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Data on Maternal Health and Pregnancy Outcomes from Prisons and Jails: Results from a Feasibility Study

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The Bureau of Justice Statistics (BJS) undertook a study designed to assess the feasibility of collecting data on maternal health and pregnancy outcomes from prisons and jails. The study examined the availability and quality of data, the respondent burden, and the challenges of collecting data on the health and health care of pregnant women in custody at the federal, state, local, and tribal levels. BJS will use the findings of this study to help determine the best strategies for implementing national data collections in correctional settings.

By focusing on maternal health and pregnancy outcomes in correctional settings, BJS is addressing a substantial gap in criminal justice statistics. There has been little research on maternal health in correctional settings, and there is a need for better data on women who are pregnant, outcomes of their pregnancies, and postpartum recovery while incarcerated. These data are necessary to assess and address the health needs of incarcerated women related to pregnancy and childbirth. In addition, there is a lack of information on services and accommodations provided to this population, policies and procedures related to pregnancy and childbirth, and how correctional maternal health and pregnancy outcomes data are tracked and maintained.

In recognition of the need for maternal health data, the U.S. House of Representatives Committee on Appropriations issued the following directive in fiscal year 2021:

> The Bureau of Justice Statistics shall include in the National Prisoner Statistics Program and Annual Survey of Jails statistics relating to the health needs of incarcerated pregnant women in the criminal justice system, including, but not limited to, the number of pregnant women in custody, outcomes of pregnancies, the provision of pregnancy care and services, health status of pregnant women, and racial and ethnic disparities in maternal health, at the Federal, State, tribal, and local levels.[1]

Through various data collections, BJS has historically collected basic information on maternal health on an ad-hoc basis, including:

- the number of women in prisons and jails who reported being pregnant at time of admission and the number who reported receiving prenatal care since admission[2]
- the number of women in prison who were pregnant and pregnant women who died from COVID-19 while in prison[3]
- data on pregnancy outcomes and use of restraints during pregnancy, labor, and postpartum recovery among women held by the Federal Bureau of Prisons (BOP) as required by the First Step Act of 2018.[4]

Independent researchers have also conducted studies on maternal health, including the Pregnancy in Prison Statistics study, the first systematic administrative data collection administered in both prisons and jails.

[1]House Committee on Appropriations Report 116-455, accompanying the Consolidated Appropriations Act, 2021 (P.L. 116–260).

[2]See *Medical Problems Reported by Prisoners: Survey of Prison Inmates, 2016* (NCJ 252644, BJS, June 2021) and *Medical Problems of Jail Inmates* (NCJ 210696, BJS, November 2006).

[3]See *Impact of COVID-19 on State and Federal Prisons, March 2020–February 2021* (NCJ 304500, BJS, August 2022).

[4]See *Federal Prisoner Statistics Collected under the First Step Act, 2021* (NCJ 301582, BJS, February 2021).

This multi-state, multi-site study was conducted to obtain pregnancy frequencies and outcomes among incarcerated women.[5] Its purpose was to fill gaps in maternal health data from correctional facilities by prospectively collecting pregnancy and pregnancy outcome data monthly from state and federal prisons and jails.

However, no regularly collected data to date align with the breadth and depth of the statistics or the scope of facilities outlined in the congressional directive. In response, BJS contracted with Abt Associates in 2021 to conduct a feasibility study to determine the best strategies for conducting national data collections, to inform the data collection methodology, and to develop survey questions. The goals of this study were to:

1. identify maternal health policies and practices guiding the care of pregnant women in correctional settings
2. understand how correctional settings record and maintain data on maternal health and pregnancy outcomes
3. identify what data elements from correctional settings are available and the quality of those data
4. understand technical, resource, and confidentiality issues involved in correctional settings providing maternal health data and identify solutions to assist in mitigating any challenges.

This technical report describes the feasibility study's methodology and findings, and it provides recommendations for administering national maternal health data collections in correctional settings.

[5]See Sufrin, C., et al. (2019). Pregnancy Outcomes in US Prisons, 2016–2017. *American Journal of Public Health*, 109(5), 799–805; and Sufrin, C., et al. (2020). Pregnancy Prevalence and Outcomes in U.S. Jails. *Obstetrics & Gynecology*, 135(5), 1177–1183.

