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Comparing Long-Acting Reversible Contraception Insertion Rates in Women with Medicaid vs. Private Insurance in a Clinic with a Two-visit Protocol

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Abstract

Objective—This study examined whether women with Medicaid are less likely to receive long-acting reversible contraception (LARC) in a clinic requiring two visits for insertion.

Study design—LARC insertion and pregnancy rates were compared among women with Medicaid vs. private insurance, along with other predictors, in a retrospective chart review (N=447).

Results—Univariately, fewer women with Medicaid vs. private insurance received LARC (66% vs. 79%, $p<.01$) and more become pregnant (18% vs. 6%, $p<.001$). Significant multivariate predictors of not receiving LARC were being unmarried and postpartum, both of which were associated with having Medicaid.

Conclusion—Women with Medicaid are less likely than women with private insurance to have a requested LARC device inserted when a clinic requires two visits for insertion.

Keywords

long-acting reversible contraception; LARC; insertion rates; socioeconomic disadvantage; Medicaid; two visits

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Conflicts of interest: none.

1. Introduction

Almost half of pregnancies in the US are unplanned [1], with socioeconomically disadvantaged women twice as likely to experience unintended pregnancy [2]. Long-acting reversible contraception (LARC) is the most effective form of reversible contraception, but most providers still require two or more visits for LARC insertion [3], despite a 2009 recommendations by the American College of Obstetricians and Gynecologists (ACOG) to provide same-day insertion [4]. Providers cite needing insurance pre-approval, insufficient time to complete counseling and insertion in one visit, protocols requiring laboratory testing prior to insertion, and concerns about higher discontinuation rates with same-day placement as reasons for not practicing same-day insertion [5]. Common barriers women cite for not returning for the second visit include not having time and difficulties with transportation [6], barriers that would be expected to affect socioeconomically disadvantaged women in a disparate manner.

While studies suggest two-visit protocols are barriers to LARC placement [e.g., 7, 8], to our knowledge, few studies have examined whether socioeconomically disadvantaged women are disproportionately affected by this requirement. One report examined whether socioeconomic status affected post-abortion intrauterine device (IUD) insertion rates in a clinic requiring two visits [6]. While statistical power was limited by relatively small sample sizes, data from retrospective and prospective studies included in the report indicate that half as many women with Medicaid received an IUD compared to women with private insurance. A retrospective study of women with Medicaid who requested an IUD in a clinic requiring two visits found only 54% returned to have the requested device inserted [9], but lack of a comparison group left it unclear whether women with Medicaid were disproportionately affected. This study also identified being unmarried and postpartum as predictors of LARC insertion.

The present study sought to compare rates of LARC insertion and pregnancy among a large sample of socioeconomically disadvantaged women, operationalized as having Medicaid insurance, compared to women with private insurance seeking LARC in a clinic that required two visits. All patients, regardless of insurance type, were counseled and completed an insurance pre-approval form at the first visit and LARC insertion took place at the second. Insurance pre-approval was initiated at the first visit primarily so that women with private insurance could be informed of any out-of-pocket expense prior to the second visit; women with Medicaid were not expected to have any out-of-pocket insurance expenses. The present study also examined predictors of LARC insertion.

2. Methods

2.1 Study Population

A retrospective chart review was conducted of all adult patients of reproductive age (18–50 years) who requested insurance pre-approval for LARC between January 1, 2013 and December 31, 2013 at the University of Vermont (UVM) Obstetrics and Gynecology clinic in Burlington, VT. While implementation of the Affordable Care Act and contraceptive mandate were ongoing at the time these data were collected, this did not influence the

practice of requiring insurance pre-approval and two visits for insertion in this clinic. The UVM Institutional Review Board approved this study.

