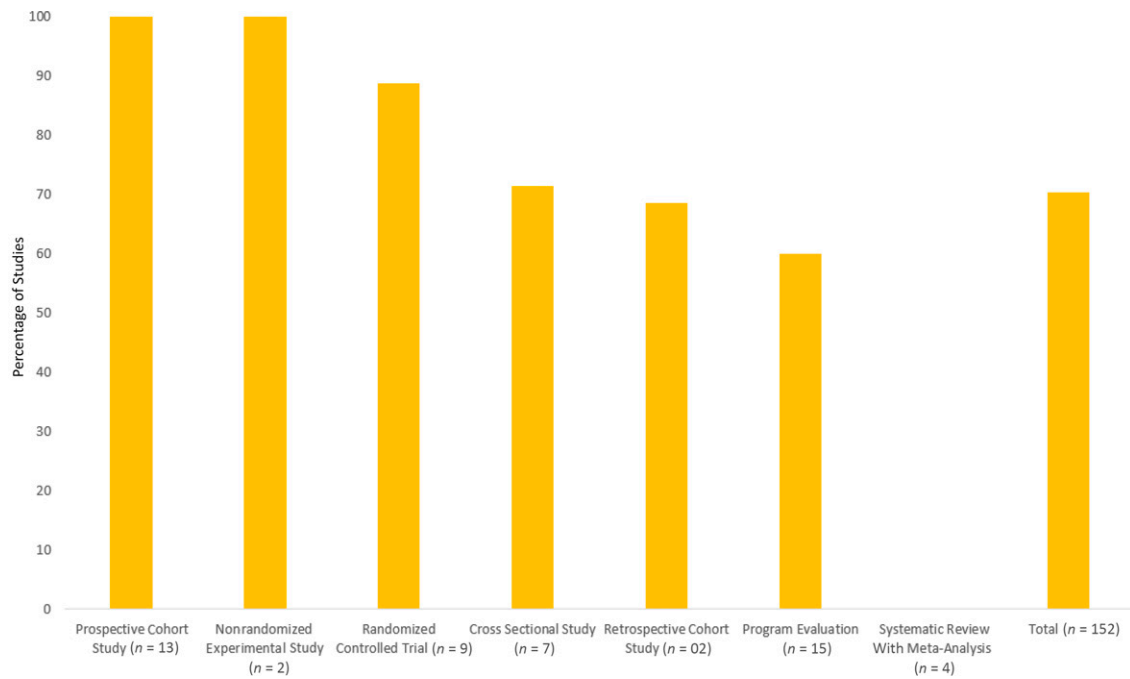


## Supplemental Information



### SUPPLEMENTAL FIGURE 3

Reporting of race/ethnicity data by study type.

**SUPPLEMENTAL TABLE 4** Ovid MEDLINE Search Strategy

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1	exp "Opioid-Related Disorders"/ or opiate substitution treatment/
2	((opiod* or opiate* or heroin or fentanyl or oxycodone or oxycontin or hydrocodone or Vicodin or codeine or morphine or Percocet or oxymorphone or Opana or Kadian or Avinza or meperidine) and (abuse* or abusing or addict* or dependency or "use disorder" or "use disorders")).ti,ab.
3	((opiod* or opiate* or heroin or fentanyl or oxycodone or oxycontin or hydrocodone or Vicodin or codeine or morphine or Percocet or oxymorphone or Opana or Kadian or Avinza or meperidine) adj2 ("use" or using or user or users or used or misuse)).ti,ab.
4	1 or 2 or 3
5	(pregnan* or peripartum or "peri partum" or perinatal or "peri natal" or postpartum or "post partum" or antepartum or "ante partum" or prenatal or "pre natal" or antenatal or "ante natal" or puerperium).ti,ab.
6	Pregnant women/ or postpartum period/ or pregnancy/ or exp perinatal care/ or prenatal care/
7	5 or 6
8	exp pregnancy outcome/ or exp "Patient Acceptance of Health Care"/ or exp pregnancy complications/ or exp "infant, low birth weight"/ or exp infant mortality/ or drug overdose/ or cesarean section/ or length of stay/ or exp infant death/
9	("medications for opioid use disorder" or "medications for treatment of opioid use disorder" or overdose or "adequate care" or mortality or morbidity or "gestational diabetes" or "prenatal high blood sugar" or preeclampsia or "high blood pressure" or hypertension or eclampsia or "prenatal depression" or "antenatal depression" or "postpartum depression" or "pregnancy loss" or "fetal demise" or complications or "failure to progress" or "fetal distress" or "perinatal asphyxia" or "shoulder dystocia" or malposition or "cephalopelvic disproportion" or "uterine rupture" or "rapid labor" or "cesarean section" or "caesarean section" or forceps or "maternal death" or "placenta previa" or "abruptio placentae" or "placental abruption" or PROM or "preterm rupture of membranes" or stillbirth or stillborn or death or "birth outcome*" or "low birthweight" or preterm or prematur* or "small for gestational age" or NAS or "neonatal abstinence syndrome*" or "neonatal withdrawal syndrome" or NOWS or "length of stay" or custody or "fetal alcohol" or FASD or hemorrhage or SIDS or "health care utilization" or "healthcare utilization" or "health care utilisation" or "healthcare utilisation" or "health services utilization" or "health services utilisation").ti,ab.
10	8 or 9
11	10 and 4 and 7
12	(case reports or comment or editorial or letter or "review").pt.
13	exp Africa/ or exp Caribbean region/ or Central America/ or Latin America/ or exp Canada/ or Greenland/ or Mexico/ or exp South America/ or Antarctic regions/ or arctic regions/ or exp Asia/ or exp Europe/ or exp islands/ or exp Oceania/
14	animals/ not humans/
15	(mice or mouse or animal or animals or porcine or pig or swine or rat or rats or murine).ti.
16	11 NOT (12 or 13 or 14 or 15)

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**SUPPLEMENTAL TABLE 5 All Quantitative Study Data (n = 152)**