Methodology

Prior to conducting the feasibility study, BJS conducted an environmental scan of existing literature on maternal health in corrections and solicited input from a multidisciplinary panel of subject matter experts. The environmental scan was conducted to better understand maternal health standards for prisons and jails, the health needs of pregnant and postpartum women in custody, and maternal health practices and services. The expert panel, along with findings from the scan, shed light on the types of maternal health services provided in facilities, existing pregnancy-related statistics, and the extent of the limited research on maternal health among incarcerated women. These steps confirmed the need to further explore the types and quality of maternal health data that correctional facilities maintain and to identify which data could be reported to BJS at the aggregate- and individual-record levels. It also identified disclosure protections under the Health Insurance Portability and Accountability Act of 1996 (HIPAA) that could have implications on obtaining individual-level data from medical records.[6]

The scan and engagement with experts were critical to identifying the gaps and challenges in correctional maternal health data. BJS considered findings from the scan, input from the expert panel, and specifications in the congressional directive to guide the methodology for conducting the feasibility study and the content of the semi-structured interviews.

BJS used a semi-structured interview approach to collect information from prison and jail respondents. Semi-structured interviews are widely used in qualitative research, particularly when little is known about the focus topic, and they are the primary source of qualitative data in health services research.[7] This approach provides flexibility because the interviews include open-ended questions that may yield unscripted follow-up questions based on the respondents' answers. It also allows for flexibility in question wording, and interviewers can ask for more context, clarity, or examples if needed. As a result, some findings in this technical report include responses that are only from a portion of respondents because not every respondent answered each question.

[6]HIPAA requires the creation of national standards to protect sensitive patient health information from being disclosed without the patient's consent or knowledge.

[7]DeJonckheere, M., Vaughn, L.M. (2019). Semistructured interviewing in primary care research: a balance of relationship and rigour. *Family Medicine and Community Health*, 7(2).

Interview design

The semi-structured interview instrument was divided into three sections:

1. policies and procedures guiding maternal health practices
2. data management systems and maternal health data
3. challenges reporting maternal health data to BJS.

The goal of the first section of the semi-structured interview was to gather data on the provision of health care and accommodations for pregnant women during incarceration. Interviewers asked about policies and practices for medical and custodial standards of care, pregnancy testing upon admission, pregnancy plans, access to obstetrician-gynecologists (OB/GYNs) and other providers, the provision of special diets and prenatal vitamins, pregnancy outcomes, and other accommodations and support. The discussions related to custodial policies on care for pregnant women included guidelines on use of restraints, transportation to appointments, and pregnancy identification methods, such as different color uniforms or a "pregnancy flag" in the case management system (CMS).[8]

The goal of the second section was to understand which data elements can be collected by BJS to produce national estimates of maternal health among women in prisons and jails. Respondents were asked to report whether their CMS or other data management systems included specific maternal health information.

In the third section of the semi-structured interview, respondents were asked about legal, technical, and resource challenges associated with reporting aggregate- and individual-level maternal health data, as well as the burden associated with reporting data, to BJS.

See appendix table 1 for a summary of the semi-structured interview instrument, including data elements listed by category with a brief description and list of variables.

[8]A CMS typically contains person-level demographics, offense and criminal history, inmate movement such as transfers and work release, known gang affiliation, violent infractions within the facility, and other pertinent data correctional officers and staff need to know to maintain safety and security.

Site selection

BJS conducted outreach with 78 local jails, all 50 state Departments of Corrections (DOCs), the Federal Bureau of Prisons (BOP), 10 companies operating private prisons, and 9 jails in Indian country to solicit participation, with the goal of securing 75 sites.[9] Among these sites, 50% would be prisons, 40% jails, and 10% jails in Indian country. Convenience sampling was used to select sites.

BJS selected local jails based on geographic location and size of confined female population. Each state DOC and the BOP were asked to identify an appropriate respondent to provide the type of information being requested.

Based on the feedback received during outreach to jails in Indian country and private prisons and information gleaned during interviews that were conducted prior to completing the outreach phase, BJS decided to cease recruitment and exclude those sites from the feasibility study. See *Study participation: Indian country jails and private prisons* text box for more information.

BJS's outreach efforts yielded interviews with 44 sites: 21 state DOCs, the BOP, 20 local jails, 1 jail in Indian country, and 1 private company that operates multiple facilities.

Interview approach

From March to July 2022, under BJS direction, Abt Associates completed a total of 45 interviews. Among those interviews, two were conducted with the BOP, one with a jail in Indian country, and one with a private company. The two interviews with the BOP were combined into one record to represent one site and the latter two interviews were excluded, leaving a final sample of 42 sites for analysis.

Interviews were conducted in videoconference format and lasted approximately 1 hour. The number of interview participants at each site ranged from 1 to 15. Participants included prison and jail administrators, wardens, medical directors or staff from the medical

[9]BJS defined a site as a state DOC, the BOP, a large company operating multiple private correctional facilities, a local jail, a single facility operated by a private company contracted to house persons for correctional authorities, or a jail facility in Indian country.

