



Shackling and pregnancy care policies in US prisons and jails

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Abstract

Objectives The number of incarcerated women in the United States has risen exponentially. Many are of childbearing age with 3–4% being pregnant at intake. Despite the need for comprehensive pregnancy-related health care in prisons and jails, there is no oversight that requires adherence to the established standards. The objective of this study was to assess prison and jail pregnancy policies and practices with an emphasis on restraint use and compliance with anti-shackling legislation.

Methods We conducted a survey of 22 state prisons and six jails, including the five largest jails, from 2016–2017 regarding pregnancy policies and practices including restraint use, prenatal care, delivery and birth, and other pregnancy accommodations. We compared reported restraint policies to state legislation at the time of the survey.

Results Data indicate that pregnancy policies and services in prisons and jails vary and compliance inconsistencies with anti-shackling legislation exist. A third of the prisons and half of the jails did not have accredited health care services. All study facilities provided prenatal vitamins and most provided supplemental snacks. Most facilities stationed an officer inside the hospital room during labor and delivery, but nearly one-third of facilities did not require a female-identifying officer.

Conclusions for practice Limited oversight and standardization of carceral health care and accommodations for pregnant people lead to variability in prisons and jails. Prisons and jails should adopt and implement standards of care guidelines to ensure the safety and well-being of pregnant people who have unique healthcare needs. Incarcerated pregnant people should be viewed as expectant parents in need of comprehensive health care, rather than as criminals who forfeited their right to a safe, respectful, and humane childbirth.

Objectives

Nearly 4% of incarcerated women in the United States (US) are pregnant when incarcerated (Sufirin et al., 2019). Thus, carceral facilities are tasked with caring for pregnant

people to ensure healthy pregnancies. Yet, the right to give birth safely with dignity is not consistently protected for pregnant people behind bars (Hayes et al., 2020). Previous studies and lawsuits have documented the variable and inadequate care for pregnant people in custody (Peeler et

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al., 2019; Daniel, 2019). Earlier studies on prisons and jails demonstrate major gaps in prenatal care and accommodations, including failure to meet the nutritional, clothing, and counseling needs of pregnant and postpartum people (Ferszt & Clarke, 2012; Kelsey et al., 2017). Furthermore, despite state anti-shackling laws and the health risks involved, the use of restraints remains a common practice in pregnancy, labor and childbirth. With at least 900 women giving birth in custody every year, we presume that many are forced to do so while shackled (Sufirin et al., 2019).

Physical restraints are mechanical devices that include handcuffs, leg shackles, belly chains, or any configurations of these. They are primarily used by law enforcement and custodial staff to restrict the movement of incarcerated individuals, as well as to reduce the risk of assaultive behaviors and escape among individuals in custody, especially when they need to be taken out of the incarceration facility into public settings, like hospitals. However, despite the extremely reduced risk of assault and escape among incarcerated pregnant people due to their physical condition, especially while in labor, they continue to be shackled during pregnancy, childbirth and postpartum period. The use of restraints on pregnant and postpartum people has been identified as medically dangerous, a human rights violation, and against national and international standards of care (*Best Practices in the Use of Restraints with Pregnant Women and Girls Under Correctional Custody*, 2014; Carson, 2021; UN General Assembly, 2010; *AMA Passes Resolution Prohibiting Shackling of Pregnant Prisoners in Labor* | *Prison Legal News*, 2010). As of July 2022, thirty-nine states, the District of Columbia and the federal government have passed legislation banning restraints in labor and delivery, with some also banning it at other points in the pregnancy and postpartum period (*Shackling of Incarcerated Pregnant, Laboring, and Postpartum Individuals: STATE LAWS (as of December 2021)*, 2021; Eskow, 2022; Hernandez, 2022). However, these laws have ‘exceptions’ allowing the use of restraints if there is a ‘legitimate’ safety threat (DiNardo, 2018). Thus, despite the call to end shackling pregnant people, the practice persists (Goshin & Colbert, 2019).

It is estimated that 58,000 pregnant people are incarcerated each year, reflecting the need for appropriate, trauma-informed reproductive healthcare in carceral institutions (Sufirin et al., 2019). The 1976 US Supreme Court ruling of *Estelle v. Gamble* established healthcare as a constitutionally protected right for incarcerated people, however it did not mandate specific services, standardization, or oversight, leading to variability in carceral health care (1976). National medical professional societies like the American College of Obstetricians and Gynecologists (ACOG) have published guidelines on recommended standards of care for incarcerated pregnant individuals (*Reproductive Health*

Care for Incarcerated Pregnant, Postpartum, and Nonpregnant Individuals, 2021). Even with existing standards, the lack of oversight leads to variability in comprehensive pregnancy care behind bars.

