competence?

Does the community/patients want the program?

Are referring physicians confident in the program?

Let's look at the literature…

Does FP Ob intrapartum care compare favourably to Ob/Gyn care for low-risk obstetrics?

Differences in intrapartum obstetric care provided to women at low risk by family physicians and obstetricians [10]

- 1985-86 retrospective chart review of 3 urban hospitals in the GTA
  - 1115 in FP Ob and 1250 in Ob/Gyn group
- Groups were similar in characteristics, and all were low-risk patients
- FP Ob's had more primiparous women, more women under 19 years old, and more women with lower SES
- They looked at major and minor outcomes

Major outcomes[10]:

- No maternal or neonatal deaths in the study.
- Neonatal morbidity was the same between groups:
  - Birth weight
  - NICU admissions
  - Intubation
  - APGAR score <6 at 5 min
- Same rate of c-section

Minor Outcomes[10]:

Ob/Gyn had higher rates of:

- Artificial rupture of membranes
- Inductions
- Augmentation of labour
- Epidural anaesthetic
- Operative vaginal births
- Episiotomies in multips (not primips)

FP Ob:

- Shorter length of stay
- Increased rates of breastfeeding
- Higher rate of 1-2° tears but not 3-4° tears

Conclusion[10]:

- No major safety differences between FP Ob's vs. OB/Gyn
- FP Ob’s intervened less

Perinatal Outcomes: A Comparison Between Family Physicians And Obstetricians [2]

- 1995 American retrospective case study
  - 578 FP Ob and 1354 Ob/Gyn patients
- FP Ob group:
  - More SVDs, more successful VBACs, and a lower C-section rate (15.4% vs 26.5%) than Ob/Gyn group.
  - More vacuum assisted deliveries
  - Fewer forceps assisted deliveries
  - Fewer diagnoses of cephalopelvic disproportion
- Fetal outcomes:
  - Similar in both groups
  - 5-min APGAR score of 9 on average in both groups

Outcomes of deliveries by family physicians or obstetricians: a population-based cohort study using an instrumental variable [1]

- Retrospective Canada wide cohort study from 2006-2009 comparing obstetrical outcomes between FP Ob's and Ob/Gyns
- Huge review > 700,000 patients.
- Result:
    - **There were no statistically significant differences in perinatal death, maternal mortality or any major neonatal morbidity**.

Does the literature support FP Ob's being safe to deliver low risk Obstetric patients?

Bottom line

FP Ob deliveries are safe when compared to Ob/Gyn deliveries for low-risk patients

What about places with low obstetrical volumes?
Are they safe?

Safety considerations:

- In many fields such as oncology, research shows that centralizing referrals improve outcomes.
  - Higher volumes -> more experience -> better results.

Does this translate to obstetrics?

Safety considerations:

- In the 1990's, the SOGC arbitrarily defined low volume obstetrics as <25 deliveries/physician/year.
  - This was not evidence based.
  - Resulted in far reaching consequences for lower volume centres, even now

- In rural and remote areas with low populations and low birth numbers, is it safe for women to deliver in their communities, or is it safer for them to travel to a bigger centre?

Does delivery volume of family physicians predict maternal and newborn outcome? [7]

- In 2002, Klein et al sought to find out if practice volumes change outcomes?
- Retrospective review comparing low-volume and high-volume rural programs from 1997-98
- Found that practice volumes **did not** change outcomes.
- No difference in maternal morbidity, 5-min APGAR scores, or NICU admissions.