Study Details			Outcome		R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling			
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary Outcome	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Agthe et al (81), 2009	2002–2005 Baltimore, MD	Randomized controlled trial (80)	Clonidine treatment of NAS	Duration of opioid pharmacologic treatment of NAS	Infant	Yes	No	40	Yes	No	No	N/A	N/A	N/A
Almano et al (27), 2009	2000–2006 Philadelphia, PA	Retrospective cohort study (258)	In utero methadone exposure	GA	Infant	Yes	Yes	27.5	Yes	No	No	N/A	Yes	N/A
Angiolita et al (82), 2016	2012 National	Cross-sectional study (8292)	States that permit child abuse charges for nonprescribed drug use in pregnancy	MOUD use in pregnancy	Prenatal/obstetric	Yes	No	15	Yes	No	Yes	No	N/A	N/A
Bachhuber et al (83), 2017	2013–2014 National	Cross-sectional study (3354)	Medicaid coverage of methadone maintenance	Use of MOUD among pregnant women	Prenatal/obstetric	Yes	No	15.1	Yes	Yes	No	N/A	Yes	No
Backes et al (84), 2012	2007–2009 Columbus, OH	Retrospective cohort study (121)	NAS treatment inpatient or outpatient combined	LOS	Infant	Yes	No	2	No	N/A	No	N/A	N/A	N/A
Bell et al (22), 2016	2010–2015 Knoxville, TN	Retrospective cohort study (301)	Opioid detoxification	PTB/intrauterine fetal demise	Infant	Yes	No	12	Yes	Yes	No	N/A	No	No
Benningfield (28), 2012	2005–2008 International	Retrospective Cohort Study 175	Anxiety and depression symptoms	Treatment discontinuation, ongoing use, PTB	Prenatal/obstetric	Yes	No	16.6	Yes	No	No	N/A	Yes	N/A
Borghella (85), 2003	1996–1999 Philadelphia, PA	Retrospective cohort study (100)	Maternal methadone dose	NAS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Bhatt-Mehta et al (86), 2019	2009–2017 Ann Arbor, MI	Retrospective cohort study (136)	In utero exposure to opioids and SSRIs vs opioids alone	LOT	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Binin et al (87), 2019	2019 Portland, OR	Systematic review with meta-analysis unknown	Buprenorphine vs methadone	NAS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Bogen et al (88), 2018	2010–2012 Pittsburgh, PA	Randomized controlled trial (49)	Study formula Enfamil 20 or 24 calories/ounce	Days to weight nadir, maximum percent weight loss, days to return to BW, and percentage weight change per day from days 4 to 21	Infant	Yes	No	6.1	Yes	N/A	N/A	N/A	N/A	N/A

## SUPPLEMENTAL TABLE 5 Continued

Study Details		Outcome			R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling			
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary Outcome and Severity	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Bracero et al (89), 2016	2003–2009 Morgantown, WV	Retrospective cohort study (91)	SSRI use concomitant with methadone	NAS incidence and severity	Infant	Yes	No	1.1	Yes	No	No	N/A	N/A	N/A
Brogly et al (90), 2018	2015–2016 Massachusetts	Prospective cohort study (113)	Methadone vs buprenorphine	Adherence to clinical care, urine screen results, MOUD cessation	Prenatal/obstetric	Yes	No	19.5	No	N/A	No	N/A	N/A	N/A
Brogly et al (29), 2018	2006–2011, 2015–2016 Massachusetts	Retrospective cohort study (1020)	Methadone or buprenorphine during pregnancy	GA, LBW, LOS	Infant	Yes	Yes	23.2	Yes	No	No	N/A	Yes	No
Brogly et al (91), 2014	2000–2013 Multiple sites	Systematic review with meta-analysis (1370)	Buprenorphine vs methadone	NAS severity	Infant	No	Yes	Not given	No	N/A	No	N/A	N/A	N/A
Chavan et al (92), 2017	2015–2017 Lexington, KY	Prospective cohort study (118)	Antepartum buprenorphine dose	NAS incidence	Infant	Yes	No	7.8	No	N/A	Yes	No	N/A	N/A
Chisolm et al (83), 2011	2005–2008 International	Retrospective cohort study (119)	Cigarette smoking, depression	NAS severity	Infant	Yes	No	11	No	N/A	No	N/A	N/A	N/A
Choo et al (94), 2004	2000–2001 Baltimore, MD	Prospective cohort study (29)	Prenatal tobacco exposure	NAS severity	Infant	Yes	No	88	Yes	No	No	N/A	N/A	N/A
Chung et al (85), 2020	2013–2016 Philadelphia, PA	Retrospective cohort study (138)	Prenatal care	Well-child care	Infant	Yes	No	30	Yes	Yes	Yes	No	Yes	Yes
Cochran et al (86), 2018	2015–2016 Pittsburgh, PA	Nonrandomized experimental study (21)	Patient navigation intervention	Ongoing use, prenatal care, discharge status	Prenatal/obstetric	Yes	No	5	No	N/A	No	N/A	N/A	N/A
Coker et al (97), 2018	2014–2016 Little Rock, AR	Retrospective cohort study (64)	Exploratory	Buprenorphine adherence	Prenatal/obstetric	Yes	No	20	Yes	No	No	N/A	N/A	N/A
Collier et al (88), 2019	2009–2015 Burlington, VT	Retrospective cohort study (98)	Colocation of MOUD and prenatal care	Pregnancy interval, pregnancy intention, postpartum contraception	Postpartum	Yes	No	0	N/A	N/A	N/A	N/A	N/A	N/A

**SUPPLEMENTAL TABLE 5 Continued**

Study Details		Outcome			R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling			
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Coulson et al (99), 2019	2014–2017 Asheville, NC	Retrospective cohort study (221)	Maternal methadone or buprenorphine dose	NAS, fetal growth (HC and BL)	Infant	Yes	No	95.5	Yes	No	No	N/A	N/A	N/A
Coyle et al (100), 2012	2005–2008 International	Retrospective cohort study (39)	Buprenorphine vs methadone	Neurobehavior	Infant	Yes	No	12.9	Yes	No	No	N/A	N/A	N/A
Crane et al (101), 2019	2019 Ohio	Program evaluation (1098)	MOUD through maternal medical home model	Patient engagement, retention in prenatal care, access to housing	Prenatal/obstetric	Yes	No	9	Yes	No	No	N/A	N/A	N/A
Davis et al (102), 2018	2014–2017 National	Randomized controlled trial (116)	Methadone or morphine to treat NAS	LOS	Infant	Yes	No	24.1	Yes	No	No	N/A	N/A	N/A
DeAtley et al (103), 2017	2014–2015 Kentucky	Program evaluation (59)	Morphine dose based on NAS management protocol	LOS, LOT	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Ellis et al (104), 2019	2010–2017 Detroit, MI	Retrospective cohort study (81)	Exploratory	Treatment retention, opioid misuse	Postpartum	Yes	No	29.1	N/A	N/A	Yes	No	N/A	Yes
Gaalema et al (105), 2013	2009–2012 Burlington, VT	Retrospective cohort study (75)	Methadone or buprenorphine exposure in utero	Time to NAS treatment	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Gaalema et al (106), 2012	2012 International	Retrospective cohort study (129)	Methadone or buprenorphine exposure in utero	NAS severity and incidence, time to treatment	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Garrison et al (23), 2016	2011–2013 Albuquerque, NM	Prospective cohort study (359)	Opioid only or polydrug use during pregnancy	Fetal growth (BW, BL, SGA)	Infant	Yes	Yes	78.8	Yes	Yes	No	N/A	No	N/A
Gawronski et al (107), 2014	2010–2011 Columbus, OH	Retrospective cohort study (150)	Methadone or buprenorphine exposure in utero	GA, BW, NICU admission, LOS, LOT, NAS incidence	Infant	Yes	No	3.3	Yes	No	No	N/A	N/A	N/A
Gibson et al (108), 2017	2000–2014 Cleveland, OH	Retrospective cohort study (403)	Gestational age	NAS (need for pharmacologic treatment, LOS, LOT)	Infant	Yes	No	18.9	Yes	No	No	N/A	N/A	N/A

