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Research

Contraceptive counselling in 3 Canadian bariatric surgery clinics: a multicentre qualitative study of the experiences of patients and health care providers

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Abstract

Background: Evidence suggests an increase in fertility and unintended pregnancy after bariatric surgery; contraceptive counselling, traditionally defined as a discussion of contraception options, is therefore an important facet of surgical planning. Our aim was to investigate patient experiences of contraceptive counselling, the attitudes of health care providers (HCPs) toward contraceptive counselling, and their perceptions of the facilitators and barriers to contraceptive counselling in bariatric surgery clinics.

Methods: We conducted a qualitative study using semistructured interviews with patients and HCPs at publicly funded Canadian bariatric surgery clinics from May 2018 to February 2019. We recruited bariatric HCPs from across Canada using snowball sampling, and recruited patient participants from 3 Canadian bariatric surgery programs. Patient participants had to be at risk of pregnancy in the postoperative period, aged 18–45 years old and have completed all preoperative counselling. We included HCPs who delivered care in a publicly funded, hospital-affiliated bariatric surgery clinic in Canada. Team members analyzed transcripts thematically.

Results: We completed 27 interviews (patient *n* = 16, HCP *n* = 11). Our analysis identified 3 separate themes: missing information in contraception counselling, making assumptions about who would benefit from counselling and strategies for improving contraception counselling. We found patients and HCPs wanted more resources on the safety and efficacy of contraceptive methods.

Interpretation: Our study showed a need for structured contraceptive counselling in bariatric surgery clinics. Information resources that support patients and HCPs who provide counselling are needed.

In Canada, most (80%) bariatric surgery is performed on women.[1] After bariatric surgery, fertility rates improve.[2] Obesity can affect the hypothalamic pituitary axis, cause polycystic ovarian syndrome and affect endometrial and oocyte quality, all of which can reduce fertility. By inducing weight loss, bariatric surgery can improve these factors and, therefore, increase fertility.[3,4] Because of concerns regarding pregnancy complications, evidence suggests that women who have undergone bariatric surgery should avoid pregnancy in the immediate postoperative period.[2,5] In Canada, clinicians advise patients wait 12 to 18 months after surgery before trying to conceive.[6,7] The current Canadian adult obesity clinical practice guideline states that "adequate contraception should be offered to women of reproductive age who undergo bariatric surgery," but does not provide details on content of or who should perform this counselling.[7] Guidelines also recommend that patients at risk of pregnancy be counselled on contraceptive choices for the postoperative period and advised to avoid the oral contraceptive pill if having a malabsorptive procedure (e.g., Roux-en-Y gastric bypass [RYGB]), because of reduced pill efficacy.[7,8]

Despite these recommendations, research suggests that patients with recent bariatric surgery are at increased risk for unintended pregnancy, with 1 study reporting 33% of pregnancies were unintended.[9–12] International studies show that health care providers (HCPs) working in bariatric surgery have substantial knowledge gaps, including what types of contraception are safe in individuals with obesity,[13,14] and patients report they are not routinely counselled.[11,15] A 2018 study in the United States of 360 women who had undergone bariatric surgery suggested that individuals counselled preoperatively are more likely to use contraception postoperatively.[15] Our key objectives were to investigate patient experiences of and HCP attitudes toward contraceptive counselling practices in bariatric surgery clinics in Canada.

Competing interests: Wendy Norman reports serving as an unpaid expert witness to the Government of Ontario, Office of the Attorney General, outside the submitted work. She was also a member of the board of directors with the Society of Family Planning, during the conduct of the study. Regina Renner reports grants from the Canadian Institutes of Health Research and payment from Merck Canada, outside the submitted work. No other competing interests were declared.

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Methods

Study design and setting

We designed a multicentre qualitative investigation involving semistructured interviews. We recruited patients from 3 academic bariatric centres in Canada, including 1 in British Columbia and 2 in Ontario. We chose sites based on clinical networks and to sample more than 1 province. We recruited health care providers from bariatric clinics in Central and Western Canada to provide a national perspective.

Participants

Eligible patients were fluent in English, were at risk of pregnancy in the postoperative period, were between 18 and 45 years of age and had completed all preoperative counselling for bariatric surgery. Given the lack of clear Canadian guidelines on who should perform contraceptive counselling and of published studies available on this topic, we invited interested HCPs from all disciplines (e.g., physicians, bariatric surgeons, nurses, counsellors) who worked in a Canadian, publicly funded, hospital-affiliated bariatric surgery clinic. All participants received a $50 Amazon gift card in recognition of their time.

