Contraceptive Use Among Female Patients Who Underwent Bariatric Surgery in US Commercial Insurance Plans

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Background

- Bariatric surgery has become more common in the US, with 250,000+ surgeries performed annually[1]
- Current guidelines recommend to avoid pregnancy for 12 to 24 months following bariatric surgery because of risks to both mothers and their fetuses, including (but not limited to) nutritional deficiencies from active weight loss[2]
- Effective contraception, such as long-acting reversible contraception (LARC), is an important component of post-surgery care

Objective

To summarize the contraceptive use patterns among reproductive-aged women after bariatric surgery

Methods

- Using the Merative MarketScan Research database, we identified commercially insured patients 18 to 45 years old who underwent bariatric surgery between Jan 2017 and Sep 2021
- Patients with a minimum of 1-year baseline data prior to surgery and 1-year follow-up were included
- CPT, HCPCS, ICD-10 and NDC codes were used to identify bariatric surgeries and prescriptions
- Identified 1+ prescriptions for LARC (including intrauterine devices [IUDs] and/or implants) first, then oral and any other types of contraception for the remaining patients
- Calculated the percentage with at least 1 OB/GYN encounter at baseline and the median time to the new contraceptive prescription (for those did not have any prescription in the baseline period)
- McNemar Test was used to assess statistical significance

Results

Table 1. Baseline characteristics (N = 13,263)

Characteristic	n	%*
Age group (years)		
18-24	974	7%
25-34	3,884	29%
35-45	8,405	63%
Region		
Northeast	2,074	16%
North Central	3,361	25%
South	6,350	48%
West	1,461	11%
Unknown	17	<1%
Payer group		
Preferred provider organization	6,941	52%
Consumer Driven Health Plan	1,818	14%
Health maintenance organization	1,500	11%
High-Deductible Health Plan	1,145	9%
Other	1,859	14%

* %s might not total 100 owing to rounding

32% of women who underwent bariatric surgery received prescription for contraception

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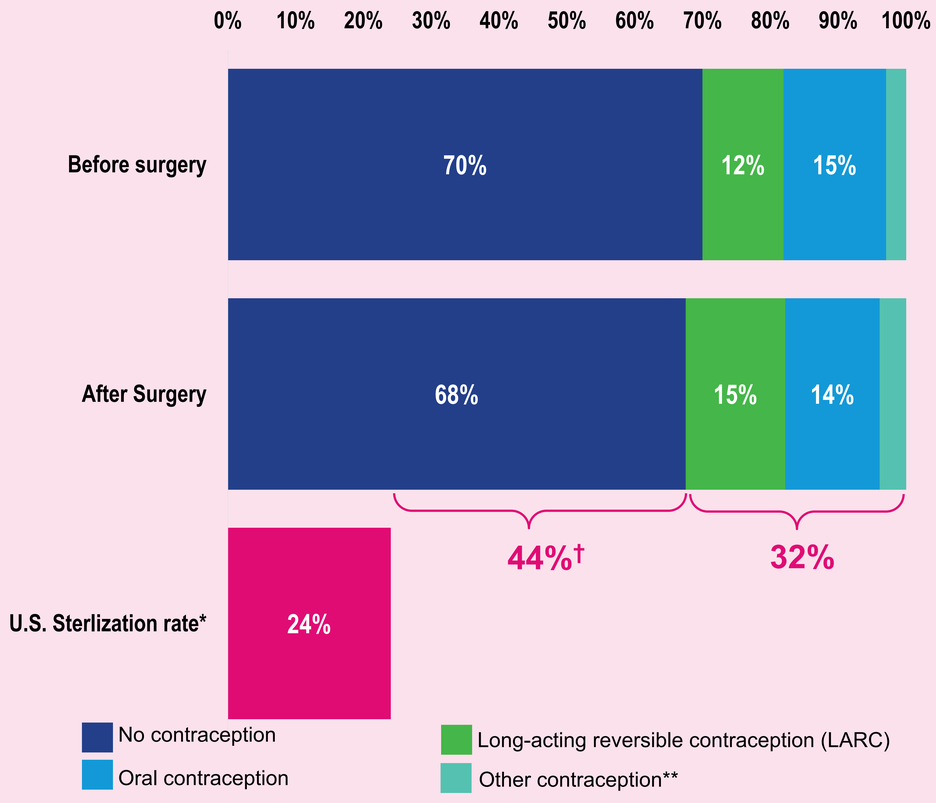
44% might not have had adequate protection from unintended pregnancy (UIP)†

14% were prescribed oral contraceptives but might not be able to prevent UIP due to malabsorption following certain bariatric surgery

Figure 1. Prescriptions for contraception before and after bariatric surgery‡



*24% of US females aged 15-49 used female or male sterilization for contraception in 2017-2019, according to the US National Center for Health Statistics[3]

†68% of bariatric surgery recipients who met the study's inclusion criteria did not have any indication of prescriptions for contraception within 12 months of surgery. Assuming 24% of the population had been sterilized, 44% (= 68%-24%) of patients who underwent bariatric surgery might not have been adequately protected against UIP

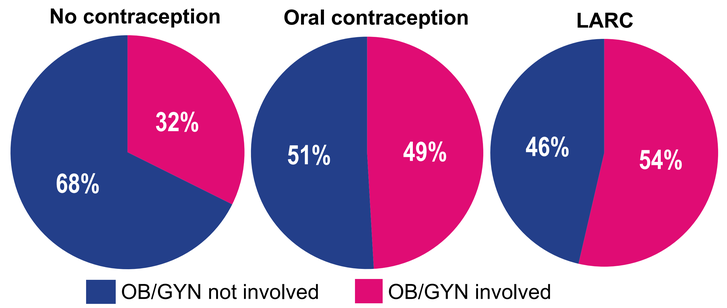
**Includes but not limited to injection, rings, patches, and diaphragms

‡Changes between pre- and post-surgery for all contraceptive types were statistically significant at $P<0.01$ (McNemar Test)

Results (continued)

Figure 2. OB/GYN involvement in the baseline period

- 54%, 49%, and 32% of patients who received LARC, oral contraception, or no contraception prescription within the first year after surgery were seen by an OB/GYN during the 1-year baseline period before bariatric surgery



- First oral contraception and LARC was prescribed within 129 days to 154 days (approximately 4 to 5 months) in median after bariatric surgery

Table 2. Time (days) until the first contraceptive prescription

Contraception	Median (Q1-Q3)	Mean
Oral	129 (52-236)	147
LARC (IUD/implants)	154 (74-243)	164

Q, quartile

Discussion and Conclusions

- The findings from this study, combined with the US sterilization rate, indicate that 44% of women who undergo bariatric surgery might have been exposed to UIP, posing risks to themselves and their fetuses
- An additional 14% who were prescribed oral contraception might also be under-protected, owing to malabsorption of oral pills after surgery
- OB/GYN involvement was high for the subgroup that received prescription for LARC (IUD or implant) suggesting that OB/GYNs may help facilitate the use of effective contraception after bariatric surgery
- The delay between bariatric surgery and first contraception prescription may expose patients to UIP
- **Limitations of this study** include lack of data on sterilization rates, non-prescriptive contraception, and types of bariatric surgery, leading to variable UIP risks among those who were not prescribed contraception or received oral contraception; we did not have data on sexual orientation and patient choices that affect need for contraception; no data on prescription compliance

References

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