Study participation: Indian country jails and private prisons

Indian country jails

To engage with and recruit participants from Indian country jails, American Indian Development Associates—an organization with a history of working with these jails—conducted initial outreach on behalf of the Bureau of Justice Statistics (BJS). After a formal semi-structured interview with one Indian country jail, and informal discussions with personnel within eight Indian country jails and the Bureau of Indian Affairs, BJS learned that Indian country jails have limited resources to provide prenatal care and typically sentence pregnant women to community corrections in lieu of incarceration. Because of this practice, very few pregnant women are held in tribal jails on any given day. Supplemental data collected by BJS from interviews intended to enhance the 2023 Survey of Jails in Indian country data collection instrument supported these findings. BJS also learned that health care for persons held in Indian country jails is often contracted out to private entities or provided by Indian Health Services (IHS). IHS, an agency within the Department of Health and Human Services responsible for providing federal health services to American Indians and Alaska Natives, is the primary healthcare provider for persons in Indian country jails. Private contractors and IHS maintain much of the health data of persons held in Indian country jails. Given this arrangement, individual Indian country jails may face obstacles obtaining data requested by BJS. For these reasons, BJS decided to cease recruitment of Indian country jails for formal interviews.

Private prisons

BJS reached out to 10 private companies operating the largest number of private prisons to initiate participation, resulting in one interview with representatives from a private company operating multiple jails and prisons on behalf of state Departments of Corrections (DOCs) and local jails. Based on this interview and several interviews with state DOCs, BJS decided to cease recruitment of private companies and individual private prisons for two reasons: pregnant women are typically not housed in private facilities and the data maintained by private companies contracted to house inmates for other correctional authorities are typically owned by the contracting governing entity. BJS concluded that the DOCs and BOP can submit the requested information directly to BJS because they either have direct access to these data or can obtain these data from private companies contracted to house persons under their authority.

unit in facilities, and corrections staff that provided care or interacted with pregnant women. There were two interviews for the BOP site, and the information covered the federal correctional facilities that house women.[10] The first interview was conducted with staff with knowledge of health services, and the second included leadership with knowledge of corrections, custody, and data. These two BOP interviews were consolidated into one BOP response.

After interviews were completed, notes were provided to respondents to review and provide any additional supporting information or to respond to questions unable to be answered during the call. Additionally, follow-up phone calls and emails were made to local jails and DOCs in an attempt to obtain information that was not received during the interviews or review period.

Data analysis

The closed-ended responses were analyzed in SPSS, and the qualitative data obtained from open-ended questions were examined using NVivo, a qualitative software that extracts key themes. Due to the nature of the semi-structured interviews, not all findings reported will total the number of interviews conducted. Missing data could be due to the respondent not knowing the answer to a question, not being asked the question included in the interview guide, or not being asked certain questions during open-ended discussions. For reporting purposes and to maintain the confidentiality of specific respondents, information provided by the BOP was combined with data from the 21 participating DOCs.

[10]At the time of the study, the BOP housed women in 29 facilities. As a result of recent mission changes, the BOP now has 27 facilities housing females, down from 29 in the previous fiscal year. These include both federal detention centers and correctional institutions.

Findings

Policies and procedures guiding maternal health practices

Data gathered in this section of the interview showed that the majority of sites had policies and procedures on how to care for pregnant women and on services and accommodations provided to pregnant women for health, safety, or comfort. Some also had specialized training and modules for new correctional officers or facility staff on how to care for and provide services to pregnant women.

Most sites had an on-site infirmary or medical care unit capable of providing prenatal care, delivering a baby, and handling complications such as a miscarriage. However, the available services and healthcare delivery system for pregnant women varied among sites. Often, medical areas had on-site nursing staff and the capacity for external providers to offer care through scheduled appointments or clinics. Few had 24-hour nursing care or on-call medical providers.

Responses to questions about specific accommodations for pregnant women indicated that, in general, sites provided pregnant women a special diet, standardized information on options regarding the pregnancy outcome and the baby's placement, substance use disorder treatment, and prenatal medication. Additionally, a few prisons offered special units that allow a baby to stay with the mother.

Data management systems and maternal health data

Based on responses provided in this section, most CMSs captured limited maternal health data. However, most respondents indicated that many of the variables of interest were recorded and maintained in an electronic medical record (EMR) system. Data elements often available in a CMS were sometimes limited to a flag or note for special accommodations for a pregnant woman that a correctional officer or staff would need to know, or a flag that a pregnant woman was transferred off-site. Transfer data might include the destination or reason for transport or could simply note when the person was moved without additional details. Table 1 displays the list of data elements that were asked about in the interviews and the number of sites that reported that the data element was included in their CMS.