## SUPPLEMENTAL TABLE 5 Continued

Study Dates, Location		Type of Study, (N)		Primary Exposure		Primary Outcome		Category		Mentioned in Study		R/E Reporting		Outcome		Bivariate Analyses by R/E		Multivariable Modeling	
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary Outcome	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?					
Goodman et al (24), 2019	2017–2018 Northern New England	Program evaluation (223)	Implementation of best practice checklist	GA, LBW, breastfeeding at discharge, access to naloxone, nicotine replacement therapy, breastfeeding counseling	Multiple	Yes	No	2.2	Yes	Yes	No	N/A	N/A	N/A					
Gopalan et al (35), 2019	2012–2015 Pittsburgh, PA	Retrospective cohort study (118)	Fixed-dose vs symptom-triggered benzodiazepine dosing	Benzodiazepine used during detoxification, methadone conversion vs stable methadone dose, neonatal Apgar scores, NICU admission, obstetrical complications	Multiple	Yes	Yes	4.3	No	N/A	No	N/A	N/A	N/A					
Gressler et al (109), 2019	2007–2015 National	Retrospective cohort study (110 285)	Regional and state legislation on OUD during pregnancy	OUD diagnosis during pregnancy and MOUD receipt	Prenatal/obstetric	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A					
Grossman et al (110), 2017	2008–2016 New Haven, CT	Program evaluation (287)	Implementation of plan-do-study-act cycles (nonpharmacologic treatment, PRN morphine, new assessment, inpatient admission instead of NICU)	LOS, morphine use, hospital costs	Infant	Yes	No	12.1	Yes	No	No	N/A	N/A	N/A					
Guille et al (30), 2020	2017–2018 Charleston, SC	Nonrandomized experimental study (98)	In person v telemedicine treatment	Treatment retention, UDS results, MAS diagnosis	Multiple	Yes	No	13.3	Yes	No	No	N/A	Yes	N/A					
Heller et al (111), 2017	2017 Bangor, ME	Prospective cohort study (60)	NAS requiring pharmacologic treatment	Neurologic outcomes	Infant	Yes	Yes	0	N/A	N/A	N/A	N/A	N/A	N/A					
Hensley et al (112), 2018	2009–2015 Illinois	Retrospective cohort study (74)	Concurrent depression diagnosis	Prenatal care adherence	Prenatal/obstetric	Yes	No	Not given	No	N/A	No	N/A	N/A	N/A					

**SUPPLEMENTAL TABLE 5 Continued**

Study Details			Outcome		R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling			
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Holbrook et al (31), 2013	2005-2008 International	Retrospective cohort study (175)	Methadone vs buprenorphine treatment of OUD during pregnancy	Withdrawal symptoms during induction to MOUD, treatment retention	Prenatal/obstetric	Yes	No	16.6	No	N/A	Yes	No	Yes	No
Holbrook and Kaltenbach (113), 2010	2005-2009 Philadelphia, PA	Retrospective cohort study (308)	Biological sex	Need for NAS treatment, LOT, peak dose of medication	Infant	Yes	No	16.56	no	N/A	No	N/A	N/A	N/A
Holbrook and Kaltenbach (114), 2012	2008-2011 Philadelphia, PA	Retrospective cohort study (125)	Exploratory	Postpartum depression	Postpartum	Yes	No	15.2	No	N/A	No	N/A	N/A	N/A
Holbrook et al (115), 2012	2005-2008 International	Retrospective cohort study (131)	Methadone or buprenorphine	Maternal infection incidence, obstetrical outcomes	Prenatal/obstetric	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Holmes et al (116), 2016	2012-2015 Lebanon, NH	Program evaluation (207)	Implementation of plan-do-study-act cycles	Pharmacologic treatment of NAS, LOS, hospital costs	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Howard et al (117), 2017	2015-2016 Boston, MA	Retrospective cohort study (88)	Parental presence at bedside	LOS, LOT, NAS severity	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Huybrechts et al (32), 2017	2000-2010 National	Retrospective cohort study (201 275)	Coexposure to opioids and psychotropic medications	NAS severity	Infant	Yes	No	34	Yes	No	No	N/A	Yes	No
Isemann et al (118), 2011	2002-2007 Cincinnati, OH	Retrospective cohort study (128)	Exploratory	Response to methadone therapy for NAS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Isemann et al (119), 2017	2013-2016 Cincinnati, OH	Retrospective cohort study (264)	Exploratory	NAS severity and incidence	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Jancaitis et al (25), 2020	1998-1998 Baltimore, MD	Prospective cohort study (210)	Methadone vs nonpharmacologic treatment	Dropout of residential care against medical advice	Prenatal/obstetric	Yes	No	81.4	Yes	Yes	Yes	No	N/A	No
Jansson et al (120), 2017	2012-2016 Baltimore, MD	Prospective cohort study (41)	Intrauterine exposure to buprenorphine	NAS severity	Infant	Yes	No	7.3	No	N/A	No	N/A	N/A	N/A
Jansson et al (26), 2012	2006-2009 Baltimore, MD	Prospective cohort study (49)	Methadone or polydrug exposure	Fetal neurodevelopment, infant development	Infant	Yes	No	38.8	Yes	Yes	No	N/A	No	N/A