Recruitment

We recruited patients from February 2018 to December 2018 at their final preoperative appointment at the 3 Canadian bariatric surgery clinics included in the study. An invitation to participate in the study was offered to all eligible individuals at these clinics by their HCPs at the time of their appointment. A research assistant provided interested patients with detailed study information on the day of their appointment and, if they agreed to participate, they completed an informed consent form. The interview was scheduled 2 to 4 weeks after the patient's expected surgical date.

Concurrently, we recruited English-speaking HCPs via email using the Canadian Obesity Network mailing list. All members of the network who had consented to receive communications from the organization received an email with information about the study. We used snowball sampling, whereby individuals who participated in the study identified other eligible participants to contact. Participants reviewed the consent form and provided consent before each scheduled interview.

Data collection

One author (B.D.; she/her, an obstetrician–gynecologist who was completing her MSc in health research methodology at the time of the study, with formal and practical training in qualitative research) developed semistructured interview guides for both patients and HCPs, with questions and probes adapted from previous survey-based research on this topic.[13] To prepare the interview guides, B.D. completed a literature search for relevant instruments and contacted the primary author of the most relevant study[13] to understand and adapt their instrument for our Canadian setting. All coauthors reviewed the interview guides, as did the Family Planning Research Committee at the University of British Columbia (UBC).

Patient interviews started with questions regarding demographic characteristics and then explored contraceptive counselling experiences in the bariatric surgery clinic (Appendix 1, available at www.cmajopen.ca/content/10/1/E255/suppl/DC1). Our HCP interviews started with demographics and questions on their contraceptive knowledge, and then explored their experiences with contraceptive counselling (Appendix 2, available at www.cmajopen.ca/content/10/1/E255/suppl/DC1). Recommendations on contraceptive counselling described in the interview guides were based on a current guideline.[13]

One author (B.D.) conducted all interviews, which were completed from June 2018 to February 2019. Another author (S.M., a health services researcher with extensive qualitative research experience with patients and HCPs in reproductive health care) provided guidance. Interviews were completed by telephone and audio-recorded with participants' permission.

Data analysis

One author (B.D.) transcribed the interviews with assistance from the team, and led coding and analysis, which was conducted concurrently with data collection. We completed interviewing when we reached thematic saturation based on our impressions of the data during and after data analysis; that is, we completed data collection once information from new interviews did not lead to changes in the codebook and or to new themes.[16]

We employed thematic analysis.[17,18] This approach emphasizes critical reflexivity and subjectivity, meaning-making and knowledge as context-dependent. Following Braun and Clarke's phases of thematic analysis,[18] 1 author (B.D.) began coding with an inductive approach, using NVivo (version 12) to organize the data. She began by identifying initial themes that were directed by the content of the data, with no attempt to fit them into a pre-existing framework, and used these initial themes to develop a codebook.[18] We then moved to a latent approach, where we worked to identify the deeper ideas, biases and ideologies that shaped the data.[18]

To move past descriptive analysis into interpretation, all coauthors met to discuss the ongoing interviews, refine and synthesize initial themes, identify patterns in the data, review the transcripts and determine when we had reached thematic saturation. To support analytic rigour, a second author (S.M.) reviewed iterative versions of the codebook and reviewed the entire coded data set in NVivo. Disagreements were rare, primarily about the language of codes, and resolved through discussion. One author (B.D.) kept memos to record her interpretations as a method of ensuring concordance between research questions, data collection and analysis throughout interviews and data analysis.

Ethics approval

Ethics approval was obtained from the UBC Behavioural Research Ethics Board (H17-02862) and the participating institutions from which patients were recruited.

Results

We completed 27 semistructured interviews with 16 patients and 11 HCPs. Interviews were about 20 (range 18–25) minutes in length, with additional time to ask demographic questions, build rapport, debrief and answer participant questions. Participant demographic characteristics are described in Table 1. Among patients, 9 were sexually active at the time of the interview. All 9 of these patients, and 4 others, were using contraception, with the levonorgestrel-releasing intrauterine device (n = 7) being the most common method. Two of 11 patients who had RYGB reported using oral contraceptive pills.