Twenty-three sites (13 DOCs and 10 jails) reported their CMS had data on a woman's pregnancy status. Additional findings showed that seven sites (five DOCs and two jails) kept data in their CMS on pregnancy complications, six sites (four DOCs and two jails) had data on visits to the obstetrician or ultrasounds, and nine sites (eight DOCs and one jail) tracked at least one pregnancy outcome (i.e., stillbirth, abortion, miscarriage, ectopic pregnancy, or live birth).

During discussions about data elements included in the site's CMS, respondents offered information about maternal health data elements maintained in their EMRs. Subsequently, a more systematic approach to asking about data elements in EMRs was adopted. Most sites interviewed reported that maternal health data were in an EMR system. Many noted that the EMR system had restricted access and was separate from the CMS. Respondents shared their assumptions that the EMR contained more detailed and specific information than the CMS on maternal health complications, pregnancy care and services, and pregnancy outcomes. Some respondents, especially those from sites where maternal health care was delivered off-site, reported that the maternal health data housed in their EMRs were often in the form of handwritten notes, PDFs, or paper charts. A few sites reported not having an EMR.

Challenges with reporting maternal health data to BJS

Of the three categories of challenges, more respondents reported legal challenges with reporting maternal health data than technical or resource challenges, and this was true for both aggregate- and individual-level data. Respondents reported challenges ranging from minor, such as needing time to obtain approval to compile and submit data, to challenging, such as specific data elements not being maintained in a readily retrievable format.

More respondents anticipated challenges or burden with the reporting of individual-level data over that of aggregate-level data. These challenges were driven by concerns for the women's privacy and the need for informed consent, which in turn taxes resources and increases reporting burden.

TABLE 1
Data elements housed in CMS, by site type

	DOCs			Jails		
Data element	Available	Unavailable	Unknown	Available	Unavailable	Unknown
FBI number	12	4	6	11	4	5
Hospital visits or transfers	11	7	4	4	14	2
Medical records located in CMS	3	18	1	2	18	0
Mental health treatment in custody	10	9	3	4	10	6
Obstetrics exams and/or ultrasounds	4	16	2	2	15	3
Pregnancy screening/pregnant status	13	7	2	10	7	3
Pregnancy complications[a]	5	13	4	2	15	3
Pregnancy outcomes[b]	8	12	2	1	16	3
Social Security number	15	2	5	15	0	5
Status in custody	16	0	6	15	0	5
SUD screening	15	5	2	6	10	4
SUD treatment in custody	11	8	3	4	13	3

Note: CMS denotes case management system. SUD denotes substance use disorder. Twenty-two Departments of Corrections (DOCs), including the Federal Bureau of Prisons, and 20 jails participated in the study. Sites included in unknown may not have been asked the question, provided a response, or provided the specific information during open-ended discussions.

[a]Includes preeclampsia, gestational diabetes, and other pregnancy complications.

[b]Includes sites that reported maintaining at least one pregnancy outcome (i.e. stillbirth, abortion, miscarriage, ectopic pregnancy, and live birth) in their CMS.

Aggregate-level data

Legal challenges

Twenty-three sites (10 DOCs and 13 jails) described legal challenges to reporting aggregate-level maternal health data (table 2). Three sites (two DOCs and one jail) reported no legal challenges, and the remaining sites did not report whether they would have legal challenges. Of the sites reporting legal challenges, 18 (7 DOCs and 11 jails) reported the expected barrier to be potential layers of approval and guidance from their legal department, general counsel, or other administrators that could extend their response timeline. Five sites (four DOCs and one jail) reported that the small number of pregnant women in custody posed legal challenges, in terms of privacy for the women and potential for identification. One jail reported they did not have access to records from off-site providers, which was the source for all maternal health care received by women in their custody.

Technical challenges

Nineteen sites (11 DOCs and 8 jails) reported that they were likely to have technical challenges with reporting aggregated maternal health data to BJS, while 6 sites (5 DOCs and 1 jail) reported no technical challenges. The remaining sites did not report whether they would have technical challenges. The most frequently reported technical challenge (six DOCs and five jails) was the location and format of detailed maternal health data, (e.g., text files, notes, PDFs). This data format was most typical when the woman received maternal health care off-site and the external healthcare provider sent records back to the site. To report these data, staff would have to manually review individual files to compile the requested data. Technical challenges would most likely impact the ability for sites to report information on different pregnancy complications, pregnancy outcomes, off-site maternal health care, and postpartum health. However, while sites confirmed that manually extracting the data adds burden, it is possible to do. Respondents indicated that reporting data on the number of pregnant women in a given timeframe, pregnancy testing, policies and practices, and accommodations and services would not be affected by this challenge. Other technical challenges included the need to create new code, queries, and reports to retrieve existing quantitative data, but these challenges could be addressed with a data collection timeframe that accounts for these extra steps.