Rural obstetrics: Joint position paper on rural maternity care [4]

- Should Lower Volume/Rural Centres Continue to Provide Maternity Care?
- The joint recommendations came from the SRPC (Society of Rural Physicians of Canada), SOGC, and CFPC for rural obstetrical practice in 1998 – has not been updated.
- Literature reviewed from 1980-1997
- Defined rural as care provided by a small number of physicians with limited access to special resources.
  - Rural remote: 80-400km from a level 2-3 centre
  - Rural isolated: >400km
  - Rural close: <80km but self-sufficient medical community

Rural obstetrics: Joint position paper on rural maternity care [4]

Conclusion:

- Rural community care is better than transfer to regional centre:
  - Fewer preterm births, shorter hospital stays, lower infant mortality
  - Better for the mother financially and psychosocially
- At the time, there were no studies comparing outcomes between centres with and without C-section capability
  - Decided it would be better to have C-section capability, but if not possible, keep already successful programs running

Rural obstetrics: Joint position paper on rural maternity care [4]

Final recommendations:

- Women should receive high quality maternity care close to home
- Rural hospitals should continue to provide low risk obstetrical programs
- Care should be standardized across Canada
- Risk management/transfer policies should be in place
- Providers should receive emergency training programs such as ALSO, ALARM, and NRP

What do we know so far?

- FP Ob deliveries are safe when compared to Ob/Gyn deliveries for low-risk patients
- FP Ob's have possible minor advantages such as more expectant management, and fewer interventions than Ob/Gyn colleagues
- Low volumes do not mean worse outcomes as long as the program is supported with ongoing CME including such things as ALARM,NRP and ALSO.
- C-section capability is not an absolute contraindication to doing deliveries in a low-risk centre if there are proper agreements with the referral centre.

Is FP Ob a dying practice and what happens to a community when it loses the capability of providing Ob care?

Is FP Ob a dying practice?

In a US article following trends in maternity care by family physicians practicing between 2000-2010[3]

- In 2000, 23% of maternity care was being provided by family doctors but by 2010 it was down to 9% ($p<0.0001$)

A 2017 American study showed that only 7% of graduating family doctors plan to provide obstetrical care. [11]

This is not a great trend!

Regionalization:

- Involves closing smaller programs and incorporating them into a larger center's program
- Historically maternity services are among the first cut when small hospitals are financially stressed.[7]
- Under the guise of "regionalization" or "centralization", restructuring and cost cutting leads to long term unintended consequences to patients, families, and communities.
- Regionalization looks like it makes sense:
  - It's more efficient
  - It costs less
  - Helps with staffing
  - Centralizes expertise

What happens when a community loses Obstetrics to Regionalization?

American data from 2004-2014[3]

- 45% of rural American counties had no maternity care affecting 1.8 million women
- During the study period Ob programs were lost in 9% more counties
- Looking at census information they demonstrated that communities that had maternity programs had:
  - More women of reproductive age (18-45y), more births per capita, higher household income, and more family doctors per 10,000 people than counties without.

What is the effect of regionalization of Obstetrics on delivery outcomes?

- Statistics show that term uncomplicated pregnancies have better neonatal outcomes when delivered at level 1-2 hospitals. [7, 12]
- Low risk women delivered at level 3 hospitals have more medical intervention, which can lead to poorer outcomes for women and babies. [7, 12]
- It is preferred that low-risk centres have C-section capabilities, but even when they do not, outcomes are as good - if they have a good working relationship with their regional tertiary care centres. [7, 13]

Cultures of risk and their influence on birth in rural British Columbia[8]

- In 2012, Kornelsen and Grzybowski conducted open ended interviews of 27 rural Ob providers and 43 previous Ob patients in BC, asking them about their perceived risks in obstetrics in their communities (3 communities, 37-50% were Indigenous women)
- Issues within these communities:
  - Sudden decline in maternity care due to regionalization
  - Problems with physician recruitment and retention
  - Limited access to midwives and obstetrical nurses
  - More women travelling long distances to deliver in regional centres.

Cultures of risk and their influence on birth in rural British Columbia[8]

- The women talked about risk in terms of:
  - Having to deliver far from home
  - The loss of family support
  - The expense of staying in the city
  - The expense and stress of finding childcare for older children
  - The loss of the birth experience in their own communities where they felt comfortable and supported.
- The women wanted to deliver close to home and felt this loss.