Despite the known risk of adverse pregnancy outcomes for women in custody, there is little contemporary data on pregnancy-related carceral policies, including the use of restraints amid increased anti-shackling legislation. While Ferszt and Clarke’s study provided data on prison pregnancy policies, including shackling, data were collected in 2009 (2012). Since then, the number of women behind bars has increased, and more states have passed anti-shackling laws. Furthermore, Kelsey et. al.’s jails study had limited details on restraint policies (2017). Study data, collected in 2015, solely reported on restraint use during labor and after delivery, did not ascertain facility policy at that time, and only included jails in their sample. To address this research gap, we surveyed a convenience sample of US state prisons and large jails regarding pregnancy care policies and services, including concordance between anti-shackling legislation and facility policies and practices. The primary objective of this study was to assess services and policies for incarcerated pregnant and postpartum people in prisons and jails. Given the attention to restraining pregnant individuals in custody and recent new anti-shackling legislation, we also conducted a policy analysis to determine concordance between facility policy and state law at the time of survey completion (2016).

Methods

This study was a part of a parent project known as the “Pregnancy in Prisons Statistics” (PIPS) study, an epidemiological surveillance study that collected one year of monthly pregnancy and postpartum outcomes from 2016 to 2017 in US prisons and jails. All sites completed a baseline survey describing their pregnancy and postpartum policies and services. Respondents included a convenience sample of 22 state prison systems (reporting state level-data) and six jails, including the five largest jails in the US. All states in the PIPS study housed pregnant people at one state prison, for which policies were reported. We targeted recruitment towards state prison systems that housed at least 2,000 women based on data from the Bureau of Justice Statistics (Prisoners in 2015, 2016). We utilized snowball sampling through professional networks and study flyers to recruit other large prison systems. We targeted the nation’s five largest jails and one jail approached us to participate. Details of the parent study design and sampling methodology have been previously described (Sufirin et al., 2019, 2020).

Prisons and jails typically operate under different policies, which have implications on healthcare. State prisons are under state level jurisdiction and house individuals who have been convicted of felony level offenses, and who are typically serving sentences longer than one year. Jails operate under local jurisdiction, with incarceration times being shorter—days to weeks or months, but generally shorter than a year. The majority of individuals incarcerated in jails are pre-trial, and some may serve a short sentence if convicted of a misdemeanor; others may be transferred to prison. Because of their differing jurisdictions and durations of incarceration, health care services are variable and not standardized between prisons and jails.

Enrollment in the PIPS study was staggered, so responses to the baseline policies survey were gathered between May–December 2016, depending on the month that each site began the study, and reflect policies in place at that time. Each facility had a designated respondent who was knowledgeable of the site’s pregnancy health policies and services. Survey respondents included nurse managers, chief medical officers, or custody administrators. This individual was responsible for reporting the survey data through an electronic pdf or via the online reporting tool. The study team and facility staff met to discuss the goals of the study prior to them joining, and we obtained research approval from each site.

The questions were developed based on Ferszt and Clarke’s survey (2012), with additional questions added based on the principal investigator’s experience in writing policies related to incarceration and reproductive healthcare. A copy of the survey instrument is in Appendix A.

We assessed outcomes regarding restraints in pregnancy, pregnancy accommodations and programming, and pregnancy-related health care services. Specific outcomes included timing and types of restraints used; security procedures at the hospital during childbirth; contact visits with newborns; work, clothing, nutrition, and housing accommodations for pregnant people; medical furlough for childbirth; availability of support programming; and access to pregnancy care. We separately asked if there was a written policy about the use of restraints in pregnancy and restraint use practices. With the exception of vaccinations, pregnancy medical care services have been previously reported in publications of PIPS pregnancy outcomes data on the number of incarcerated pregnant people who had abortions, who had opioid use disorder (OUD), who breastfed postpartum in custody, and who underwent a postpartum tubal sterilization procedure (Sufrin et al., 2020, 2021; Asiodu et al., 2021; Pan et al., 2021). Although reported, we include them here, with the facility’s pregnancy census and birth statistics, to contextualize the prison and jail pregnancy policies and practices. We were unable to collect individual patient data

and characteristics, including detailed maternal and infant outcomes. We did, however, ascertain data about newborn deaths (Sufrin et al., 2021) and infant placement (Asiodu et al., 2021). Additionally, we collected information about facility characteristics; health care service delivery arrangement; logistical arrangements for prenatal care provision; and health care services accreditation.