Resource challenges

Thirteen sites (eight DOCs and five jails) reported that limited resources could impact their ability to provide aggregate-level maternal health data within the typical BJS-requested survey response timeframe (i.e., 2 months). Two jails reported no resource challenges. The remaining sites did not report whether they would have resource challenges. Respondents shared that the resources needed to fulfill the aggregate-level data request depended on the format and location of maternal health data, with data located in EMRs and as text files requiring more resources to compile. Of the 13 sites that reported resource challenges, 10 sites (8 DOCs and 2 jails) reported a lack of necessary staff to coordinate, retrieve, or analyze the data. Five sites (two DOCs and three jails) discussed the amount of time necessary to fulfill such a data request. For those who work with external vendors to either manage the EMR or provide health care, there could be additional time involved.

TABLE 2
Challenges to reporting aggregate-level maternal health data, by site type

Challenges	DOCs	Local jails
Legal challenges	10	13
Legal approval	7	11
Privacy issue because too few women	4	1
No access to OB/GYN records	0	1
Technical challenges	11	8
Data are in notes, text, PDF form	6	5
Multiple databases and double counting	1	0
Creation of codes/process to run a new data query	4	3
Resource challenges	8	5
Staff to coordinate, retrieve, or analyze the data	8	2
Time to develop process and retrieve data	2	3
Money to pay for staff time, resources needed	2	1

Note: OB/GYN denotes obstetrician-gynecologist. Twenty-two Departments of Corrections (DOCs), including the Federal Bureau of Prisons, and 20 jails participated in the study. These data were based on open-ended questions and represent the number of sites that provided details on their challenges. Details may not sum to totals because respondents could report multiple challenges.

Individual-level data

Legal challenges

Thirty-one sites (17 DOCs and 14 jails) reported legal challenges to reporting individual-level maternal health data could be a barrier, while 1 local jail reported no legal challenges; the remaining sites did not report whether they would have legal challenges (table 3). Twenty-one sites (10 DOCs and 11 jails) reported needing to obtain informed consent or an individual medical release, with many reporting it would be very difficult, burdensome, or impossible to get informed consent from all pregnant/postpartum women who had recently been incarcerated. For jails, which hold people for shorter periods of time, this step would require outreach to women released to the community, which can be very difficult. Other legal challenges reported were the need for institutional legal approval (eight DOCs and eight jails) and HIPAA concerns (four DOCs and one jail).

Technical challenges

Twelve sites (six DOCs and six jails) reported anticipated technical challenges to reporting individual-level maternal health data, and six sites (three DOCs and three jails) reported no technical challenges. The remaining sites did not report whether they would have technical challenges. The majority of sites that described technical challenges (four DOCs and five jails) reported that the challenge was in the format of maternal health data, the same as for reporting aggregate data. Three sites (two DOCs and one jail) specifically mentioned data quality issues as a technical challenge.

Resource challenges

Ten sites (six DOCs and four jails) reported having limited resources that would impact their ability to provide individual-level data to BJS. Two jails reported having no resource challenges, and the remaining sites did not report whether they would have resource challenges. Similar to the challenges for reporting aggregate data, the most reported resource challenge was a lack of staff to coordinate, retrieve, or analyze the data. Respondents also mentioned the significant staff time required to get informed consent to release individual-level data. In some cases, respondents reported that staff would need to first identify pregnant women by reviewing text or paper files before outreach and contact could even occur. Three of the sites (two DOCs and one jail) discussed the time it would take to fulfill the request, and they related this back to the challenges with certain data formats, the need to create a new query or process, or the need to obtain informed consent from individual women.

TABLE 3
Challenges to reporting individual-level maternal health data, by site type

Challenges	DOCs	Local jails
Legal challenges	17	14
Legal approval	8	8
Informed consent or medical release	10	11
HIPAA concerns	4	1
Technical challenges	6	6
Data are in notes, text, PDF form	4	5
Developing the report	1	1
Data are incomplete, low quality	2	1
Resource challenges	6	4
Staff to coordinate, retrieve, or analyze the data	3	4
Time to develop process and retrieve data	2	1
Money to pay for staff time, resources needed	1	0

Note: HIPAA denotes Health Insurance Portability and Accountability Act. Twenty-two Departments of Corrections (DOCs), including the Federal Bureau of Prisons, and 20 jails participated in the study. These data were based on open-ended questions and represent the number of sites that provided details on their challenges. Details may not sum to totals because respondents could report multiple challenges.

