Structural Racism in Newborn Drug Testing: Perspectives of Health Care and Child Protective Services Professionals

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VISUAL ABSTRACT

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ABSTRACT

PURPOSE Black birthing parents and their newborns disproportionately experience newborn drug testing for prenatal substance exposure by health care professionals (HCPs), which contributes to Child Protective Services (CPS) reporting, family separation, and termination of parental rights. This qualitative study aims to interrogate dominant power structures by exploring knowledge, attitudes, and experiences of HCPs and CPS professionals regarding the influence of structural racism on inequities in newborn drug testing practices.

METHODS We conducted semistructured interviews with 30 physicians, midwives, nurses, social workers, and CPS professionals guided by an explanatory framework, and conducted inductive, reflexive thematic analysis.

RESULTS We identified 3 primary themes: (1) levels of racism beyond the hospital structure contributed to higher rates of drug testing for Black newborns; (2) inconsistent hospital policies led to racialized application of state law and downstream CPS reporting; and (3) health care professionals knowledge of the benefits and disproportionate harms of CPS reporting on Black families influenced their decision making.

CONCLUSION Health care professionals recognized structural racism as a driver of disproportionate newborn drug testing. Lack of knowledge and skill limitations of HCPs were barriers to dismantling power structures, thus impeding systems-level change. Institutional changes should shift focus from biologic testing and reporting to supporting the mutual needs of birthing parent and child through family-centered substance use treatment. State and federal policy changes are needed to ensure health equity for Black families and eliminate reporting to CPS for prenatal substance exposure when no concern for child abuse and neglect exists.

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INTRODUCTION

The United States Child Abuse and Prevention Treatment Act requires states to enact policies to identify newborns affected by substance use disorders or prenatal substance exposure (PSE) during pregnancy.[1] Thirty-seven states and the District of Columbia go beyond federal requirements by requiring health care professionals (HCPs) to file a report for PSE to child welfare agencies, even in the absence of true HCP concerns for child abuse.[2,3] For example, Michigan's Child Protection Law requires reporting of suspected child abuse or neglect for suspicion of PSE.[4] Black pregnant people and their newborns are more likely to undergo biologic testing for substance exposure than their White counterparts despite a similar prevalence of substance use.[5,6] In a retrospective cohort study of 26,366 live births in Michigan, Black newborns were 3.8 times more likely to be tested for drugs than White newborns when there was no biologic test performed during pregnancy.[7] Such biologic testing has been linked to disproportionate reporting to Child Protective Services (CPS).[8-13] Once subjected to CPS investigation, Black parents face harsher penalties than other racial groups including family separation and termination of parental rights.[14-17] The American College of Obstetrics and Gynecology opposes criminalization of substance use in pregnancy, noting that implicit bias on the basis of race or class influences coercion and criminalization.[18]

Structural racism is a root cause of the disparities in adverse health outcomes faced by Black families and mediates these outcomes in multiple, intersecting pathways, including federal, state, local, and institutional policies and interpersonal discrimination and microaggression.[19-22] In the context of PSE, neighborhood

poverty and lack of health care resources may lead to late presentation for prenatal care and lower rates of substance use treatment.[23-25] When hospital systems implement testing policies based on risk factors, these social determinants may lead to disproportionate testing of Black people.[26,27] Historical racism within racialized organizations and the "war on drugs" drive greater HCP suspicion of substance use among Black people via interpersonal racism. And, when state policies consider substance exposure to be abuse or neglect, Black people are exposed to higher rates of criminalization and its downstream economic, financial, familial, and emotional consequences.[14,15,17,28]

Examination into the role of HCPs in these pathways has shown that HCPs were concerned about possible harms but lacked knowledge about the details of CPS investigations and about how to change CPS reporting policies.[29-34] Few of these studies examined the contributions of structural racism and obstetric racism (defined as mutually reinforcing systems of racial discrimination operating at multiple levels and threatening the well-being of Black birthing people and their newborns) at the health care system level, leaving a gap in understanding how dominant power structures and practices operate at the institutional level to foster racial inequities in newborn drug testing (NDT).[23,34,35]

This qualitative analysis is part of a larger antiracist, justice-informed, community-engaged, multiphase mixed methods study. An initial quantitative retrospective cohort analysis showed that clinicians are more likely to order drug testing on Black newborns compared with White newborns and other racial and ethnic groups.[7] A second qualitative phase examines attitudes and experiences of recently pregnant patients who experienced NDT.[36] In this third qualitative phase, the primary aim is to interrogate dominant power structures through interviews of HCPs and CPS professionals to understand the mechanisms by which structural racism influences HCP's behavior. A secondary aim is to understand to what extent HCPs' and CPS professionals' observed knowledge, attitudes, and experiences reinforce policies that maintain racial inequities.

METHODS

Research Team and Reflexivity

Our study team members' intersecting identities and shared commitment to practicing antiracism and reducing health inequities affected study design, interactions with study participants, and data analysis. Our perspectives include intersecting racial and ethnic identities (African American, Asian-American, Latin-American, immigrant, and first-generation American), salient lived experiences (Black birthing individual), and disciplines (obstetrics and gynocology, family medicine, addiction medicine, public health, and sociology). To interrogate power systems from an antiracist perspective and elevate community perspectives, we consulted with 2 scholars with expertise in antiracist research and convened 3 meetings with a participatory council of maternal child health advocates and parents identified as community change champions.