We compared respondents’ reported restraint policies and practices in pregnancy to state laws in existence at the time of the survey. We searched and reviewed state legislation on the use of restraints in pregnancy for all study states and made note of which states had legislation prior to 2016 (2015 or before), passed legislation (or amendments) from 2016 to 2022, and which states still do not have laws (Kuhlik & Sufrin, 2020). We then cross-referenced survey responses (if they have a policy, if they marked that they use restraints, if they marked ‘no’ to questions that asked if their policy prohibited certain restraint use) with the wording of those state laws enacted at least one year prior (2015) to the time of data collection in 2016 to identify facilities whose response directly contradicted the state law. This allowed us to determine if they were in compliance with the state’s law at the time of the survey. We used the language “restraints” when asking those survey questions since the term is used in law enforcement and most legislation. We thus report results using “restraints,” but use the word “shackling” in our discussion.

Survey data were collected, stored and managed using the Research Electronic Data Capture (REDCap) tool, a secure web-based survey and data collection platform (Harris et al., 2009). We analyzed data using descriptive statistics and calculated frequencies, medians, and means in Excel. We indicate where denominators differed due to non-responses to certain items. The study team did not perform any statistical tests of association due to the small sample size and known variability in health care and institutional policies among carceral facilities. The *Johns Hopkins University School of Medicine* Institutional Review Board categorized this as non-human subject’s research. We adhered to each institution’s system for research approval. Although the study was categorized as non-human subjects research, the data reported informs encounters of real individuals who experienced incarceration.

Results

Facility Characteristics

Participating prisons and jails represented a broad geographic range and differing facility population sizes (Tables 1 and 2). Pregnant females represented 3.8% and

Table 1 Participating state prisons and jails

Prisons (n=22)	AL, AZ, CO, GA, IA, IL, KS, LA, MA, MD, ME, MN, MS, OH, OK, PA, RI, TN, VT, WI
Jails (n=6)	Cook County (IL), Dallas County (TX), Hampden County (MA), Harris County (TX), Los Angeles County (CA), New York City (NY)

Table 2 Characteristics of facilities and selected pregnancy outcomes, N (%)

Characteristic	Prison (n=22)	Jails (n=6)
Region		
Northeast	5 (23)	2 (33)
Midwest	6 (27)	1 (17)
South	8 (36)	2 (33)
West	3 (14)	1 (17)
Median female census on 12/31/2016 (range) ¹	899.5 (91, 12,663)	784 (282, 1804)
Total females at all sites combined on 12/31/2016 ¹	33,757 (0.6)	172 (3.5)
Total number of admissions of pregnant females at all sites combined over study period ¹	1,224	1,622
Total number of births at all study sites combined over study period ¹	753	144
Facility is managed by a private company	1 (5)	0 (0)

¹ Data previously published

3.2% of admitted females to study prisons and jails in December 2016, respectively. From 2016 to 2017, 1,224 pregnant females were admitted to participating prisons and 1,622 pregnant females were admitted to study jails for a total of 2,846 pregnant individuals admitted to all study facilities during this twelve-month period (Sufrin et al., 2019, 2020).

Restraint Policies and Practices

All study facilities except one jail had written policies prohibiting restraints at varying points of pregnancy, birth, and postpartum (Table 3). In practice, half of the prisons and a third of the jails reported that restraints were not used at any point during pregnancy. The remaining facilities indicated restraint use during transportation to court appearances, medical appointments, or hospital stays. Two prisons indicated using restraints immediately following childbirth and six facilities (5 prisons, 1 jail) did not prohibit restraints at all during postpartum.

At the time of survey completion, 13 of 22 prisons (59%) and all jails resided in states that passed anti-shackling legislation at least one year prior (Table 4). The policy of two of these facilities (one prison and one jail in different states) opposed the state law at that time. Both facilities indicated that their policy did not prohibit the use of restraints during transportation for labor and delivery. The jail additionally reported that restraints to another person and postpartum restraint use were not prohibited. These policies directly contradicted the existing state legislation.