SUPPLEMENTAL TABLE 5 Continued

Study Details		Outcome		R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling				
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary Outcome	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Jansson et al (121), 2007	2002–2004 Baltimore, MD	Prospective cohort study (50)	Methadone and vaginal tone	NAS symptoms and pharmacologic treatment	Infant	Yes	No	42	Yes	No	No	N/A	N/A	N/A
Jansson et al (122), 2010	2006–2008 Baltimore, MD	Prospective cohort study (64)	Methadone	NAS severity	Infant	Yes	No	27.7	No	N/A	No	N/A	N/A	N/A
John McConnell et al (123), 2020	2012–2017 Portland, OR	Program evaluation (1531)	Implementation of Project Nurture	CPS involvement, prenatal care, GA, LBW	Multiple	Yes	No	92.9	Yes	Yes	No	N/A	Yes	No
Jones et al (124), 2005	2000–2003 Baltimore, MD	Randomized controlled trial (20)	Methadone vs buprenorphine treatment of OUD during pregnancy	Incidence of NAS, amount of opioid pharmacologic treatment of NAS, LOS, peak NAS score	Infant	Yes	No	80	Yes	No	No	N/A	N/A	N/A
Jones et al (125), 2014	2005–2008 International	Retrospective cohort study (58)	Maternal buprenorphine dose	Peak NAS score, GA, Apgar scores, HC, birth length and weight, amount morphine to treat NAS, LOS, LOT	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Jones et al (126), 2013	2005–2008 International	Retrospective cohort study (73)	Maternal methadone dose at delivery	NAS incidence and severity, pharmacologic treatment of NAS, LOS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Jones et al (127), 2013	2005–2008 International	Retrospective cohort study (131)	Tobacco use at study entry	NAS incidence and severity, pharm treatment of NAS, LOS	Infant	Yes	No	Not given	No	N/A	No	N/A	N/A	N/A
Jones et al (128), 2010	2005–2008 International	Randomized controlled trial (175)	Methadone vs buprenorphine treatment of OUD during pregnancy	NAS incidence, score, LOS, pharmacologic treatment of NAS, HC	Infant	Yes	No	16.6	Yes	No	No	N/A	N/A	N/A



**SUPPLEMENTAL TABLE 5 Continued**

Author, Publication Year	Study Dates, Location		Type of Study, (N)	Primary Exposure		Primary Outcome	Category	R/E Reporting		Bivariate Analyses by R/E			Multivariable Modeling		
	Year	Location		Exposure	Outcome			Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure		Analysis of Outcome	Difference in Outcome
Kaltenbach et al (129), 2018	2005–2008	International	Retrospective cohort study (98)	Prenatal exposure to methadone or buprenorphine	Child growth, cognition, language, sensory processing, and temperament, maternal perceptions of stress, home environment, and addiction severity	Infant	Yes	No	6	No	N/A	No	N/A	N/A	N/A
Kaltenbach et al (130), 2012	2005–2008	International	Retrospective cohort study (129)	Exploratory	NAS expression	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Knittel et al (131), 2020	2016–2018	North Carolina state prison	Retrospective cohort study (179)	Exploratory, incarceration in a North Carolina state prison during pregnancy with OUD	Receipt of MOUD during pregnancy, referral to MOUD after incarceration	Prenatal/obstetric	Yes	No	62.4	N/A	N/A	Yes	No	No	N/A
Kohta et al (132), 2019	2009–2012	Pittsburgh, PA	Retrospective cohort study (791)	Prenatal LARC intent	Postpartum LARC receipt	Postpartum	Yes	No	3.9	Yes	No	Yes	No	N/A	N/A
Kraft (133), 2011	2008–2010	Philadelphia, PA	Randomized controlled trial (24)	Sublingual buprenorphine vs oral morphine to treat NAS	Neonatal safety, LOS, LOT	Infant	Yes	No	4.2	No	N/A	No	N/A	N/A	N/A
Kraft et al (134), 2017	2011–2016	Philadelphia, PA	Randomized controlled trial (63)	Buprenorphine vs morphine for NAS treatment	LOT for NAS	Infant	Yes	No	17.5	Yes	No	No	N/A	N/A	N/A
Krans et al (46), 2018	2014–2016	Pittsburgh, PA	Program evaluation (248)	Woman-centered OUD treatment services through Pregnancy Resource Center	Pregnancy-specific buprenorphine doses, prenatal and postpartum care, breastfeeding, contraception receipt	Multiple	Yes	Yes	6	Yes	No	No	N/A	N/A	N/A
Krans et al (135), 2016	2009–2012	Pittsburgh, PA	Retrospective cohort study (791)	Exploratory	Methadone vs buprenorphine during pregnancy	Prenatal/obstetric	Yes	No	3.1	N/A	N/A	Yes	No	N/A	N/A

**SUPPLEMENTAL TABLE 5 Continued**

Study Details		Outcome			R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling			
Author: Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary Outcome	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Krans et al (136), 2016	2009–2012 Pittsburgh, PA	Retrospective cohort study (791)	Exploratory	Screening for HCV, prenatal care for women with HCV infection, rate of HCV treatment enrollment	Prenatal/obstetric	Yes	No	3.1	N/A	N/A	Yes	No	N/A	N/A
Krans et al (39), 2018	2008–2013 Pennsylvania	Retrospective cohort study (7805)	Exploratory	Postpartum contraception receipt	Postpartum	Yes	No	12.2	N/A	N/A	Yes	Yes	Yes	Yes
Kreitinger et al (137), 2016	2016 Albuquerque, NM	Retrospective cohort study (70)	Prenatal alcohol exposure	NAS incidence and severity	Infant	Yes	Yes	81.4	Yes	No	No	N/A	N/A	N/A
Lander et al (138), 2015	2015 Morgantown, WV	Randomized controlled trial (45)	Mixed-gender or pregnancy-only group therapy	Treatment retention, relapse, NAS incidence, patient satisfaction with group therapy	Multiple	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Lawlor et al (45), 2020	2014–2016 Lexington, KY	Program evaluation (64)	Care-by-Parent Program participation	Rate of treatment-requiring NAS	Infant	Yes	Yes	Not given	No	N/A	No	N/A	No	N/A
Lee et al (139), 2015	2007–2013 Pennsylvania	Retrospective cohort study (139)	Exploratory	LUS in NICU	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Lemon et al (33), 2018	2013–2015 Pittsburgh, PA	Retrospective cohort study (716)	Methadone vs buprenorphine	NAS incidence	Infant	Yes	No	5.7	Yes	No	No	N/A	Yes	N/A
Lemon et al (34), 2018	2013–2015 Pittsburgh, PA	Retrospective cohort study (716)	Methadone vs buprenorphine	Relationship between PTB and NAS incidence	Infant	Yes	No	5.7	Yes	No	No	N/A	Yes	N/A
Lim et al (140), 2009	2002–2007 Columbus, OH	Retrospective cohort study (68)	High-dose methadone during pregnancy	Duration of NAS	Infant	Yes	No	3	Yes	No	No	N/A	N/A	N/A
Liu et al (141), 2015	2003–2010 Florida	Retrospective cohort study (117)	Exploratory	Rate of NAS	Infant	Yes	Yes	8	N/A	N/A	No	N/A	No	No
Lo-Gigamic et al (40), 2019	2008–2015 Pennsylvania	Retrospective cohort study (2361)	Trajectory groups	Buprenorphine treatment adherence	Multiple	Yes	Yes	5.5	Yes	Yes	Yes	Yes	Yes	Yes

