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Progestin-only pill use over 6 months postpartum

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1 Progestin-only pill use over 6 months postpartum

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23 **Abstract**

24 Objectives: To determine progestin-only pill (POP) use at 3 and 6 months  
25 postpartum among women who chose POPs at the postpartum visit.

26 Study Design: Secondary data analysis of a prospective observational study  
27 with telephone interviews at 3 and 6 months postpartum to assess  
28 contraceptive use.

29 Results: Of 440 women who attended the postpartum visit, 92 (20.9%) chose  
30 POPs. Current POP use was 44/84 (52.4%) at 3 months, 33/76 (43.4%) at 6  
31 months, and 32/76 (42.1%) at both 3- and 6-month follow-up assessments.

32 Conclusion: About half of women who plan POP use at the postpartum visit  
33 are not using this method at 3 months after delivery.

34 Implications: About half of women with a prescription for progestin-only pills  
35 will be not using this method at 3 months postpartum; further understanding  
36 of continued sexual activity and breastfeeding may clarify pregnancy risk for  
37 those not reporting modern contraception use during the postpartum period.

38

39 Keywords: postpartum contraception; progestin-only pills; hormonal  
40 contraception; breastfeeding

## 41 **1.0 Introduction**

42 Clinicians often prescribe progestin-only pills (POPs) in the postpartum  
43 period either as a woman's preferred method or as a bridge to estrogen-  
44 containing contraception as POPs are well-tolerated, have few  
45 contraindications, and are safe in lactating women [1-4]. While short-acting  
46 hormonal methods generally decrease rapid repeat pregnancies, the specific  
47 contribution from POPs can be difficult to measure as they are frequently  
48 categorized with combined oral contraceptive pills, patches, and rings [2,5].  
49 However, one study demonstrated that a plan for postpartum POP use was  
50 associated with an increased risk of rapid repeat pregnancy when compared  
51 with any other reversible method, including no method at all [6]. The  
52 retrospective nature of that study limited assessment of actual POP use after  
53 prescription. In this study, we aim to investigate POP use at 3 and 6 months  
54 postpartum among women who planned POPs at the postpartum visit.

55

## 56 **2.0 Materials and Methods**

57 We conducted a secondary analysis using data from a prospective  
58 observational study assessing outcomes before and after the University of  
59 California, Davis Department of Obstetrics and Gynecology changed routine  
60 scheduling of the postpartum visit from 6 weeks to 2 to 3 weeks after  
61 delivery [7]. Briefly, we enrolled women who delivered at our institution,  
62 planned to return for postpartum care, and wanted to delay a subsequent  
63 pregnancy for at least one year. We excluded women who required assisted

64 reproductive technologies to achieve the index pregnancy, planned  
65 vasectomy, underwent a permanent contraceptive procedure or  
66 hysterectomy, or had an intrauterine device (IUD) or implant placed during  
67 the delivery hospitalization. Participants reported their postpartum plan for  
68 contraception on a baseline survey completed during pregnancy. We  
69 reviewed the electronic medical record (EMR) for contraception plan at post-  
70 delivery hospital discharge, POP prescription at discharge, and the method  
71 selected at the postpartum visit. We contacted participants at 3 and 6  
72 months after delivery to obtain information about contraception use, repeat  
73 pregnancies, and breastfeeding. The University of California, Davis  
74 Institutional Review Board approved this study, and all participants gave  
75 informed consent.

76 For this analysis, we evaluated the primary outcome of reported POP  
77 use at 3 and 6 months after delivery among women who chose POPs at the  
78 postpartum visit as documented in the EMR. Secondary outcomes included  
79 other contraceptive methods used (including combined oral contraceptives)  
80 and repeat pregnancies within 6 months postpartum. Additionally, we  
81 evaluated predictors of POP use, including decision for POPs during  
82 pregnancy or prior to hospital discharge, timing of postpartum visit  
83 scheduling (i.e. 6 weeks or 2-3 weeks after delivery), and breastfeeding  
84 status (i.e. none, partial, or exclusive).

85 We used REDCap electronic data system for data management [8] and  
86 SPSS 25.0 (IBM Corp., Armonk, NY, USA) to perform descriptive statistics and

87 comparisons between groups with Fisher's exact tests for categorical  
88 variables and t test for continuous variables.

89

### 90 **3.0 Results**

91 Of 440 women who attended a postpartum visit, 92 (20.9%) chose  
92 POPs per EMR documentation. All individuals desiring POPs received a  
93 prescription, either at hospital discharge (n=35, 38.0%) or postpartum visit  
94 (n=57, 62.0%). Other chosen methods most commonly included condoms  
95 (24.3%), none (21.8%), and hormonal IUD (13.4%). We had follow-up  
96 information for 84 (91.3%) participants at 3 months and 76 (82.6%)  
97 participants at 6 months postpartum. Demographics, obstetric  
98 characteristics, and breastfeeding status of POP users are presented in Table  
99 1. All participants planned to breastfeed after delivery.