No facilities reported using restraints during labor and delivery, regardless of a state law or a facility restraint policy. Among the 15 study states with active anti-shackling

legislation in 2016, all prohibited restraint use during transportation to the hospital for labor and delivery, however, 5 facilities (3 prisons, 2 jails across 4 states) reported routinely restraining pregnant patients in this context. Several facilities reported restraining pregnant individuals during transportation to pre-natal medical appointments: one jail, in a state that prohibited restraints at any point during pregnancy, and three prisons, in states where this was outlawed past the first trimester (two states; two facilities) or during the third trimester (one state; one facility). Fewer state laws prohibited restraints during transportation for court appearances, however one jail, in a state that prohibited restraints at any point during pregnancy, and two prisons, in states where this was prohibited past the first trimester (one state; one facility), and during the third trimester and in postpartum recovery (one state; one facility), self-reported restraint use during this form of transportation. One prison that reported routinely using restraints immediately following childbirth reported that this practice was explicitly prohibited by facility policy.

Pregnancy Accommodations

All facilities provided prenatal vitamins and most supplemented the standard diet with high protein snacks (Table 5). Some sites provided details about nutritional accommodations, which included up to 3200 extra calories in the pregnancy diet in the form of peanut butter, yogurt, vegetables, cheese, and sandwiches.

While almost all study facilities assigned pregnant individuals to the bottom bunk, most prisons and two jails did not provide extra bedding. Half of the prisons and four jails provided maternity clothing.

Table 3 Restraints, other security practices, and visitation

	Prisons (n = 22)	Jails (n = 6)
Facility has formal, written policy	22 (100)	5 (83)
Policy prohibits leg restraints	19 (86)	5 (100)
Policy prohibits belly chains	22 (100)	5 (100)
Policy prohibits wrist restraints behind the back	22 (100)	5 (100)
Policy prohibits restraints to another inmate	22 (100)	4 (80)
No written policy ¹	0 (0)	1 (17)
Use of restraints		
Used during transport to court appearances	10 (45)	2 (33)
Used during transport to hospital for appointments	9 (41)	4 (67)
Used during transport to hospital for labor and delivery	5 (23)	2 (33)
Used at hospital in labor or delivery	0 (0)	0 (0)
Used at the hospital immediately after childbirth	2 (9)	0 (0)
Not restrained in any of these circumstances	11 (50)	2 (33)
Restraints prohibited		
For labor and delivery ²	22 (100)	5 (100)
For transport	19 (86)	5 (83)
Entire 9 months of pregnancy	11 (50)	2 (33)
Second trimester and third trimester	3 (14)	0 (0)
Third trimester (only)	2 (9)	1 (17)
Restraints prohibited in the postpartum period		
While in the hospital immediately after childbirth	12 (55)	5 (83)
For at least 6 weeks after childbirth	4 (18)	0 (0)
Other ³	1 (5)	0 (0)
Not prohibited	5 (23)	1 (17)
Must be female officer, if officer presence required during childbirth hospitalization		
Yes	16 (73)	4 (67)
No	6 (27)	2 (33)
Security procedures or when a pregnant inmate gives birth at an off-site hospital ⁴		
Officer stationed inside woman's hospital room	18 (82)	3 (50)
Officer stationed outside the woman's hospital room	10 (45)	3 (50)
Hospital door must be open at all times	0 (0)	1 (17)
Officer stationed on the hospital unit/floor	2 (9)	0 (0)
No officer stationed on the hospital unit	1 (5)	0 (0)
Labor and delivery happens in secure locked hospital unit	1 (5)	1 (17)
Visitors allowed during childbirth hospitalization	10 (45)	4 (67)
During labor	7 (70)	1 (25)
During birth	7 (70)	1 (25)
Immediately after delivery	9 (90)	4 (100)
Infant allowed to stay in room after birth		
Yes	10 (45)	5 (83)
No	2 (9)	0 (0)
Based on the hospital's policy	10 (45)	1 (17)
Conjugal visits are allowed	1 (5)	0 (0)
Contact with newborns within 3 months of birth		
During regular facility visiting hours	16 (73)	1 (17)
During special additional visiting hours	8 (36)	2 (33)
Contact visits not allowed	1 (5)	2 (33)

¹One jail did not have a formal, written policy, but still prohibited the use of restraints during certain circumstances, based on more detailed survey responses

²Denominator for jails: 5

³“Other”: one facility that delineated one week of restrictions for vaginal delivery and four weeks of restrictions for cesarean sections, “unless otherwise determined by the physician.”