**SUPPLEMENTAL TABLE 5 Continued**

Study Details		Outcome			R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling			
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Lopian et al (44), 2019	2012–2017 Buffalo, NY	Retrospective cohort study (108)	Exploratory	Treatment retention, ongoing use	Postpartum	Yes	Yes	17.6	N/A	N/A	Yes	No	N/A	N/A
Lund et al (142), 2012	2005–2008 Baltimore, MD	Retrospective cohort study (25)	Methadone or buprenorphine vs methadone-assisted withdrawal	Need for pharmacologic treatment of NAS, peak NAS score, neonatal, HC, LOS, LOT, BW, BL, GA, and Apgar score, cesarean delivery, maternal weight gain in pregnancy, fetal presentation at delivery, anesthesia during delivery, UDS at delivery, delivery complications, number of prenatal visits, study discontinuation	Multiple	Yes	No	52	Yes	No	No	N/A	N/A	N/A
McCarthy et al (143), 2008	1999–2003 Davis, CA	Retrospective cohort study (57)	Methadone throughout pregnancy vs methadone induction during pregnancy	NAS treatment, LOS, BW, GA, illicit use at delivery	Infant	Yes	No	37	Yes	No	No	N/A	N/A	N/A
McCarthy et al (144), 2015	2008–2013 Davis, CA	Retrospective cohort study (62)	Methadone split dosing and increase dose for withdrawal symptoms	NAS incidence	Infant	Yes	No	17	No	N/A	No	No	N/A	N/A
McCarthy et al (145), 2005	1999–2003 Davis, CA	Retrospective cohort study (81)	Methadone dose	NAS incidence and pharmacologic treatment, LOS, ongoing use	Multiple	Yes	No	37	Yes	No	No	N/A	N/A	N/A

**SUPPLEMENTAL TABLE 5 Continued**

Study Details			Outcome			R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling		
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
McDaniel et al (146), 2020	2012-2018 Washington	Retrospective cohort study (323)	Intrauterine methadone only vs methadone/polydrug exposures	NAS (Time to maximum Finnegan scores, proportion requiring scheduled morphine, LOS)	Infant	Yes	No	35.6	Yes	No	No	N/A	N/A	N/A
McNicholas et al (147), 2012	2005-2008 International	Retrospective cohort study (175)	HCV infection	Hepatic enzyme levels	Multiple	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Meyer (148), 2012	2000-2006 Burlington, VT	Retrospective cohort study (149)	Access to opioid agonist therapy	Prenatal care, BW	Multiple	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Meyer et al (149), 2015	2000-2012 Burlington, VT	Retrospective cohort study (609)	Methadone vs buprenorphine	GA, BW, LOS, LOT, breastfeeding, discharge to parental custody, NAS treatment	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Mitchell et al (150), 2017	2013-2015 Indiana	Retrospective cohort study (54)	Care in NICU vs special care nursery	Time from birth to first dose or oral morphine	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Mullins et al (151), 2020	2014-2018 North Carolina	Retrospective cohort study (193)	Buprenorphine vs naloxone	NAS requiring treatment, maternal outcomes	Multiple	Yes	No	14.5	Yes	No	No	N/A	N/A	N/A
Napolitano et al (152), 2013	2010-2012 Florida	Retrospective cohort study (112)	Combined methadone program vs inpatient morphine program	LOS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Nguyen et al (43), 2018	2016-2017 Morgantown, WV	Retrospective cohort study (26)	Buprenorphine + naloxone exposure during pregnancy	GA, Apgar scores, BW, BL, and HC, NAS treatment, LOS	Infant	Yes	Yes	0	N/A	N/A	N/A	N/A	N/A	N/A
O'Connor et al (153), 2013	2007-2012 Augusta, ME	Retrospective cohort study (65)	Buprenorphine	Breastfeeding, NAS	Infant	Yes	No	<5	No	N/A	No	N/A	N/A	N/A
O'Connor et al (154), 2016	2007-2013 Maine	Retrospective cohort study (148)	Concurrent use of buprenorphine and antidepressants in pregnancy	Severity and duration of NAS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
O'Connor et al (155), 2016	2007-2014 Maine	Retrospective cohort study (155)	Maternal buprenorphine dose at delivery	GA, BW, method of delivery, Apgar scores, peak NAS score, duration of NAS, pharmacologic treatment of NAS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A

**SUPPLEMENTAL TABLE 5 Continued**

Study Details			Outcome			R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling		
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
O'Connor et al (42), 2018	2007–2015 Maine	Retrospective cohort study (190)	Exploratory	Treatment retention	Postpartum	Yes	Yes	<5	No	N/A	No	N/A	N/A	N/A
O'Connor et al (156), 2017	2007–2015 Maine	Retrospective cohort study (191)	Third trimester marijuana use	GA, BW, Apgar scores, NAS severity	Infant	Yes	No	<5	Yes	No	No	N/A	N/A	N/A
O'Connor et al (157), 2013	2007–2012 Maine	Retrospective cohort study (90)	Gender	NAS score and pharm treatment	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Parikh et al (21), 2019	2008–2017 Baltimore, MD	Retrospective cohort study (345)	Race	Need for pharmacologic treatment of NAS	Infant	Yes	Yes	35	N/A	N/A	Yes	Yes	Yes	Yes
Parlaman et al (158), 2019	2017–2018 Washington	Program evaluation (304)	Implementation of Eat-Sleep-Console protocol	LUS, medication dose for NAS treatment	Infant	Yes	No	37	Yes	No	No	N/A	N/A	N/A
Parlett et al (159), 2019	2006–2017 National	Retrospective cohort study (1807)	Exploratory	NAS diagnosis	Infant	Yes	No	Not given	No	N/A	No	N/A	N/A	N/A
Parlier et al (160), 2014	2010–2012 North Carolina	Retrospective cohort study (94)	Exploratory	Prenatal care utilization, postpartum contraception, GA, NAS diagnosis	Multiple	Yes	No	6.4	N/A	N/A	No	N/A	N/A	N/A
Paterno et al (161), 2019	2015–2016 Greenfield, MA	Program evaluation (38)	EMPOWER program involvement	Breastfeeding initiation and at discharge, contraception, depression symptoms, neonatal outcomes, prenatal community referrals	Multiple	Yes	No	5.3	Yes	No	No	N/A	N/A	N/A
Patton et al (35), 2019	2013–2015 Pennsylvania	Retrospective cohort study (1562)	Pre- or post-Medicaid expansion	Postpartum health care utilization and contraception initiation	Postpartum	Yes	No	13	Yes	No	Yes	Yes	Yes	Yes
Peacock-Chambers et al (162), 2019	2006–2013 Springfield, MA	Retrospective cohort study (256)	Exploratory	EI referral and enrollment	Infant	Yes	Yes	27.7	N/A	N/A	Yes	No	Yes	N/A

