Women who are involved in the criminal justice system experience poorer reproductive health outcomes. Resolving this inequality will require addressing reproductive health disparities facing incarcerated women, improving the health of criminal justice-involved women in the community, and preventing engagement of women with the criminal justice system altogether.

Over 1.2 million women in the United States were on probation, parole, or incarcerated in jail or prison facilities at the end of 2015, the most recent year for which data are available [1]. Of those, approximately 202,000 women were incarcerated and nearly five times that number were on parole or probation [1]. Women’s incarceration has increased by 823% during the past 30 years despite recent decreasing incarceration rates for men nationally [2]. This trend means that more women in the community have been involved in the criminal justice system than ever before. Women who are poor and/or women of color disproportionately bear the burden of women’s criminal justice involvement in the United States, and with the rise of the opioid epidemic, increasing numbers of rural women and white women are in jails and prisons [3, 4].

Approximately 29,000 women were under correctional supervision in North Carolina at the end of 2015 [1]. At mid-year 2015, there were 2,763 North Carolina women imprisoned in state facilities; 2,292 held in local jails; 1,107 on parole, which follows an episode of incarceration; and 23,746 on probation, which is an alternative to incarceration [1, 5]. There are no federal prison facilities that house women in North Carolina. More recent data from the North Carolina Department of Public Safety suggest that this level of criminal justice involvement for women in the state has remained unchanged in recent years [5].

The health experiences of women who are involved in the criminal justice system share some of the same features as those of men, with high levels of chronic disease [6, 7], a heavy burden of infectious morbidity [8, 9], and the pervasive effects of trauma present in this population [3, 10]. Involvement in the criminal justice system also introduces unique reproductive health challenges for women, and addressing them will require innovative and collaborative approaches to address. The objectives of this commentary are: 1) to highlight evidence-based mechanisms to address reproductive health disparities that exist for women who are incarcerated; 2) to identify opportunities to improve the health of criminal-justice-involved women in the community; and 3) to propose methods based in health care for primary and secondary prevention of criminal justice involvement.

Addressing the Reproductive Health Disparities Facing Incarcerated Women

Women who are involved in the criminal justice system experience poorer reproductive health outcomes across life transitions, and health disparities for women who have experienced incarceration are particularly well documented. Women who are currently or have been incarcerated have experienced childhood and adult sexual violence and trauma [10], unintended pregnancies [11], adverse birth outcomes [12], cervical dysplasia and malignancy [13], and sexually transmitted infections (STIs) [9] in disproportionately high numbers. These same disparities exist for populations that are overrepresented in the criminal justice system, including women of color, poor women, and rural women, although the magnitude of the disparity is often greater among women who belong to these groups and are also incarcerated.

Acknowledging that the pathways through which women enter the criminal justice system often stem from cycles of abuse and trauma that begin in childhood and adolescence is an important first step in addressing the effect of trauma among women who are incarcerated [14, 15]. Lifetime prevalence figures for adult sexual violence among women who have been incarcerated range from 33% to 81%, and between 25% and 59% report a history of childhood sexual trauma, as compared with a lower prevalence of adult sexual trauma (10%-44%) and similar prevalence of childhood sexual trauma (28%-54%) reported in samples of women in the community [10]. Comparisons must be made cautiously, however, as women with histories of incarceration and other criminal justice involvement are also included in

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samples from the broader community, and differences in measurement and reporting may be substantial across studies. Adequately providing health care services to women who are incarcerated requires adopting a trauma-informed approach that explicitly recognizes and addresses these experiences of sexual trauma [16]. Trauma-informed care includes creating a safe physical and emotional environment, screening for trauma, engaging the patient in treatment planning and organizational decisions, and training staff in trauma-specific approaches. Trauma-informed care has the potential to minimize triggers, de-escalate situations, and avoid restraint, seclusion, and other measures that may repeat aspects of past abuse [17].

Most women in jails report that they are interested in either starting or continuing a method of contraception, and poor access to contraception is one important driver of unintended pregnancy among women returning to the community after incarceration [18]. Barriers to improving access within jail and prison health care settings include a lack of provider training about basic birth control methods as well as women’s concerns about their ability to continue their contraceptive pill, patch, ring, or injection, or conversely to discontinue their long-acting reversible contraceptive in the community [18]. Addressing these barriers will require partnerships with community and academic health care providers for direct service provision, education about methods and best practices for shared contraceptive decision-making, and improved continuity of care. Any action to improve access to family planning services for incarcerated women must also acknowledge that the involuntary sterilization of many incarcerated women, even as recently as within the last decade, has severely damaged the reputation of the criminal justice system as a source of any reproductive health care [19]. Women who are poor and women of color have been targeted both historically and recently for sterilization and involuntary contraception campaigns, and so they may be more wary of reproductive health efforts originating within the criminal justice system [19].

Women who are involved in the criminal justice system experience rates of gonorrhea, chlamydia, and trichomonas that are more than double those of the broader population, and they also have a higher prevalence of syphilis, HIV/AIDS, and hepatitis C virus (HCV) than their counterparts outside the criminal justice system [9, 20]. Comprehensive STI, HIV, and HCV care for incarcerated women includes: 1) universal screening with a clear choice to opt out; 2) rapid testing with systems to ensure women who have returned to the community receive results; 3) a treatment-as-prevention approach to continuation and initiation of medications for HIV and HCV with linkage to care in the community following incarceration; and 4) funding, implementation, and evaluation of prevention interventions. These interventions include bio-behavioral strategies such as pre-exposure prophylaxis (PrEP) for HIV and medication-assisted treatment (MAT) for opioid use disorder to reduce risk for HCV as well as education, skills training, housing, and employment assistance [21].