100 At follow-up, 44 (52.4%) and 33 (43.4%) participants reported POP use  
101 at 3- and 6-months postpartum, respectively (Figure 1). Among 76  
102 participants with data from both 3- and 6-month interviews, 32 (42.1%)  
103 reported POP use at both assessments. For participants not reporting POP  
104 use, commonly used methods included condom use (18.9%) or no method  
105 (19.7%) by the 6-month interview (Figure 1). Two participants became  
106 pregnant within 6 months postpartum (one POP and one condom user).

107 Antepartum plan for POPs, plan for POP at hospital discharge, POP  
108 prescription at discharge, timing of postpartum visit scheduling, and

109 breastfeeding status did not predict POP use at 3 or 6 months postpartum  
110 (Table 1).

111

#### 112 **4.0 Discussion**

113 We found that only half of women who choose POPs at the postpartum  
114 visit are using POPs at 3 and 6 months after delivery, which may account for  
115 the previously reported increased risk of rapid repeat pregnancy with this  
116 method [6]. Because we did not confirm when participants started POPs after  
117 their postpartum visit, we cannot determine if this finding reflects a true  
118 discontinuation rate or whether participants had accepted a prescription  
119 without intending to use POPs. We also noted that participants did not use  
120 POPs as a bridge to more effective modern contraception; instead, most  
121 reported using barrier or no method at follow-up.

122 A strength of this study is the high follow-up through 6 months  
123 postpartum and ability to assess changes in contraceptive use over time. In  
124 contrast, previous studies have relied on retrospective evaluation of POP  
125 prescriptions at a single reference timepoint for POP use during the  
126 postpartum course [5,6]. However, our study may be limited in its  
127 generalizability to other settings as most participants were educated,  
128 privately insured, and have demonstrated ability to follow up in clinic. In  
129 addition, breastfeeding status surveys did not provide enough information to  
130 distinguish between exclusive breastfeeding and lactational amenorrhea  
131 method (LAM). Some women may have met LAM criteria (i.e. nearly or



132 exclusively breastfeeding, amenorrheic, and within 6 months postpartum [9])  
133 but reported “none” as the contraceptive method. Lastly, we did not obtain  
134 data regarding continued sexual activity during follow-up, and some may  
135 have reported no contraceptive method use if not sexually active. Despite  
136 the relatively high rates of reported barrier or no contraceptive use, only two  
137 participants reported a repeat pregnancy. Additional studies assessing  
138 continued sexual activity and postpartum amenorrhea may clarify pregnancy  
139 risk, especially among breastfeeding women.

140         Counseling regarding pregnancy spacing and contraceptive method  
141 selection is an integral component of postpartum care [10]. Given the  
142 discrepancy between planned POP use at the postpartum visit and actual  
143 reported use at 3 and 6 months after delivery, our findings demonstrate the  
144 dynamic state of contraceptive method use in the postpartum period and  
145 emphasize the importance of ongoing follow-up to facilitate shared decision-  
146 making with individuals regarding their pregnancy risk and contraceptive  
147 method choice throughout the postpartum period.

Brief Research Article

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195 Table 1: Characteristics of progestin-only pill (POP) users and non-users at 3- and 6-months postpartum  
 196 among those who chose POPs at the postpartum visit

Characteristic	Postpartum visit (n=92)	3 months postpartum			6 months postpartum		
		POP use (n=44)	Non-POP use (n=40)	p-value	POP use (n=33)	Non-POP use (n=43)	p-value
Age	29.6±4.6	29.1 ±4.8	30.1 ±4.3	0.32	29.1 ±4.8	29.6 ±4.4	0.66
Hispanic or Latina ethnicity	24 (26.1)	13 (29.5)	11 (27.5)	1.0	8 (24.2)	11 (25.6)	1.0
White race	66 (71.7)	35 (79.5)	27 (67.5)	0.23	28 (84.8)	28 (65.1)	0.07
College graduate or higher	58 (63.0)	29 (65.9)	26 (65.0)	1.0	23 (69.7)	27 (62.8)	0.63
Full-time employment	59 (64.1)	29 (65.9)	25 (62.5)	0.82	22 (66.7)	27 (62.8)	0.81
Private insurance	76 (82.6)	37 (84.1)	34 (85.0)	1.0	28 (84.8)	37 (86.0)	1.0
Living with partner	84 (91.3)	41 (93.2)	36 (90.0)	0.70	32 (97.0)	37 (86.0)	0.13
Parity ≥2	34 (37.0)	17 (38.6)	15 (37.5)	1.0	11 (33.3)	18 (41.9)	0.48
Prior miscarriage	24 (6.1)	11 (25.0)	10 (25.0)	1.0	9 (27.3)	9 (20.9)	0.59
Prior induced abortion	18 (19.6)	8 (18.2)	8 (20.0)	1.0	5 (15.2)	9 (20.9)	0.57
Index pregnancy planned	64 (69.6)	31 (70.5)	27 (67.5)	0.82	26 (78.8)	27 (62.8)	0.21
Intend POPs during antepartum care	40 (43.5)	22 (50.0)	15 (37.5)	0.28	19 (57.6)	16 (37.2)	0.11
Intend POPs at hospital discharge	58 (63.0)	24 (54.5)	27 (67.5)	0.27	19 (57.6)	29 (67.4)	0.47
Received POP prescription at discharge	35 (38.0)	13 (29.5)	15 (37.5)	0.49	12 (36.4)	15 (34.9)	1.0