Burden to extract aggregate data

Sites were asked additional questions to gauge the burden to create a data extract of (1) the aggregate number of pregnant women in custody for a 1-day count, and (2) aggregate data on the outcomes of pregnant women in custody for a period of 1 year. Of the 18 DOCs that provided an answer to the first question, 16 reported that it would be easy to extract a 1-day count of the number of pregnant women in custody (table 4). Nine jails, out of 12 responding, indicated it would be easy to extract this 1-day count. For sites that reported it would be easy to extract this data, some reported a timeframe of up to one week, while the others did not indicate the amount of time it would take to extract the data. Two DOCs and two local jails reported it would be difficult to extract these data but did not specify the amount of time it would take.

Fewer sites provided an answer for the burden to report pregnancy outcomes, and the responses were more mixed. Two of the five responding DOCs reported it would be easy to extract the data, while two reported it would be difficult. The remaining DOC was unsure of the burden. Among jails, seven provided an answer, with two reporting the data extract would be easy, four sites reporting the extract would be difficult, and one site reporting they were unsure of the burden as the timeline to extract the data would be dependent on their EMR vendor. Of the four sites reporting it would be easy to extract the data, one reported that extracting the data would take a few days and the other three did not report a timeframe. None of the six sites that reported difficulties extracting pregnancy outcomes provided a time estimate.

TABLE 4
Burden to extract aggregate-level maternal health data, by site type

Data element	DOCs	Local jails
Number of pregnant women in custody for a 1-day count		
Easy to do[a]	16	9
Difficult to do[b]	2	2
Unsure, depends on vendor	0	1
Outcomes of pregnant women in custody for a period of 1 year		
Easy to do[c]	2	2
Difficult to do[d]	2	4
Unsure, timeline unknown	1	0
Unsure, depends on vendor	0	1

Note: Twenty-two Departments of Corrections (DOCs), including the Federal Bureau of Prisons, and 20 jails participated in the study. Data are incomplete as not all sites provided a response.

[a]Includes respondents who said it would be easy to do, no time period specified or provided a timeframe of less than a week.

[b]Includes respondents who said this would be difficult or impossible to do, no time period specified.

[c]Includes respondents who said this would be easy to do, no time period specified or provided a timeframe of a few days.

[d]Includes respondents who said this would be difficult, burdensome, or impossible to do, no time period specified.

Recommendations for a national maternal health data collection

Findings from 42 semi-structured interviews provided insight on policies and practices of care and accommodations for pregnant women, maternal health data maintained by correctional sites, and the expected challenges and burden for respondents to compile and report maternal health data.

The results presented inform the feasibility of collecting maternal health data from prisons and jails and the data elements that are likely available across sites. Findings revealed that some data elements are available and can be reported with minimal burden to the respondents. While other data elements are also available, there is a larger burden associated with reporting because the information is stored in the EMR with restricted access and is often stored in text, note, or PDF format. The recommendations below take these factors into account.

Recommendation 1: Collect information on maternal healthcare practices and data elements commonly available in CMSs

Maternal healthcare services and accommodations and data elements available in a CMS related to pregnancy screenings and status can be reported to BJS with minimal burden. Specifically, the maternal health data elements that appear feasible for BJS to collect from prisons and local jails include:

- number of women who are pregnant at time of admission in a given timeframe
- 1-day count of the number of pregnant women in custody
- demographic data of women who are pregnant
- pregnancy screening practices
- number of pregnancy tests conducted
- practices for special accommodations and types of healthcare services provided to pregnant and postpartum women
- provision of special housing units that allow babies to stay with new mothers

- information on the delivery and organization of maternal health care, to include whether the on-site medical unit is equipped to conduct ultrasounds, deliver a baby, and triage in case of an emergency (e.g., pre-term labor, stillbirth, etc.).

Pregnancy complications and outcomes are possible to collect but will impose more burden to compile and report. Although these data are often maintained, there are hurdles to reporting them. First, the data are in EMR systems, which have limited user access that may not include the identified survey respondent. Many sites specifically discussed restricted access to EMR and health data, and each reported that only certain personnel, such as medical and healthcare staff, can access the system and retrieve the data. While using EMR data to respond to a BJS maternal health survey could pose extra burden on the site, BJS can mitigate these challenges by identifying medical staff as the respondent to the survey. The National Prisoner Statistics (NPS-1B) Survey is an example of an annual BJS data collection wherein respondents coordinate submission of HIV/AIDS data with medical staff when data otherwise would not be available. A similar model could be used for a maternal health data collection.