**SUPPLEMENTAL TABLE 5 Continued**

Study Details		Outcome			R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling			
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Peeler et al (20), 2020	2017–2019 Massachusetts	Retrospective cohort study (1710)	Maternal R/E	Prenatal receipt of MOUD, NAS severity, EI referral, and biological parental custody at discharge	Multiple	Yes	Yes	10.7	N/A	N/A	Yes	Yes	N/A	Yes
Pizano et al (163), 2011	2002–2006 Cincinnati, OH	Retrospective cohort study (174)	Methadone dose	NAS incidence and severity, BW, GA, neonatal mortalities and morbidities	Infant	Yes	No	1.7	Yes	No	No	N/A	N/A	N/A
Pritham et al (164), 2012	2005–2006 Bangor, ME	Retrospective cohort study (152)	Methadone vs buprenorphine	LOS for NAS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Rose-Jacobs et al (165), 2019	2013–2015 Boston, MA	Prospective cohort study (75)	Prenatal food insecurity	NAS pharmacologic treatment, LOS for NAS	Infant	Yes	No	17.1	No	N/A	No	N/A	N/A	N/A
Roth et al (166), 2020	2017 Huntington, WV	Retrospective cohort study (176)	Polysubstance exposure, toxicology vs toxicology and self-report to identify polysubstance exposure	NAS LOT and LOS	Infant	Yes	No	8.5	No	N/A	No	N/A	N/A	N/A
Sanlorenzo et al (167), 2019	2009–2011 Tennessee	Retrospective cohort study (822)	Exploratory, prenatal benzodiazepine exposure	Pharmacologic treatment of NAS	Infant	Yes	No	2.3	N/A	N/A	Yes	No	N/A	N/A
Saunders et al (168), 2014	2010–2012 Knoxville, TN	Program evaluation (386)	NAS protocol implementation	LOS, weaning time from opioids, adjunct medication use	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Schauburger et al (169), 2020	2011–2018 La Crosse, WI	Retrospective cohort study (94)	Exploratory	Treatment retention, maintenance of custody	Postpartum	Yes	No	3	N/A	N/A	No	N/A	N/A	N/A
Schiff et al (138), 2018	2006–2016 Boston, MA	Retrospective cohort study (564)	Exploratory	Breastfeeding initiation, continuation, and exclusivity	Infant	Yes	Yes	12	N/A	N/A	Yes	Yes	No	Yes
Schiff (170), 2018	2011–2015 Massachusetts	Retrospective cohort study (4154)	OUD during pregnancy, exploratory	Fatal or nonfatal opioid-related overdose events	Multiple	Yes	No	37	N/A	N/A	Yes	Yes	N/A	No

**SUPPLEMENTAL TABLE 5 Continued**

Study Details		Outcome		R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling				
Author: Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Schiff et al (9), 2020	2011–2015 Massachusetts	Retrospective cohort study (5247)	Maternal R/E	Use of MOUD in year before delivery	Prenatal/obstetric	Yes	Yes	13.3	N/A	N/A	Yes	Yes	N/A	Yes
Scott et al (37), 2020	2011–2017 Indianapolis, IN	Retrospective cohort study (204)	Exploratory	Need for pharmacologic treatment of NAS	Infant	Yes	Yes	10	N/A	N/A	Yes	Yes	Yes	Yes
Seligman et al (171), 2008	2000–2006 Philadelphia, PA	Retrospective cohort study (204)	Exploratory	NAS treatment	Infant	Yes	Yes	25	N/A	N/A	Yes	No	N/A	N/A
Seligman et al (172), 2010	1996–2006 Philadelphia, PA	Retrospective cohort study (388)	Maternal methadone dose at delivery	NAS treatment	Infant	Yes	No	32	Yes	Yes	No	N/A	Yes	No
Short et al (36), 2016	2012–2014 Pennsylvania	Retrospective cohort study (3725)	Breastfeeding status	Infant LOS	Infant	Yes	Yes	10	Yes	No	No	N/A	Yes	No
Short et al (173), 2018	1996–2014 National	Cross sectional Study (88 241)	Exploratory	MOUD receipt	Prenatal/obstetric	Yes	No	Not given	N/A	N/A	Yes	Yes	No	Yes
Singh et al (174), 2020	2015–2018 Springfield, MA	Program evaluation (264)	EMPOWER and rooming-in program participation	Infant LOS, NICU LOS and admission, NAS pharmacologic treatment	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Staszewski et al (175), 2020	2007–2017 Stony Brook, NY	Retrospective cohort study (260)	Methadone vs buprenorphine	GA, BW, NAS incidence, morphine to treat NAS, NICU admission, LOS	Infant	Yes	No	42.3	Yes	No	No	N/A	N/A	N/A
Stein et al (176), 2020	2003–2009 Massachusetts	Retrospective cohort study (4584)	Concomitant marijuana and opioid use during pregnancy	GA, LBW, neonatal mortality, NAS, LOS	Infant	Yes	No	15.9	Yes	Yes	No	N/A	Yes	No
Stewart et al (177), 2013	2006–2011 Dallas, TX	Retrospective cohort study (95)	Opioid detoxification during pregnancy	Illicit drug use at time of delivery, infant LOS, NAS scores, pharmacologic treatment of NAS	Multiple	Yes	No	52.6	Yes	No	No	N/A	N/A	N/A
Suifin et al (178), 2020	2016–2017 National	Cross sectional Study (117)	Pregnant women with OUD in jails or prisons	Treatment engagement	Prenatal/obstetric	Yes	No	Not given	No	N/A	No	N/A	N/A	N/A