⁴Participants could select multiple responses; some facilities reported several security procedures (9 prisons, 1 jail)

Just over half of the prisons and a third of the jails either routinely lightened the workload or did not assign work to pregnant people. Facilities made these changes either upon the order of a physician or patient request in fifteen prisons (68%) and four jails (67%).

Some facilities provided details about pregnancy-related accommodations. These included pregnant people wearing pink shirts for identification, larger sized clothes, parenting classes/education up to 1-year postpartum, work precautions of no heavy lifting, extra bathroom privileges and extra pillows for bedding.

Table 4 State and Facility Restraint Policies and Practices

Characteristic	Prisons (n = 22)	Jails (n = 6)
Facilities located in states with laws prior to 2016 restricting or prohibiting restraint use during pregnancy	13 (59)	6 (100)
Facilities in these states that had written, formal policies regarding restraint use	13 (100)	5 (83)
Written policy contradicts state law	1 (8)	1 (20)
Self-reported practice contradicts state law	3 (23)	2 (33)
Facilities located in states with laws passed during or after 2016 restricting or prohibiting restraint use during pregnancy	6 (27)	0 (0)
Facilities in these states that had written, formal policies regarding restraint use	6 (100)	-
Facilities report routinely using restraints throughout pregnancy	3 (50)	-
Facilities located in states without any laws limiting or prohibiting restraint use during pregnancy	3 (14)	0 (0)
Facilities in these states that had written, formal policies regarding restraint use	3 (100)	-
Facilities report routinely using restraints throughout pregnancy	0 (0)	-

Birthing, Visitation, and Programming Policies

Most facilities stationed an officer inside the hospital room during labor and delivery, but nearly one third of facilities did not require a female-identifying officer. Fewer than half of the prisons allowed visitors, including family members, at any point during childbirth or postpartum hospitalization.

Infant contact policies after return from childbirth were limited outside of regular facility visiting hours. Around a third of study facilities provided additional visiting hours for postpartum patients and their newborns, and even fewer offered nursery programs. One prison and two jails did not allow any form of contact with the infant postpartum.

Three prisons and one jail did not provide support or educational classes during pregnancy or after birth. However, parenting classes, doula programs, and other programs, such as “Mentoring Moms”, “Residential Parenting Program”, “Caring Parent Program”, and “Kids Apart Program” were present at many of the study facilities.

Healthcare Services Delivery

A third of the prisons and half of the jails did not have accredited health care services (Table 2). Half of the study prisons administered healthcare through a private contract, while most jails delivered healthcare directly through the facility. Routine prenatal care for pregnant people was provided by all study facilities, commonly as a joint delivery of on-site and off-site care (Table 5). On-site prenatal care was delivered by an obstetric physician for over half of the prisons and jails. All of the prisons and five of six study jails recommended administration of the flu vaccine, while fewer advised the Tdap vaccine (73% prisons, 67% jails). Data on pregnancy testing, management of OUD, abortion access, breastfeeding policies, and postpartum contraception are reported in Table 5 and analyzed in detail elsewhere (Sufrin et al., 2019, 2020, 2021; Asiodu et al., 2021; Pan et al., 2021).

Conclusions for Practice

Data from this study indicate that pregnancy policies and services in US prisons and jails vary and there are compliance inconsistencies with anti-shackling legislation. While most study facilities reported appropriate accommodations for pregnant people in custody, the discrepancies with restraint policies and adherence to state anti-shackling laws raise concerns for the health and safety of incarcerated pregnant people (*Health Care for Incarcerated Women*, 2022).

Previous studies reported similar findings that best practices and standards of care for pregnant individuals are not followed regardless of existing policies. Similarly, a survey of state prisons found that routine prenatal care was provided on-site and off-site; pregnant people were often accommodated with lower bunk assignments, but few facilities provided a double mattress; and that many facilities did not require the correctional officer present at birth to be a female officer (Ferszt & Clarke, 2012). Additionally, a survey of US jails found that almost all provided pregnant people with prenatal vitamins and supplemental snacks (Kelsey et al., 2017). However, half of their study jails allowed pregnant people to apply for furlough to be released before childbirth, while only one jail in our sample made this accommodation. Moreover, our findings on the use of restraints on pregnant people in custody mirrored that of previous studies demonstrating that restraints are still used in practice (Ferszt & Clarke, 2012; Kelsey et al., 2017).