Recommendation 2. Prioritize collecting aggregate-level data over individual-level data

Aggregate data collection significantly reduces burden on respondents by limiting the potential need to obtain informed consent to release individual-level records. Informed consent poses significant resource challenges for sites, particularly for local jails, which were more likely to report it would not be possible to locate the relevant persons to obtain informed consent. When discussing aggregate data, respondents did not report the need for informed consent as a challenge. Respondents from both DOCs and jails reported fewer challenges, layers of institutional approval, and limitations to reporting aggregate data compared to individual-level data. However, based on factors including available resources, BJS will consider engaging in additional work to better understand the limitations of providing individual-level data and work with sites to determine how these limitations could be overcome, particularly given the U.S. House of Representatives' directive to address disparities in maternal health and health outcomes among incarcerated women.

Recommendation 3. Prioritize supplemental over new stand-alone data collections

To further decrease respondent burden, BJS can include maternal health surveys in existing BJS national collections to the fullest extent possible. Data providers are familiar with BJS's annual and periodic collections, which will help reduce the learning curve associated with completing a new data request. Including maternal health as part of an existing collection also reduces the time and cost associated with implementing a stand-alone collection.

Recommendation 4. Employ established methods to maximize response rates

While the semi-structured interviews determined availability of data elements, they did not define or request quantitative information regarding those data elements. Respondents noted the importance of BJS providing clear instructions and definitions of terms when developing the national data collection instrument to ensure comparability and lessen the burden of reporting quantitative data. Additionally, BJS can provide the data elements to be collected in advance and allow ample time to respond to help maximize responses to national data collection efforts. Allowing ample time will be particularly important for sites that contract with an external vendor to manage their EMR data.

To further facilitate survey response and ensure high quality data, BJS can host an informational technical assistance and training webinar for data providers. BJS can utilize existing data use agreements (DUAs) or memoranda of understanding (MOUs) with sites to decrease the layers of approval and approval timelines. Twenty-one sites (16 DOCs and 5 jails) reported a current or recent DUA with BJS at the time of the interview. This presents an opportunity for BJS because the DUAs can be modified to collect maternal health data. A DUA or MOU helps facilitate approval and buy-in and the processing and fulfillment of timely data requests for BJS.

Recommendation 5. Assess the need to obtain maternal health data from Indian country jails and private facilities

Indian country jails

Further collaboration with the Bureau of Indian Affairs and Indian Health Service is warranted to assess the full extent to which pregnant women are being housed in Indian country jails and to determine best practices for obtaining maternal health data, pending available resources.

Private facilities

To confirm findings from the feasibility study, further assessment of the extent to which pregnant women are held in private prisons and the extent to which states can provide maternal health data for those women is necessary. This can be accomplished during cognitive testing of a prison maternal health data collection instrument.

At this time, BJS will focus national data collection in state and BOP-operated facilities and local jails. During the instrument development stage, BJS will further assess the extent to which pregnant women are held in private prisons and the extent to which states can provide maternal health data for those women.

Conclusion

Findings from this study suggest that BJS could succeed in collecting important data on maternal health from state prisons, the BOP, and local jails. The collective interview findings suggest that it is feasible for BJS to collect information on maternal health practices; prevalence of pregnant women and demographics; pregnancy test outcomes; types of accommodations, services, and programs available for pregnant and postpartum women; and the organization of maternal health care.

By collecting aggregate-level data through supplements or addendums to existing BJS collections, the congressional directive to collect the number of pregnant women in custody, outcomes of pregnancies, provision of pregnancy care and services, and health status of pregnant women could be met in a timely and less burdensome manner.

Further consideration should be given to the collection of individual-level data as those data would provide additional information that could be used to better understand the disparities in maternal health and health outcomes of incarcerated women.

Next, BJS will examine items for inclusion in a survey instrument and further assess respondent burden before exploring options for national implementation in a BJS collection.