2.2 Procedure

The medical charts of all patients who submitted a pre-approval form were reviewed by one of the authors (TMH). Patients seeking LARC for indications other than contraception (e.g., abnormal uterine bleeding) were excluded, as were uninsured women, patients with Medicare, and women who were unable to receive the device due to medical complication/contraindication (e.g., cervical stenosis). The remaining records were reviewed using a standard form to record age, race, marital status, insurance status, nulliparity and postpartum status (defined as <three months postpartum at the time of LARC request as many postpartum visits were not within six weeks), as well as the type of LARC requested, whether the LARC device was inserted within six months of the request, and any pregnancies in the 12 months following request. If there were no visits at least 12 months after device request clearly documenting the presence or absence of pregnancy during this time, the patient was excluded from the pregnancy analysis.

2.3 Statistical Methods

Characteristics were compared between patients with Medicaid and private insurance using chi-square tests and two sample *t* tests. Chi-square tests were also used to compare Medicaid- and privately-insured patients on the primary outcome of whether a device was inserted within six months of initial request and the secondary outcome of pregnancy in the 12 months following the request. Stepwise logistic regression, which included all participant characteristics, was used to determine potential predictors of a patient receiving LARC. Statistical analyses were performed using SAS Version 9.4 (SAS Institute, Cary, NC) and statistical significance was based on *p* .05.

3. Results

There were 652 insurance pre-approval forms submitted in 2013. Two hundred and five women were excluded, primarily for seeking LARC for indications other than contraception (*n*=194). Of the remaining 447 women, 144 had Medicaid and 303 had private insurance. There were significant differences between women with Medicaid vs. private insurance on all demographic and reproductive characteristics except race (Table 1).

In univariate analysis, women with Medicaid were significantly less likely to have LARC inserted in the six months after request vs. privately-insured women (66% vs. 79% respectively, *p*<.01). Twelve-month follow-up data were available for 67% (*n*=96) of women with Medicaid and 70% (*n*=211) of women with private insurance. Women with Medicaid were more likely to become pregnant in the year following LARC request vs. privately-insured women (18% vs. 6% respectively, *p*<.001).

In multivariate analysis based on stepwise logistic regression, being postpartum increased the odds of not receiving requested LARC (OR 2.40, 95% CI 1.24–4.67) as did being unmarried (OR 1.85, 95% CI 1.02–3.33). Insurance type was not an independent predictor of LARC receipt nor was any other characteristic examined.

4. Discussion

The present data suggest that socioeconomically disadvantaged women are significantly less likely than more affluent women to get a requested LARC device inserted in a clinic with a two-visit protocol. These results are consistent with the patterns observed by Stanek et al. [6], but benefit from a substantially larger sample size, and extend the results of Bergin et al. [9] by including women with private insurance for comparison.

Insurance status predicted LARC receipt in univariate, but not multivariate analyses, where being unmarried and postpartum were significant predictors of not receiving LARC, paralleling the results of Bergin et al. [9]. Together, these data underscore the importance of ACOG's longstanding recommendation of same-day, single-visit LARC insertion protocols, including immediate postpartum LARC [4, 10].

The primary limitation of this study is its retrospective nature and that fact that associations are not the same as causation. Despite these limitations, this study serves to highlight the potential benefits of a single-visit protocol for LARC provision in decreasing disparities in unintended pregnancy.

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Table 1

Characteristics of participant

Characteristic	Women with Medicaid insurance n=144	Women with private insurance n=303	p value
Age (years)	27.6 ± 6.1	30.2 ± 8.1	<.001
Race			.25
White not Hispanic	131 (92)	286 (95)	
Other	13 (9)	17 (6)	
Marital status			<.001
Single/divorced	115 (80)	174 (57)	
Married	29 (20)	129 (43)	
Nulliparous	12 (8)	128 (43)	<.001
Postpartum	95 (66)	72 (24)	<.001
Type of LARC requested			<.001
Levonorgestrel IUD	85 (60)	244 (82)	
Copper IUD	14 (10)	33 (11)	
Etonogestrel implant	44 (31)	21 (7)	

Data are mean ± standard deviation or n (%).

Postpartum defined as <three months since delivery.

LARC, long-acting reversible contraception; IUD, intrauterine device.