The use of restraints on pregnant people has been condemned due to the increased risk of falls, potential placental abruption, poor circulation, and the possibility of delayed medical care in urgent situations (*Health Care for Incarcerated Women*, 2022; *AMA Passes Resolution Prohibiting Shackling of Pregnant Prisoners in Labor*, 2010; *Nonuse of Restraints for Pregnant and Postpartum Incarcerated Individuals*, 2010; “Shackling Incarcerated Pregnant Women,” 2011). Although many study sites reported having policies prohibiting restraints, the data indicate that restraints were

Table 5 Health care delivery, practices, and pregnancy accommodations

	Prisons (n = 22)	Jails (n = 6)
Health care services delivery		
Private contract	11 (50)	0 (0)
Public agency (e.g. department of public health)	0 (0)	1 (17)
Contract with community non-profit	1 (5)	0 (0)
Directly through prison/jail	10 (45)	4 (67)
Other (hospital)	0 (0)	1 (17)
Health care services accredited ¹		
American Correctional Association (ACA)	11 (50)	1 (17)
National Commission on Correctional health Care (NCCHC)	5 (23)	3 (50)
Not accredited	8 (36)	3 (50)
Health Care Practices		
Pregnancy testing policy ²		
Not done under any circumstances	0 (0)	0 (0)
All females tested at intake	14 (64)	5 (83)
All tested within 2 weeks of arrival (including within 48 h of arrival)	4 (18)	1 (17)
Only at the medical provider's discretion/upon clinical indication	3 (14)	0 (0)
Only upon woman's request	1 (5)	0 (0)
Location of routine prenatal care delivery		
Entirely on-site	3 (14)	0 (0)
Entirely off-site	2 (9)	0 (0)
Mostly on-site	4 (18)	2 (33)
Mostly off-site	1 (5)	0 (0)
Combination of on-site and off-site	12 (55)	4 (67)
Type of provider for routine prenatal care ³		
Ob/Gyn physician	13 (59)	4 (67)
Family physician	2 (9)	2 (33)
Other physician	2 (9)	0 (0)
Certified Nurse Midwife	1 (5)	1 (17)
Nurse Practitioner or Physician assistant	8 (36)	2 (33)
Medical furlough for birth ⁴	1 (5)	1 (17)
Pregnant women sent to a separate site before childbirth	3 (14)	1 (17)
Provision of pregnancy recommended vaccinations		
Flu vaccine	22 (100)	5 (83)
Tdap vaccine	16 (73)	4 (67)
Management of pregnant individuals with OUD ²		
Withdrawal only	4 (18)	1 (17)
Initiate and continue MOUD ⁵	4 (18)	2 (33)
Continue (with or without initiation) pre-incarceration MOUD	18 (82)	4 (67)
Discontinue MOUD postpartum ⁶	11 (61)	3 (75)
Abortion is allowed ²	19 (86)	4 (67)
First Trimester Only	8 (42)	0 (0)
First and Second Trimester	11 (58)	4 (100)
Abortion is not allowed ²	3 (14)	2 (33)
Breastfeeding or pumping is allowed ²		
Yes	11 (50)	5 (83)
No	11 (50)	1 (17)
Postpartum contraception availability ²		
Reversible Contraception	10 (45)	6 (100)
Permanent Contraception	11 (50)	5 (83)
Accommodations for pregnant people		
Nutritional Needs		

Table 5 (continued)

	Prisons (n = 22)	Jails (n = 6)
Prenatal vitamins ⁷	21 (100)	5 (100)
Pregnancy-specific diet	17 (77)	5 (83)
Supplemental snacks	19 (86)	5 (83)
Supplemental milk ⁸	14 (78)	4 (80)
Supplemental fresh fruit ⁹	14 (74)	4 (80)
Work, rest, sleep & clothing accommodations		
Assigned to bottom bunk	21 (95)	6 (100)
Double mattress or extra bedding	8 (36)	4 (67)
Work assignment accommodations ¹⁰		
Pregnant person routinely not allowed to work	4 (18)	2 (33)
Pregnant person routinely assigned to light duty	9 (41)	1 (17)
Changes made upon pregnant person’s request	3 (14)	2 (33)
Changes made upon doctor’s orders	12 (55)	2 (33)
Changes in work assignments are not needed	1 (5)	0 (0)
Extra rest or free time	13 (59)	4 (67)
Special clothing available (maternity pants and bras)	11 (50)	4 (67)
Programs/Support/Education ¹¹		
Nursery program ^{12, 13}	3 (14)	1 (17)
Parenting classes	17 (77)	4 (67)
Doula program	4 (18)	1 (17)
Other ¹⁴	7 (32)	3 (50)
None	3 (14)	1 (17)