**SUPPLEMENTAL TABLE 5 Continued**

Study Details		Outcome			R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling			
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Summey et al (179), 2018	2006-2014 Greenville, SC (466)	Program evaluation	Traditional care vs MAiN program treatment	Medical and safety outcomes, health services utilization, CPS involvement, emergency services utilization	Infant	Yes	No	6.4	Yes	No	No	N/A	N/A	N/A
Taleghani et al (180), 2019	2015-2017 National	Retrospective cohort study (156)	Pharmacotherapy for NAS with either methadone or buprenorphine	LOS, LOT, cumulative opioid exposure	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Tolia (181), 2018	2011-2014 National	Retrospective cohort study (3364)	Methadone vs buprenorphine prenatal exposure	LOS	Infant	Yes	No	14	Yes	Yes	Yes	Yes	Yes	No
Towers et al (182), 2020	2017-2018 Knoxville, TN (230)	Prospective cohort study	Naltrexone during pregnancy	Obstetric (mode of delivery, GA, spontaneous delivery), newborn (NAS, LOS, BW, HC)	Multiple	Yes	No	4.8	Yes	No	No	N/A	N/A	N/A
Tuten et al (183), 2009	2009 Baltimore, MD (68)	Retrospective cohort study	Mood disorder at delivery	Mode of delivery, illicit use at delivery, maternal LOS, infant LOS, GA, NICU admission, BW, NAS treatment	Multiple	Yes	No	74	Yes	No	No	N/A	N/A	N/A
Tuten et al (184), 2018	2010-2014 Baltimore, MD (194)	Randomized controlled trial	Type of reinforcement-based treatment, early response (ongoing use and treatment retention first 2 wk)	Treatment retention and ongoing use	Prenatal/obstetric	Yes	No	23.2	Yes	No	Yes	No	N/A	N/A
Unger et al (185), 2011	2005-2008 International (113)	Retrospective cohort study	Biological sex	BW, BL, HC, NAS severity, duration, and treatment	Infant	Yes	No	8.8	Yes	No	No	N/A	N/A	N/A
Yelez et al (186), 2009	2002-2007 Baltimore, MD (77)	Prospective cohort study	Methadone exposure, exploratory for maternal factors	Neurobehavioral function	Infant	Yes	No	40	No	N/A	No	N/A	N/A	N/A
Vilkins et al (187), 2017	2006-2014 Boston, MA (273)	Retrospective cohort study	Methadone or buprenorphine treatment	Opioid analgesic requirement	Postpartum	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A



**SUPPLEMENTAL TABLE 5 Continued**

Study Details			Outcome		R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling			
Author, Publication Year	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Wachman (188), 2018	2016 Boston, MA	Program evaluation (186)	Pre- or post-quality improvement intervention	LOS due to NAS	Infant	Yes	No	15.1	Yes	No	No	N/A	N/A	N/A
Wachman et al (189), 2011	2003–2009 Boston, MA	Retrospective cohort study (273)	Concurrent psychiatric medication with MOUD during pregnancy	Infant LOS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Wachman et al (190), 2010	2003–2009 Boston, MA	Retrospective cohort study (276)	Infants with MAS, exploratory for maternal factors	Breastfeeding eligibility, initiation, length of breastfeeding	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Wachman et al (191), 2018	2006–2015 Boston, MA	Retrospective cohort study (744)	Psychiatric coexposure with opioids	MAS outcomes (pharmacologic treatment, adjunct treatment, LOS, LOT)	Infant	Yes	No	14	No	N/A	No	N/A	N/A	N/A
Walsh et al (192), 2018	2014–2015 Ohio	Program evaluation (3266)	Quality improvement intervention	Pharmacologic treatment, LOS, LOT	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Wang et al (193), 2019	2008–2014 Birmingham, AL	Systematic Review with meta-analysis (300)	Opioid detoxification during pregnancy	Maternal abstinence at delivery, MAS, stillbirth, GA	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Wiegand et al (194), 2015	2011–2013 Chapel Hill, NC	Retrospective cohort study (62)	Buprenorphine/naloxone vs methadone treatment	MAS incidence, peak NAS score, morphine (mg) to treat NAS, LOT for NAS	Infant	Yes	No	17.7	Yes	No	No	N/A	N/A	N/A
Wilder et al (195), 2017	2006–2013 Cincinnati, OH	Retrospective cohort study (189)	Methadone dose	Treatment retention at delivery and postpartum, ongoing use during pregnancy and postpartum	Multiple	Yes	No	2.1	Yes	No	No	N/A	N/A	N/A
Wilder et al (41), 2015	2006–2013 Cincinnati, OH	Retrospective cohort study (251)	Methadone treatment of OUD during pregnancy or postpartum, exploratory for factors of discontinuation	MOUD discontinuation	Multiple	Yes	Yes	2.6	No	N/A	No	N/A	N/A	N/A

SUPPLEMENTAL TABLE 5 Continued

Study Dates, Location		Type of Study, (N)		Primary Exposure		Outcome		R/E Reporting			Bivariate Analyses by R/E			Multivariable Modeling	
Author, Publication Year	Location	Study Dates, Location	Type of Study, (N)	Primary Exposure	Primary Outcome	Category	Mentioned in Study	Discussed in Discussion	Hispanic and/or Non-White (%)	Analysis of Exposure	Difference in Exposure	Analysis of Outcome	Difference in Outcome	Adjusted for R/E?	Stratified by R/E?
Winkelman et al (60), 2018	2004–2014 National	Cross sectional Study (55 629)		Medicaid vs private insurance	Transfer to another hospital, LOS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Winkelman et al (196), 2020	1992–2017 National	Cross sectional Study (131 838)		Criminal justice referral pre- or post-Medicaid expansion	MOUD receipt	Prenatal/obstetric	Yes	No	33.5	Yes	Yes	No	N/A	Yes	N/A
Wong et al (197), 2018	2000–2016 Seattle, WA	Retrospective cohort study (88)		Buprenorphine exposure/dose	NAS incidence, pharmacologic treatment, LOS, LOT	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Wunsch (198), 2006	2001 Richmond, VA	Retrospective cohort study (73)		Paregomic vs methadone for NAS	Time to resolution of NAS, rate of decrease of symptom severity, LOS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Yonke et al (199), 2020	2017–2018 Albuquerque, NM	Cross sectional Study (40)		Exploratory	Breastfeeding	Infant	Yes	No	77.5	N/A	N/A	Yes	No	N/A	N/A
Yonke et al (200), 2019	2011–2015 Albuquerque, NM	Retrospective cohort study (228)		Buprenorphine or methadone	Breastfeeding compared with breastfeeding intention	Infant	Yes	No	82.5	Yes	No	No	N/A	N/A	N/A
Young et al (201), 2015	2010–2011 Columbus, OH	Retrospective cohort study (26)		Morphine vs methadone to treat NAS	LOS	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A
Zedler et al (202), 2016	2016 Multiple sites	Systematic review with meta-analysis (unknown)		Buprenorphine or methadone during pregnancy	GA, BW, HC, spontaneous fetal death, fetal/congenital anomalies, fetal growth	Infant	No	No	Not given	No	N/A	N/A	N/A	N/A	N/A