Cultures of risk and their influence on birth in rural British Columbia[8]

- Doctors referenced "risk" as:
  - Preterm labours
  - Emergency air transfers for women in the second stage of labour for C-sections

- Doctors and patients saw risk in a very different way and saw the benefits and loss due to regionalization in very different ways

What are the downstream consequences of losing maternity care in remote areas?

- Klein et al wrote an editorial for CFP in 2002 describing the cascade of effects on a community when they lose maternity care. [6]
  - Level 1 (low risk) centre loses Obstetrical Program
  - Doctors and nurses stop practicing Obstetrics and women have to travel to deliver
  - The community becomes a "high outflow" community
    - Rate of premature births increases
    - Maternal and newborn complications increase
  - Healthcare becomes more expensive

Mothers, babies, and communities: Centralizing maternity care exposes mothers and babies to complications and endangers community sustainability [6]

Centralization effects:

- Physicians’ and Nurses’ job satisfaction suffers.
- Physicians retire and relocate, and the community cannot recruit the same kind of physician -> maternity and women’s health in general suffers.
- Residents, medical students and nursing students choose not to provide maternity care, restricting the next generation of women’s access to care.

Mothers, babies, and communities: Centralizing maternity care exposes mothers and babies to complications and endangers community sustainability [6]

Centralization effects (con't)

- Associated programs such as surgery and anaesthesia shrink, doctors take more call and are hard to replace when they retire.
- Women of reproductive age and their families leave the community if they can afford to.
- The SES of the entire community declines as the young workforce leaves and birth rate declines.

Back to the Strathroy Obstetrical Experience...

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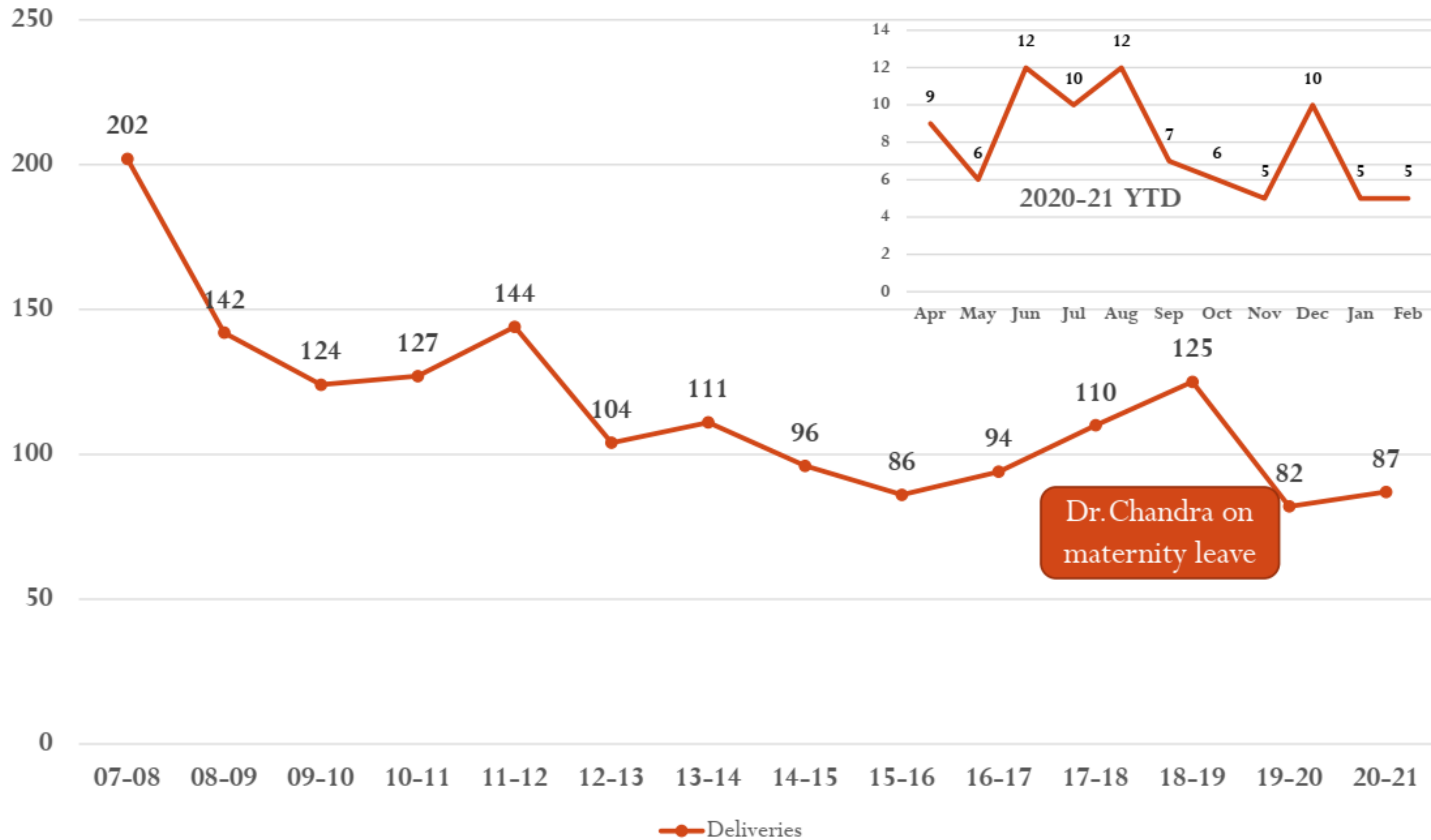
Deliveries by Fiscal Year