¹One prison and one jail were accredited by both ACA and NCCHC

²Data previously published

³Participants could select multiple responses for this outcome, therefore some facilities indicated that they had several types of prenatal providers (7 prisons and 2 jails) and %’s do not add up to 100

⁴Details provided about birth-related furloughs: “Judicial releases or other under separate authority from medical” (prison); released to “MOMs Unit,” an offsite community substance abuse treatment program through the Sheriff’s Female Furlough Program, where they can stay for up to 5 years (jail)

⁵MOUD stands for Medications for the treatment of OUD

⁶Denominator is among facilities that either continue only or initiate and continue MOUD in pregnancy

⁷Prison denominator: 21, Jail denominator: 5

⁸Prison denominator: 18, Jail denominator: 5

⁹Prison denominator: 19, Jail denominator: 5

¹⁰Participants could select multiple responses, some facilities indicated changes were made to work assignments in multiple circumstances (4 prisons, 1 jail)

¹¹Participants could select multiple responses; some facilities reported offering several of these programs (12 prisons, 4 jails)

¹²“Nursery program,” also known as mother-infant care programs, refers to housing arrangements where newborns return to the facility with their mother and reside in a special area of the facility designated for mothers and infants

¹³Maryland facility reported having a prison nursery program. However, upon consultation with publicly available information, it was confirmed that there is no nursery program. They are thus not included in this count. All other nursery programs were confirmed

¹⁴“Other” included a class taught by the NP on stages of pregnancy, what to expect, and how to care for their body, the “Caring Parent Program”, an application-only Residential Parenting Program (RPP), KAP (Kids Apart Program) Lund (residential treatment program for substance abuse and mental health issues where pregnant or postpartum individual can live alongside their children), Catch the Hope, Perinatal MH group, parent support group, mentoring programs

still used throughout pregnancy and postpartum, including during transportation. Off-site transportation for care, to court appearances, and to the hospital for labor or for other issues is routinely necessary, thus it is troubling that 13 facilities reported using restraints during transport, despite

existing state laws that prohibit this usage. Circumstances for the use of restraints and the points in which restraints were used (pregnancy, childbirth, postpartum period) varied greatly across facilities.

All anti-shackling laws allow officers to use restraints at any point if the pregnant person is deemed a “threat” to themselves or others, or a flight risk. These discretionary loopholes, in conjunction with not one state anti-shackling law outright banning restraints, have been argued to promote the use of restraints in pregnancy and undermine the enforcement of anti-shackling laws (DiNardo, 2018). These laws do not account for the special circumstance of pregnant people whose risk of harm to others and escape is dramatically reduced due to their physical condition, the presence of armed officers, and the potential harm that could result to the fetus. Thus, in most instances, “extraordinary circumstances” do not exist, leading us to infer that shackling is used as a punitive practice. Data assessing compliance with laws are sparse and our study demonstrated the necessity to investigate compliance in policy and in practice. Increased awareness and education among carceral facilities and community providers is needed to ensure no pregnant person is shackled at any point.

Only eight facilities allowed a support person during childbirth, suggesting significant isolation for most who give birth in custody. Eight facilities did not require the officer present during childbirth to be female, which birthing individuals may experience as invasive, humiliating, and traumatizing given the prevalence of prior sexual trauma among incarcerated women. Other studies found similar findings that prisons and jails limit and may even prohibit a birth companion, even though evidence shows that emotional support and coaching is associated with improved birth outcomes for laboring women (Ferszt & Clarke, 2012; Kelsey et al., 2017; “ACOG Committee Opinion No. 766,” 2019). Studies also show benefits of doula support for incarcerated birthing people, yet this was not widely available in our study sites (Schroeder & Bell, 2005; Shlafer et al., 2015).