Agar, appearance, pulse, grimace, activity, and respiration; BL, body length; BW, birth weight; CPS, child protective services; EI, early intervention; EMPOWER, Engaging Mothers for Positive Outcomes with Early Referrals; GA, gestational age; HC, head circumference; HCV, hepatitis C virus; LARC, long-acting reversible contraception; LBW, low birth weight; LOS, length of stay; LOT, length of pharmacologic treatment; MAIN, Managing Abstinence in Newborns; N/A, not applicable; PRN, as needed; PTB, preterm birth; R/E, race/ethnicity; SGA, small for gestational age; SSRI, selective serotonin reuptake inhibitor; UDS, urine drug screen.

**SUPPLEMENTAL TABLE 6** Qualitative Study Data

Authors, Year	Study Dates (M)	Type of Study	Major Eligibility	Primary Aim/Outcome	Latinx and/or Non-White (%)	Notes on Race/Ethnicity
Alexander et al (203), 2020	2019 (22)	Semistructured focus groups	Patients at perinatal OUD treatment center	Identify and describe perceptions of birth and newborn health care experiences among a population of women in treatment of OUD to improve the delivery of perinatal health care	50	No mention of race/ethnicity beyond reporting demographics
Atwood et al (204), 2016	2013–2014 (20)	Semistructured interviews	Families of newborns with NAS at hospital discharge	Understand experience of newborn hospitalization for NAS, to improve family-centered care	0	Homogenous sample of White families listed as a limitation of study
Cleveland et al (49), 2016	2016 (15)	Semistructured individual interviews	Mothers with SUD during pregnancy	Describe the mothering experience of women with SUDs	100	Authors noted lack of ethnic diversity as limitation, as all participants were Hispanic; attributed this to geographic location and encourage future research in the area to represent a variety of ethnic groups
Demirci et al (205), 2015	2005–2006, 2008–2009 (11)	Semistructured interviews and focus groups	Pregnant and postpartum women on methadone	Perceptions around breastfeeding decision among pregnant and postpartum women on methadone	0	No mention of race beyond reporting percentage of non-Latinx White subjects; listed small convenience sample from single geographic area as a generalizability limitation, but no mention of race/ethnicity here
Falletta et al (206), 2018	2012 (16)	Semistructured interviews	Pregnant or postpartum women with abuse/dependence of pharmaceutical opioids at a drug treatment facility	Perceptions of child welfare services among pregnant and postpartum women using opioids	37.5	No mention of race beyond reporting demographics
Goodman et al (207), 2020	2015–2016 (10)	Semistructured interviews	Postpartum women who were successfully engaged in both substance use treatment and maternity care in pregnancy	Experiences of postpartum women with OUD, to understand factors contributing to their ability to access substance use and maternity care and social support	Not given, participants were non-Latinx White or White/American Indian	No mention beyond reporting demographics
Hahn et al (208), 2016	2016 (8)	Interviews	Mothers of infants with NAS	Impact of infant massage on both the behaviors of infants with NAS and the mothers' relationships with their babies	Not given	Race/ethnicity not mentioned
Hicks et al (209), 2018	2015 (30)	Cross-sectional qualitative/quantitative interviews Group interviews	Postpartum women on methadone	Breastfeeding practices and barriers for women on methadone	3.3	Majority White study population listed as limitation in discussion
					0	

Authors, Year	Study Dates (M)	Type of Study	Major Eligibility	Primary Aim/Outcome	Latinx and/or Non-White (%)	Notes on Race/Ethnicity
Howard (210), 2016	2013–2014 (30)		Postpartum women with OUD (primary drug of choice prescription medications and synthetic narcotics or on MOUD)	The role of pregnant women with an OUD participating in medical decision-making regarding their prenatal care while addressing their addiction		In introduction, authors mentioned feminist theory that factors, including ethnicity, contribute to identity and access to treatment options as well as that economically disadvantaged women may be intimidated by status of physician, including typical White race; authors referenced power differentials.
Howard et al (211), 2018	2017–2018 (25)	In-depth qualitative interviews	Mothers with OUD 12 wk after delivery	Investigate perspectives of mothers with OUD regarding breastfeeding and rooming-in during the birth hospitalization and identify facilitators and barriers	0	100% non-Latinx White population mentioned in limitations section
Jackson and Shannon (212), 2012	2005–2007 (85)	Interviews and quantitative analysis comparing demographics to barriers to treatment	Rural pregnant women with SUD (86% opiate)	Barriers for rural pregnant women seeking substance use treatment	3.5 non-White 2.4 Latinx	Noted that more racial diversity would have strengthen comparisons
Mattocks et al (213), 2017	2017 (14)	Focus groups	Pregnant and postpartum women on methadone	Experiences and challenges with methadone treatment and obstetrical care	20	No mention of race beyond reporting demographics
McGlothen et al (48), 2018	2015 (8)	Semistructured interviews	Mothers receiving MOUD during postpartum period	Describe what influences the infant feeding decisions of women taking MOUD	88	Noted in methods, largely Hispanic local population
Ostrach and Leiner (214), 2019	2017–2018 (27)	Interviews	Patients receiving comprehensive perinatal substance use treatment and on buprenorphine	Patients' ambivalence about MOUD in context of stigma/judgment	3.7	In introduction, authors mentioned that different MOUD are racialized differently
Rizzo et al (215), 2014	2012–2013 (32)	Observation qualitative and quantitative method study, semistructured interviews	Pregnant women on buprenorphine for prescription opioid dependence	Parenting skills and concerns	18.7	No mention other than reporting demographics
Rockefeller et al (216), 2019	2017–2018 (13)	Semistructured interviews	Mothers of infants with NAS	Mothers' experiences of, supports for, and barriers to bonding with infants with NAS	16 non-White 8 Latinx	Suggested studies of racially diverse populations in discussion
Scott et al (217), 2017	2007–2012 (11)	Semistructured interviews	Women with histories of opioid use who experience fetal or infant loss	Care experiences of women who used prescription or illicit opioids and experiences fetal or infant loss	28	No mention of race/ethnicity beyond reporting demographics

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