We identified 3 main themes in our qualitative analysis, namely missing information, making assumptions and improving experiences. Appendix 3, available at www.cmajopen.ca/content/10/1/E255/suppl/DC1, provides the codebook developed through the qualitative analysis. Table 2 describes the main themes and subthemes.

Table 1: Participant demographic characteristics

Characteristic	No. (%) of participant group
Patients (n = 16)	
Age, yr	
20–29	3 (19)
30–39	6 (37)
40–45	7 (44)
Type of surgery received	
Roux-en-Y gastric bypass	11 (69)
Sleeve gastrectomy	5 (31)
Patient education	
Grade 12 or below	3 (19)
University/college degree or more	13 (81)
Health care provider (n = 11)	
Area of practice*	
Atlantic Canada	0
Central Canada	6 (55)
Western Canada	4 (36)
Not reported	1 (9)
Role in clinic	
Surgeon	2 (18)
Physician (nonsurgeon)	2 (18)
Nurse	7 (64)
Primary surgery performed in clinic†	
Roux-en-Y gastric bypass	7 (63)
Sleeve gastrectomy	3 (27)

*Atlantic Canada includes Newfoundland and Labrador, New Brunswick, Nova Scotia and Prince Edward Island. Central Canada includes Quebec, Ontario and Manitoba. Western Canada includes Saskatchewan, Alberta and British Columbia.
†One participant reported an equal split of procedures.

Missing information

The theme of missing information was composed of 3 subthemes — avoiding conception, choosing contraception and changing gynecologic health. These are presented below by patient and HCP experience. Table 3 contains quotations describing this theme.

Patient experience

Patients identified that information exchange was a complex process that went beyond the patient–HCP dyad. They stressed the importance of clinical education materials, such as a patient orientation manual (Quotation 1, Table 3). Written resources were an important adjunct to in-person communication with HCPs, and patients perceived there was an overwhelming amount of information relayed at appointments.

Most patients reported that advice to avoid pregnancy for 18 months after surgery was provided, but that there was a lack of detail (Quotation 2, Table 3). In most cases, it was reported that contraception counselling was provided by nursing staff.

Patients reported that the topic of how to choose contraception was not consistently introduced by HCPs. They described that they were told to avoid pregnancy, but that no further information was given (Quotation 3, Table 3). Patient 15, who was using oral contraception after RYGB, similarly described a lack of information being provided (Quotation 4, Table 3).

Patients felt that little time was dedicated to contraceptive counselling and even less on how gynecologic health may change after surgery. One participant expressed concern over what to expect after her surgery with respect to her menstrual cycles (Quotation 5, Table 3).

Two patients reported that the first time they were told about avoiding pregnancy and the need for contraception occurred when they were approached by the study team.

Health care provider experience

Health care providers stressed the importance of delaying pregnancy for 18 months. All providers perceived that all patients in their clinics were routinely informed of this recommendation. Health care providers reported that nurses were most involved in providing counselling. Physicians reported that they were not participating in contraceptive counselling.

Table 2: Summary of qualitative themes

Theme	Subtheme
Missing information	• Avoiding conception • Choosing contraception • Changing gynecologic health
Making assumptions	• Who to counsel • Who does counselling • "I don't need counselling"
Improving experiences	• Content • Repetition • Format

Table 3: Theme of missing information

Quotation number	Quotation
1	That [the patient orientation manual] is what we call our bible. That's what we go back to and refer to all the time. (Patient 15)
2	It was literally one line on a slide. (Patient 5)
3	But they didn't talk about any contraceptives or way to prevent it or anything. (Patient 7)
4	I mean nothing's really been clarified as for the pill or whether to go off it or what … nobody has given me any other options. (Patient 15)
5	Like are my periods going to be different, because like it's supposed to be coming up within the week … is it going to be on time like it was before? (Patient 5)
6	Interviewer: Was there any training? Participant: No, none. (HCP 4)
7	The other NPs [nurse practitioners] may not have the same familiarity with contraception, so I think that's a barrier as well. Not to say that they don't know about it, but there isn't as much ease with it. (HCP 4)
8	I think that it could definitely be missed … I mean hopefully I don't miss it very often, but it's kind of up to the nurse that's doing the assessment to remember to tell them. (HCP 6)

Note: HCP = health care provider.

No counselling tools appeared to be used routinely in clinics. Providers reported that limited information was provided in patient education materials. A nurse who provided counselling related that no formal training was provided during their orientation to work at the clinic (Quotation 6, Table 3). Lack of time, resources, training and knowledge were identified as barriers to counselling. Without adequate training and knowledge, some HCPs felt their peers may not have the self-efficacy to conduct contraceptive counselling, identifying another barrier (Quotation 7, Table 3).