Brief Research Article

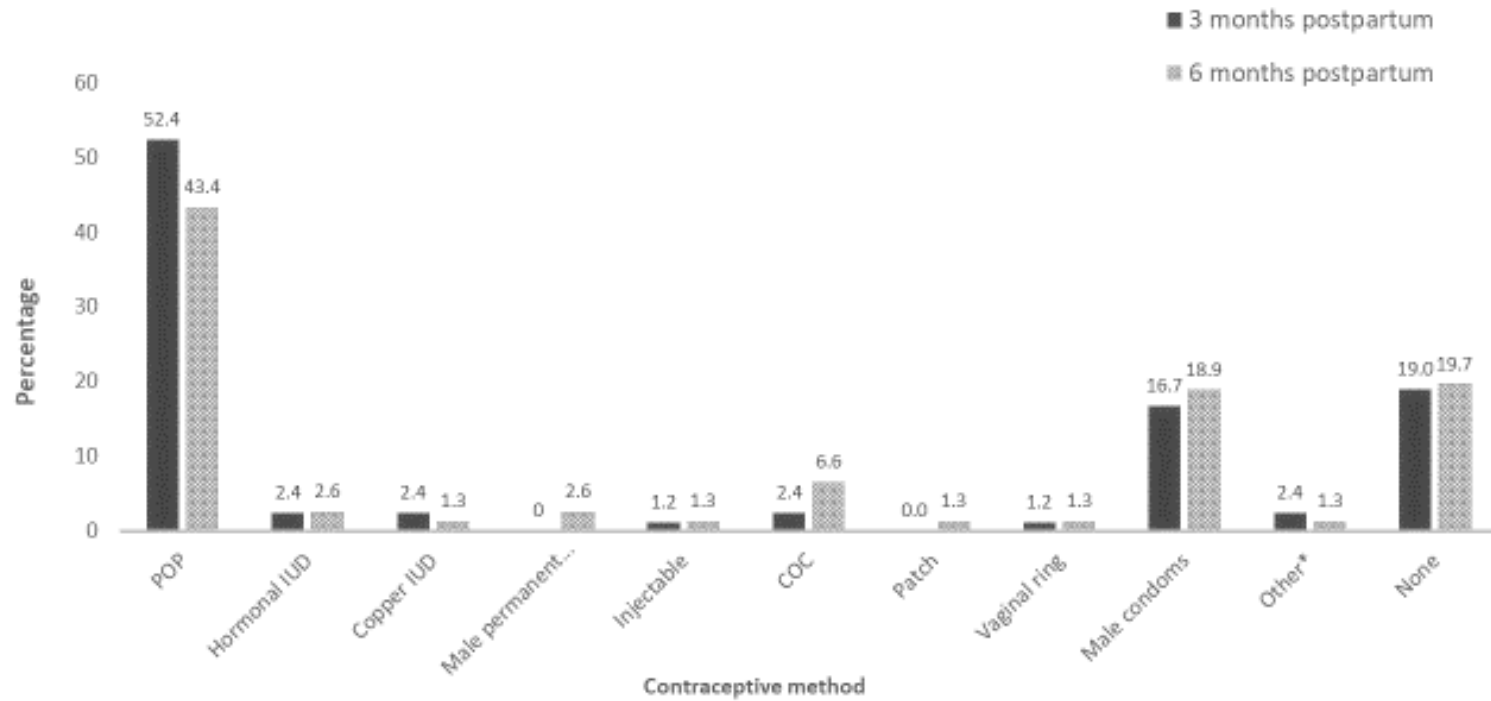
	Scheduled 6-week postpartum visit Breastfeeding status	49 (53.3)	26 (59.1)	19 (47.5)	0.38	20 (60.6)	20 (46.5)	0.25
	Exclusive breastfeeding	73 (79.3)	22 (50.0)	22 (55.0)	0.67	13 (39.4)	17 (38.6)	1.0
	Any breastfeeding	92 (100.0)	35 (79.5)	33 (82.5)	0.79	20 (60.6)	27 (62.8)	1.0
197	Data shown as mean ± standard deviation or n (%)							
198	POP: progestin-only pill							

199 Figure Legend

200 Figure 1: Contraceptive method reported at 3 and 6 months after delivery

201 among women choosing progestin-only pills at the postpartum visit

Figure 1



POP=progestin-only pill; IUD= intrauterine device; COC=combined oral contraceptive pill; \*Other includes withdrawal (n=1) and natural family planning (n=1) at 3-months follow-up and spermicide (n=1) at 6-months follow-up