APPENDIX TABLE 1

Data elements included in the semi-structured interview

Category	Data element	Variable or Question
Facility/site information	Facility type	Jail, prison, unified
	Population housed in facility	Pretrial, sentenced, held for other agencies, other
	Respondent type	Reporting for a single facility
		Reporting for multiple facilities
	Custody statuses of inmates	Minimum/low, medium, high, super, administrative
	Sex of inmates in facility	Female-only, coed facility, combination
	Number of women held in the facility	Average daily population of females
Policies and procedures	Existing policies on maternal health and pregnant women	Policy on how to care for pregnant women
		Policy on types of services for pregnant women
		Specialized training for those in contact with pregnant women
	Facility accreditation(s) for maternal health care	Does facility meet accreditation standards for maternal health care?
Screening	Screening for pregnancy	When are women screened for pregnancy? (open-ended)
		Are women of a certain age automatically screened?
Access to health care	Facility provides material to pregnant women on maternal health care	Provide educational material to pregnant women
	Maternal health care access for pregnant women	How does the facility provide maternal health care to pregnant women? (open-ended)
		Does the facility have an on-site medical infirmary?
Access to accommodations and services	Special accommodations for pregnant women	Special housing unit for pregnant women
		Special unit(s) allowing newborns to stay with mothers
		Specialized diet and/or prenatal medication
		Access (indirect or direct) to an OB/GYN provider
		Access to substance use disorder treatment
		Access to mental health counselor or therapist
		Information on pregnancy options and baby's placement
		Connected to special designee to facilitate decision-making
Data management systems	Inmate management system or case management system (CMS)	Vendor and name for CMS Where CMS data is stored (in house, external vendor, etc.)
	Medical records in CMS	Are medical records stored in CMS?
Data Elements in CMS	CMS: Demographics and Personally Identifiable Information	Date of birth
		Sex
		Race and ethnicity
		Citizenship
		Occupation
		FBI number
		Full Social Security number (SSN)
		Last 6-digit SSN
		Criminal history
		Status in custody (e.g., pretrial, sentenced, etc.)
	CMS: Initial screenings	Illicit drug use/substance use disorder (SUD)
		Pregnancy screening
		Prescription drug and/or alcohol use/abuse
		Bodily injury
	CMS: Maternal health complications (once woman is identified as pregnant)	Preeclampsia, gestational diabetes, other pregnancy-related complication(s)
		Method of delivery (i.e., vaginal)
		Hospitalizations related to maternal health/pregnancy
		Hospitalization unrelated to maternal health/pregnancy
	CMS: Healthcare services received	Mental healthcare services
		SUD services
		Number of ultrasounds, obstetrics exams
		Number of obstetrics exams
		Prenatal counseling, as requested

Continued on next page

APPENDIX TABLE 1 (continued)
Data elements included in the semi-structured interview

Category	Data element	Variable or Question
	CMS: Pregnancy outcomes	Pregnancy loss (stillbirth, miscarriage, etc.)
		Abortion
		Live birth
		Outcomes related to baby (major neonatal abnormalities, live birth weight, Apgar score, care in neonatal intensive care unit)
	CMS: 1-year outcomes	Data on maternal morbidity and mortality, 1 year post pregnancy
Challenges and burdens	Data use agreement between facility and BJS	Data use agreement or memorandum of understanding
	Facility's capability to share aggregate-level data with BJS	Administrative process (open-ended)
		Legal challenges (open-ended)
		Technical challenges (open-ended)
		Management/resource challenges (open-ended)
	Facility's capability to share individual-level data with BJS	Administrative process (open-ended)
		Legal challenges (open-ended)
		Technical challenges (open-ended)
		Management/resource challenges (open-ended)
	Burden associated with retrieving data	Time to retrieve aggregate 1-day count of the number of pregnant women in custody (open-ended)
		Time to retrieve aggregate 1-year count of the number of pregnant women in custody (open-ended)
		Time to retrieve aggregate data on pregnancy outcomes among women in custody, for a period of 1 year (open-ended)
		Time to retrieve individual data on accommodations and services among pregnant women in custody, for a period of 1 year (open-ended)
		Time to retrieve individual data on overall health status of pregnant women in custody, for a period of 1 year (open-ended)
	Similar existing data collection efforts	Of the surveys and data requests reported on an annual basis, which (if any) would be relevant to these questions? (open-ended)
	BJS resources for facilities	What resources could BJS provide to reduce burden? (open-ended)

Note: OB/GYN denotes obstetrician-gynecologist.

The Bureau of Justice Statistics of the U.S. Department of Justice is the principal federal agency responsible for measuring crime, criminal victimization, criminal offenders, victims of crime, correlates of crime, and the operation of criminal and civil justice systems at the federal, state, tribal, and local levels. BJS collects, analyzes, and disseminates reliable statistics on crime and justice systems in the United States, supports improvements to state and local criminal justice information systems, and participates with national and international organizations to develop and recommend national standards for justice statistics. Kevin M. Scott, PhD, is the acting director.

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