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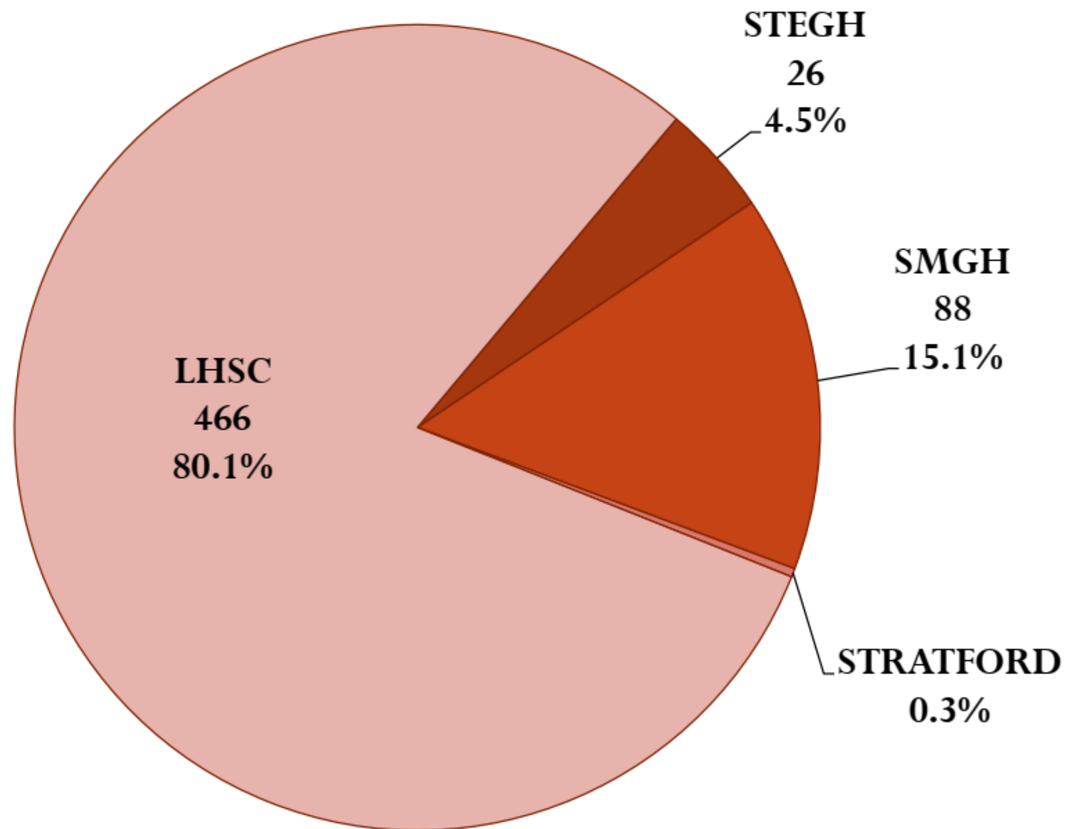
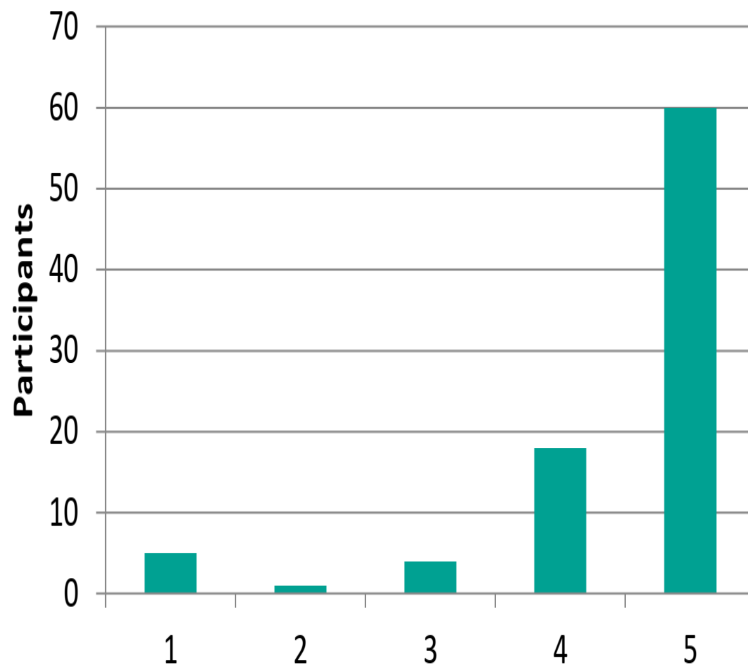
Where are Strathroy residents going for low risk OB Care?