Many currently incarcerated women who do not have HIV meet the criteria defined by the Centers for Disease Control and Prevention for PrEP for HIV, and the American College of Obstetrics and Gynecology encourages health care providers to discuss PrEP with any woman who has experienced incarceration [22, 23]. A search of the National Institutes of Health Research Portfolio Online Reporting Tool produces a list of projects honing strategies to link individuals leaving jails and prisons with PrEP in the community [24]. The natural extension of this work will be to allow women to establish PrEP use during the period of incarceration in anticipation of community re-entry, similar to the successful implementation of initiation of MAT for opioid use disorder in Rhode Island correctional facilities with linkage to ongoing care in the community [25].

Despite the success of cervical cancer screening programs in reducing the incidence of invasive carcinoma in the United States, only roughly 50%-65% of women entering a jail system report being up to date on cervical cancer screening [26]. Jail and prison screening programs identify cytologic abnormalities in 8%-16% of women, as compared to approximately 6% in the wider community [26]. Improving cervical health literacy is an evidence-based method for improving cervical health; it includes assessing and addressing gaps in knowledge about cervical health, building self-efficacy for screening and follow-up, and developing system navigation skills [27]. In my own experience, collaborative review of screening protocols by academic and correctional health care providers has helped to ensure that incarcerated women are up to date with cervical cytology without being over-screened.

Women who are incarcerated during their pregnancies have higher rates of medical comorbidities, maternal complications, preterm births, and low-birthweight infants [12]. Access to routine prenatal care varies widely by facility type and geography, although our experience in North Carolina suggests that this may be successfully addressed through community and academic partnerships. In addition, many incarcerated women receive little support for breastfeeding, postpartum bonding, and custodial arrangements for their infants; facilitating continuous labor support and innovative breastfeeding programs may not only remedy these issues but also support women’s healthy transitions back into the community [28, 29]. Although pregnant women are more likely than others to receive MAT for opioid use disorder while they are incarcerated, MAT is far from being the universal management for incarcerated pregnant women with opioid use disorder, despite strong evidence of maternal and fetal benefits [30]. Finally, inconsistent prohibitions—and enforcement thereof—regarding the shackling of pregnant women mean that women are restrained in ways that delay diagnosis and treatment, unsafely limit movement, increase risk for venous thromboembolism, and interfere with
mother-child bonding in the antepartum, intrapartum, and postpartum period in many facilities across the country [31]. Health care providers should follow the American College of Obstetrics and Gynecology official policy position, which calls on providers to advocate to end the shackling of pregnant women.

**Improving the Health of Justice-involved Women in the Community**

Women who are under community supervision, including those who have returned to the community after incarceration, experience health disparities similar to those of incarcerated women in the domains of trauma, access to family planning and women’s primary health care screening services, STI prevalence, and pregnancy complications and adverse outcomes. Addressing these disparities will likely require partnerships between correctional facilities and community correctional organizations in order to ensure continuity of care. Improving reproductive health outcomes for criminal-justice-involved women in the community will also require implementation of trauma-informed care by the community and academic health centers that assume care for these patients [32]. Specific services that could reduce health disparities for criminal-justice-involved women in the community include the provision of PrEP for HIV, treatment for hepatitis C, MAT for opioid use disorder for pregnant and non-pregnant women, and low-cost, single-appointment initiation and discontinuation of contraceptive methods [33].

**Opportunities for Primary and Secondary Prevention of Criminal Justice Involvement**

Beyond implementing specific services to target the reproductive health disparities facing women who are involved in the criminal justice system, clinicians, policymakers, and public health providers have tremendous potential to support primary and secondary prevention of criminal justice involvement. Approaches to poverty, sex exchange, and drug use that leverage the criminal justice system rather than focusing on the underlying issues exacerbate health disparities, and health care providers should advocate for and support alternate approaches. Laws that criminalize or punish women’s behavior beyond that of men simply because they may be pregnant and demand health care providers’ attention include those that incarcerate a pregnant woman for minor drug-related offences in an attempt to prevent her from using drugs during pregnancy, or prosecute a woman for child abuse due to real or perceived fetal harm after violence directed toward her during pregnancy. These laws do not prevent poor maternal or fetal outcomes, but do push women into the criminal justice system. Instead, supporting and connecting with community organizations that offer job training, housing, re-entry programming, and other resources that could prevent future criminal justice involvement may result in improved health outcomes for pregnant and non-pregnant women [34]. Alternatives to incarceration that provide treatment for substance use and mental health disorders and resources for housing and community support exist, such as in the JusticeHome (New York City), Mothers and Infants Nurturing Together (Federal Bureau of Prisons), and Women and Infants at Risk (Detroit, Michigan) programs [28]. These programs have focused largely on pregnant women involved in the criminal justice system, and could serve as models to prevent criminal justice involvement for both pregnant and non-pregnant women. Findings from programs that have built legal advocacy clinics in health care facilities suggest they may help divert women from the criminal justice system by addressing issues early and providing free or low-cost advocates for women in the community [35].

**Conclusion**

The reproductive health disparities associated with the rise in women’s involvement in the criminal justice system over the past several decades highlight the fact that women who are arrested, detained in jail, are on probation or parole, and are incarcerated are disproportionately women from marginalized groups that also experience differentially worse reproductive health outcomes—poor women, women of color, and rural women. The criminal justice system serves to emphasize and amplify the reproductive health disparities seen in these groups both by creating a single group that includes many otherwise different marginalized women and by directly exacerbating health disparities as previously outlined. Decreasing the burden of poor reproductive health outcomes among women involved in the criminal justice system will require reducing the harms of incarceration by not only improving access to high-quality reproductive health care on the inside, but also addressing the long-lasting impacts of trauma, improving continuity of care between the criminal justice system and the community, and ultimately preventing women’s involvement with the criminal justice system.

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