All study facilities provided prenatal vitamins, and most provided supplemental snacks, but similar to other studies, the quantity and quality of those snacks is not always specified (Ferszt & Clarke, 2012; Kelsey et al., 2017). Pregnant people have increased nutritional needs, including caloric requirements and micronutrients, which are necessary to support the growing fetus and extra demands of pregnancy on the body (Shlafer et al., 2017). Moreover, incarcerated people have limited options to access food, yet pregnant people often need small frequent meals and snacks throughout the day. Additionally, positive birth outcomes, specifically longer gestational periods and increased infant birth weight were associated with nutrition-related knowledge among pregnant people in custody as found in one intervention study focused on women incarcerated in jail (Dallaire et al., 2017). However, no such educational programs were reported at our study sites.

Regarding vaccinations in pregnancy, which prior studies have not reported, all but one facility recommended the flu vaccine to pregnant people, but fewer offered the Tdap vaccine, despite the standard practice of receiving it in the 3rd trimester of pregnancy (“Committee Opinion No. 718: Update on Immunization and Pregnancy: Tetanus, Diphtheria, and Pertussis Vaccination,” 2017). We did not assess vaccine counseling for pregnant people, but such counseling in conjunction with staff and patient education is particularly important given the COVID-19 pandemic and the disproportionate health impact on people in prisons and jails (Saloner et al., 2020).

Health care service accreditation is one strategy for assuring that facilities adhere to standards of care for pregnant people in custody, but accreditation is optional and one third of study prisons and half of study jails were not accredited. Regardless, facilities should meet nationally established and accepted standards of care, like ACOG’s policy priorities and recommendations on health care for incarcerated women (*Health Care for Incarcerated Women*, 2022).

We differentiate the results by facility type, prison or jail, because their policies and practices have different implications on health care. For instance, jails are short term incarcerations with high turnover that might make some services harder to deliver. However, five of the jails in our study are large, well-resourced jails in urban settings. They have different levels of oversight and centralization of policies. No significant differences were observed between pregnancy services and policies in prisons versus jails even regarding adherence to restraint policies and practices. However, the sample size is too small to generalize conclusions for all prisons and jails.

This study had limitations. Although the data were collected in 2016–2017, no prior study has assessed concordance between anti-shackling legislation and facility compliance. The study team did not collect policies from the prisons and jails to confirm what was reported in the survey. Desirability bias is a possibility, as respondents working in these facilities may have reported more favorable responses. No tests of association were performed due to a small sample size. This sample is not representative of all US prisons and jails; smaller jails, rural jails, and other prisons that vary in census may also vary in policies and services available for this population. Data in this study do not provide global generalizability. Regarding the restraint policy analysis, there were prisons whose reported practices may have contradicted state law, but the state law was more specific than their response, so a conclusion could not be easily drawn. Importantly, the study was not able to collect individual data about the pregnant people in care at these facilities or their perspectives that could shed light on whether the policies and services had long-term health outcomes.

Until the PIPS study there was limited data on how many pregnant people were incarcerated in the US, let alone the care they receive (Goshin & Colbert, 2019). To date, only a handful of studies have examined the policies and care for pregnant and postpartum people in prisons and jails. Policy makers and practitioners must take a deeper look at the policies and services that dictate pregnant people's lives while behind bars. Incarcerated pregnant people should be viewed as expectant parents in need of comprehensive health care, rather than as criminals who forfeited their right to a safe, respectful, and humane childbirth (DiNardo, 2018). We hope this study is a catalyst to examine how carceral services and policies are implemented, how they are received by the people who experience them, and how they can be improved to ensure the safety and dignity of pregnant and postpartum people experiencing incarceration.

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Author Contribution CS designed the study, survey instrument and supervised data collection. CK led and KT and AP contributed to data analysis. CK, KT, AP and CH equally wrote this manuscript, assisted by CS. All authors provided critical feedback and assisted in the composition of this manuscript. The authors read and approved the final manuscript.

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Data Availability Study instruments are available upon request to the corresponding author.

Code Availability Not applicable.

Declarations Carolyn Sufrin serves in a volunteer capacity on the board of directors of the National Commission on Correctional Health Care as the liaison for the American College of Obstetricians and Gynecologists.

Ethics Approval and Consent to Participate Approved by the Johns Hopkins School of Medicine IRB as non-human subjects research.

Consent to Participate All study site agreed to participate in this study. We adhered to each institution's system for research approval.

Consent for Publication Not applicable.

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interests.

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