(Distribution of Maternal Residence by Residence Code, FY 2018/19)



Source: DADS, IDS

Of those who delivered at SMGH, what is their experience?



Participants were asked, based on a rating scale from 1-5, 1 being ”Not Very Good” and 5 being “Very Good”, how their overall experience of giving birth was at SMGH.

The majority of respondents (88%) had either a good or very good experience delivering at SMGH. Note that there is a major difference between the percentage of participants who had a very good experience and those who did not have a very good experience.

Should the Strathroy Obstetrics Program be allowed to survive?
Or even expand?
How do we do this?

Let's review:

- SMGH's Obstetrical Program has consistently done well in accreditation reviews with experienced physicians (mostly FP Ob's) and nurses
- SMGH is a level 1 site which specializes in low-risk deliveries
- Literature shows better outcomes for low-risk patients in low-risk centers
- Patients who deliver at SMGH have a good experience

But:

- Obstetrical volumes are decreasing
- Possible reasons:
  - **Maternal Factors:** They decide to self-refer to midwives, they decide which hospital is safer, they talk to other parents and hear stories.
  - **Physician Factors:** Physicians have pre-set referral patterns, they don't trust FP Ob's, they let the patient decide, they may not know the program exists.

How do we make this happen more often at SMGH?

We are looking to you for thoughts and help!

Conclusions:

- If you follow the evidence, low-risk women, like Kristen that we presented, can safely deliver at low-risk centres
- Our program is safe.
- People who use it like it.
- Our program is valuable to the community, patients and learners.
- We hope this presentation builds confidence in the safety and quality of our program.
- We need the support of our colleagues to keep obstetrics in Strathroy alive.

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THANKS!

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