These experiences suggest that clinics may not have protocols for contraceptive counselling, and this absence could be another barrier to patient education. An HCP explained that counselling can be missed because there is no formal policy or measure to ensure that it happens (Quotation 8, Table 3).

Missing guidance on what information to include in counselling, how to counsel and who should counsel was identified as a barrier to effective information exchange. Additionally, training appears to be site dependent and not standardized. We did not identify any facilitators to counselling in our interviews.

Patients and HCPs agreed that limited information was provided in education sessions on contraception. For patients, missing information encompassed a lack of detail in 3 key areas of desired information: avoiding pregnancy, choosing the right method of contraception and gynecologic health. For HCPs, missing information in the form of a lack of onboarding and training materials was a barrier to providing counselling.

Making assumptions

There were 3 subthemes in the theme on assumptions: who to counsel, who does counselling and "I don't need counselling." Table 4 contains quotations describing this theme.

Patient experience

Patients suggested that HCPs may have assumed contraception counselling was not required ("I don't need counselling") for a variety of reasons including age, having already had children or already using a method of contraception (Quotation 1, Table 4). They also identified that a lack of HCP comfort with the topic may have led to a lack of information (Quotation 2, Table 4).

Patients recognized how these assumptions could lead to unintended pregnancies. Quotation 3 in Table 4 describes one participant's reflection on what could happen if contraception was not discussed.

Health care provider experience

Our HCP interviews also reflected these assumptions, with participants noting situations where they did not provide counselling based on their personal judgment of a client's sexual activity (Quotation 4, Table 4). Physician respondents further assumed that counselling was being carried out by other members of the care team, while describing they had no knowledge on what information was being communicated (Quotation 5, Table 4). We also found that HCPs encountered patient assumptions that generated challenges to counselling, including beliefs about the ability to ovulate (Quotation 6, Table 4).

Patients and HCPs identified that making assumptions was an issue during contraception counselling. Both groups agreed that HCPs were making assumptions about who would need counselling and HCPs identified how their assumptions about the roles and responsibilities of the care team and patient assumptions about their health are challenges to contraception counselling.

Improving experiences

For the "improving experiences" theme, we identified 3 subthemes, namely content, repetition and format. Table 5 includes quotations supporting this theme.

Patient experience

When describing what could have improved her counselling experience, 1 participant suggested written materials (Quotation 1, Table 5), which she felt would allow patients to see other care providers to access contraception, if desired.

Table 4: Theme of making assumptions

Quotation number	Quotation
1	I don't know if at that point they assume that I'm good and I know some things and I'm taken care of and so they don't continue the conversation. (Patient 4, who reported that she had an intrauterine device before her surgery)
2	I know some people get embarrassed talking about having sex and everything that goes along with it, but I think it would be good; they don't even discuss how long you should abstain. (Patient 13)
3	You don't want to be on the pill thinking you're fine and then all of sudden you get pregnant with your fourth child. (Patient 2)
4	If their husbands have had vasectomies … I don't counsel any further. (HCP 11)
5	I don't know what the nurses are telling them about what methods they can use. (HCP 2)
6	Often we get that "well I haven't ovulated" — that's not a problem. (HCP 9)

Note: HCP = health care provider.

Table 5: Theme of improving experiences

Quotation number	Quotation
1	I believe that a handout definitely would be helpful, something tangible. (Patient 12)
2	But just a reminder it's really important that if you do this [surgery] that you shouldn't be considering getting pregnant … because it's a really emotional time ... and you might not be thinking. (Patient 1)
3	Because, you know, knowledge is power. (Patient 9)
4	Having the various [contraception] options and then having reasons why birth control may not work well … but also talking about how their fertility changes when they lose weight. (HCP 4)

Note: HCP = health care provider.

Patients explained how repetition and multiple information formats could help in the stressful preoperative period. The instruction to delay pregnancy might be forgotten if only mentioned once (Quotation 2, Table 5).

Patients perceived that information on choosing contraception and changing gynecologic health in the postoperative period would support informed choices (Quotation 3, Table 5).

Health care provider experience

Health care providers identified the need for a resource that included the same 3 key domains patients identified as missing: contraception options, information on why to avoid pregnancy in the early postoperative period and changes to gynecologic health as a consequence of bariatric surgery (Quotation 4, Table 5).

