Use of highly effective contraception in pregnant women with opioid use disorder

Tani Malhotra, MD[1]; David Sheyn, MD[2]; Kavita Shah Arora, MD, MBE, MS[3]
1 Metrohealth/University Hospitals Combined Fellowship; 2 University Hospitals; 3 Metrohealth Medical Center

Introduction

- Provision of postpartum contraception is associated with reduction in short interval pregnancies
- Rates of unintended pregnancies in patients with substance use disorders (SUD) approach 71-90%
- National rates of inpatient postpartum provision (IPP) of long acting and permanent methods (LAPM) in patients with opioid use disorder(OUD) is unknown
- Aim: Determine rates and associated factors of IPP LAPM in patients with OUD

Methods

- Retrospective cross-sectional study of gravidas with OUD using the National Inpatient Sample from 2012-2016
- Gravidas who underwent tubal sterilizations (PPTL) or received a long-acting reversible contraception (LARC) identified using ICD codes
- Univariate and multivariate regression analysis performed

Results

- Of 22,340 deliveries to patients with OUD, 2,291 (10.2%) received LAPM
- 86.8% of those who received LAPM underwent a PPTL
- Cesarean section was the strongest predictor of LAPM
- Those with a stillbirth were less likely to choose LAPM
- Region of delivery and hospital location were also associated with LAPM utilization

Discussion

- The rate of LAPM utilization in patients with OUD appears to be associated with delivery location and route, specifically in urban academic centers and larger facilities.
- Efforts should be made to expand access to LAPM equitably across the country.
- Addressing barriers to provision of IPP LARCs may increase the overall utilization of LAPM

Gravidas with opioid use disorder who **delivered at urban teaching hospitals** and those who had a **cesarean delivery** were most likely to receive long-acting and permanent methods of contraception

Table 1: Comparison of Patients with Opiate Use Disorder Who Received Long-Acting Reversible Contraception, Post-Partum Tubal Ligation, or Neither

	LARC (n=302)	PPTL (n= 1,989)	Neither (n=20,049)	p
Age (years), Mean (SD)	27.5(4.8)	30.5(4.7)	27.6(4.9)	<0.001
Race				<0.001
Caucasian	145 (48.0)	1,289(64.8)	13,077(65.2)	
African-American	18(5.9)	101(5.1)	938(4.7)	
Hispanic	42(13.9)	107(5.4)	1,045(5.2)	
Asian/Pacific Islander	0(0.0)	<10	86(0.4)	
Native American	<10	16(0.8)	263(1.3)	
Region				<0.001
Northeast	68(22.5)	374(18.8)	4,861(24.2)	
Midwest	70(23.1)	415(20.9)	4,351(21.7)	
South	73(24.2)	931(46.8)	7,648(38.1)	
West	91(30.1)	272(62.6)	3,189(15.9)	
Hospital Location				<0.001
Rural	<10	359(18.0)	2,940(14.7)	
Urban Non-Teaching	11(3.6)	386(19.4)	4,625(23.1)	
Urban Teaching	283(93.7)	1,246(62.6)	12,484(62.3)	
Hospital Size				<0.001
Large	241(79.8)	1,245(62.6)	11,576(57.7)	
Medium	55(18.2)	493(24.7)	5,584(27.9)	
Small	<10	253(12.7)	2,889(14.4)	
Insurance Type				<0.001
Public	182(60.3)	1,816(91.3)	17,578(87.7)	
Private	20(6.6)	173(8.7)	2,471 (12.3)	
Route of Delivery				<0.001
Cesarean Delivery	122(40.4)	1,510(75.9)	6,224(31.0)	
Spontaneous Vaginal Delivery	137(45.4)	403(20.3)	11,489(57.3)	
Operative Vaginal Delivery	43(14.3)	76(3.8)	2,336(11.6)	
Pre-Term Delivery	52(17.2)	218(10.9)	2,731 (13.6)	0.02
Intrauterine fetal demise	<10	<10	211(1.1)	0.04
Length of Stay (days), Median (IQR)	3(2-4)	3(2-4)	2 (2-3)	<0.001

Table 2: Univariable and Multivariable Regression Analysis of Factors Associated with Long-Acting and Permanent Postpartum Contraception in Women with Opiate Use Disorder

	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)
Age per Year	1.07(1.07-1.08)	**1.07(1.06-1.09)**
Non-White Race	1.14 (1.03-1.20)	0.91 (0.81-1.04)
Hospital Location		
Rural	1.09(0.98-1.22)	1.13 (0.91-1.39)
Urban Teaching	1.19(1.10-1.29)	**1.15 (1.06-1.31)**
Urban Non-Teaching*	--	--
Geographic Region		
West*	--	--
Northeast	0.75(0.70-0.85)	1.00 (0.69-1.32)
South	1.23(1.13-1.33)	1.02 (0.96-1.22)
Midwest	0.97(0.87-1.07)	++
Public Insurance	1.16(1.08-1.29)	**1.42 (1.22-1.66)**
Pre-existing Conditions	1.43(1.31-1.57)	**1.12(1.01-1.25)**
Preterm Delivery	0.84 (0.74-0.96)	**0.82 (0.69-0.96)**
Stillbirth	0.24 (0.11-0.55)	**0.23(0.08-0.65)**
Mode of Delivery		
Spontaneous Vaginal Delivery*	--	--
Operative Vaginal Delivery	0.68 (0.52-0.88)	0.98 (0.71-1.36)
Cesarean Delivery	5.49 (4.99-6.04)	**5.21 (4.64-5.83)**

*referent
++ no significant association noted in univariable analysis