Patients and HCPs wished to improve and empower contraceptive decision-making. We found both groups expressed a desire to improve experiences for future patients in the form of increased resources and education. The importance of timing and format of information delivery was discussed frequently, suggesting that contraception education should be initiated early in the surgical process and repeated often in both verbal and written forms.

Interpretation

Our study explored the experiences of patients who underwent bariatric surgery in BC or Ontario with respect to contraceptive counselling, as well as the attitudes of HCPs toward this topic. We identified 3 major themes: missing information, making assumptions and improving experiences. Health care providers identified barriers to counselling, including time constraints and a lack of training and resources.

Through our analysis, participants and HCPs identified topics that should be included in contraceptive counselling, namely fertility and delaying postoperative pregnancy, contraceptive choices and postoperative changes to gynecologic health, including increased fertility after bariatric surgery. This is similar to other survey-based research in bariatric surgery. In an American study, 42% of individuals who underwent bariatric surgery reported that they wished they had received more detailed contraceptive counselling.[15] To improve contraceptive counselling experiences and maximize uptake, it is critical to provide information on adverse effects and risks, to discuss efficacy of different types of contraception and to review any misperceptions about low fertility.[19] Our 3 identified topics fit into this discussion framework.

Our findings suggest that patients recognized HCPs were making assumptions about who should be counselled on contraception based on a variety of factors. Previous American, survey-based studies have described a lack of routine contraception counselling in bariatric surgery clinics, as well as a lack of familiarity with the topic among HCPs, which was another barrier reported in our results.[11,13,20] Bias in medical counselling is a well-documented phenomenon[21–23] and can

lead to a negative patient experience.[19,24] Further, individuals who are more satisfied with their family planning visit are more likely to use contraception.[25] In our study, HCPs described personal decision-making processes to determine who they would counsel, despite overarching clinic policies that all patients should receive the same information. If all patients are not routinely counselled, patients may not get the information they need to make informed health care decisions. This could lead to less satisfaction with method of contraception, non-use of contraception and, in the setting of increased fertility after bariatric surgery, increased risk of unintended pregnancy.

Our analysis also suggests that patients have a desire for information to be communicated in a variety of ways and at various time points in the surgical process. Providers echoed the importance of repetition. Similar to other studies, most counselling occurred during orientation sessions;[15] however, information retention can be challenging in the setting of medical appointments.[26] Consistently covering key topics with each patient at multiple points throughout the pre- and postoperative process could empower patients with the knowledge needed to make informed health care decisions. Providing additional resources, such as hand-outs, videos or take-home patient decision aids, is an evidence-based method of mitigating information overload and improving knowledge retention of medical information.[27–29]

Next steps in our research include the creation of resources tailored to contraceptive counselling in bariatric surgery clinics, ideally created in conjunction with patients and HCPs. These resources could be used to establish counselling protocols within clinics so that all individuals receive the same information.

Limitations

As we sampled patients from only 3 bariatric surgery clinics in 2 provinces, our results may not reflect experiences of care in other locations. This is also true of our HCP group, which included only individuals from Western and Central Canada, which is likely a limitation of the use of snowball sampling. We may have clustering of results in participants based on geographic area. Generalizability is further limited by only including English speakers and physician and nurse HCPs, despite sending invitations to all individuals involved in patient care. Missing professions include dietitians, social workers and counsellors, among others. Our patient interview guide was not piloted with patients before the start of the study, which could mean relevant topics were not investigated, but guides were reviewed by family planning research experts. We did not distribute transcripts back to participants for member checking.

Because all interviews were conducted by telephone, we could not observe nonverbal communication, which may have limited our ability to respond reflexively to participants' physical cues. Conversely, telephone interviews have been found to produce rich data and allow participants to feel more comfortable disclosing sensitive information about their sexual and reproductive health.[30]

Conclusion

Our study identified 3 themes that describe contraceptive counselling experiences in Canadian bariatric surgery clinics: missing information, making assumptions and improving experiences. To align with the priorities identified by patients and HCPs in our study, contraceptive counselling should include discussions of fertility and postoperative pregnancy, contraceptive choices and postoperative changes to gynecologic health. We found patients and HCPs wanted more resources on safety and efficacy of contraceptive methods. The results of our study are adaptable for high-income nations, in particular those with publicly funded health care systems.

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