Setting

The study was conducted at the University of Michigan, a large academic health system in the Midwestern United States in a county with a racial distribution of Asian (9.2%), Black (12.2%), Hispanic or Latine (5.2%), multiracial (3.8%), and non-Hispanic White (74.3%) individuals.[28] During the study period, there was no formal policy regarding NDT, leaving decisions to the discretion of the HCP. This study was considered exempt by the Institutional Review Board of the University of Michigan Medical School (HUM00198997) as procedures were deemed no more than minimal risk.

Participant Selection

Eligible study participants included HCPs who provided obstetrical or newborn care within the last 12 months or CPS staff members working in Washtenaw County. We recruited potential participants by e-mail, first approaching clinical leaders and then using snowball sampling to recruit participants with different roles and clinical sites. We interviewed a total of 30 participants in 4 groups, and conducted 20 individual interviews from May 2021 through October 2022 at which point we achieved thematic saturation and adequate representation of HCP roles.[37]

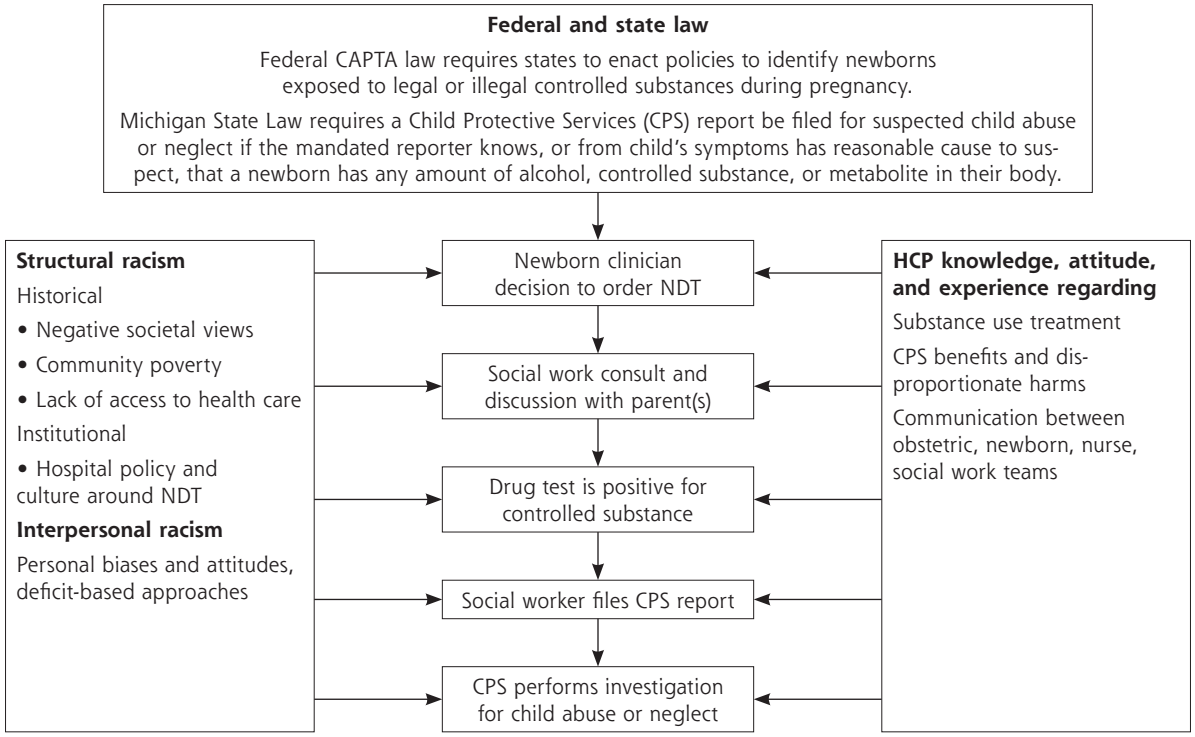
Explanatory Framework

We developed and iteratively refined a framework to describe potential influences of structural racism on HCP decision making about NDT (Figure 1). We adapted elements from other frameworks that included: the Levels of Racism Framework, which identified the manifestations of structural (ie, institutional, historical) and interpersonal racism at multiple socioecological levels underlying NDT inequities[38]; the Theoretical Domains Framework, which uses behavior change theories to account for how HCP and CPS professional knowledge, skills, role, social and team influences, and beliefs impact decision making[39]; domains from a framework focused on the perspectives of Black women (community resources, policing, education)[24]; and the Public Health Critical Race Praxis, which conceptualizes race as proxy exposure to systematic racism, centers the perspectives of marginalized people, and emphasizes community perspectives in the research process.[40]

Data Collection

Team members developed, piloted, and revised a semistructured interview guide (Supplemental Appendix) informed by the framework to elicit the potential influence of racism at multiple levels on HCP decision making to order NDT. After obtaining written informed consent, a study team member (C.S., V.W., L.O., A.C.) conducted group interviews (with 2-4 participants with similar roles, such as pediatrician or CPS staff) or individual interviews if scheduling prohibited group participation. Interviews lasted 45-60 minutes. Interviews

Figure 1. Explanatory framework of potential influences of structural racism on health care professional decision making in newborn drug testing.



CAPTA = Child Abuse and Prevention Treatment Act; CPS = child protective services; HCP = health care professional; NDT = newborn drug testing.

were audio recorded, transcribed verbatim, and cross-checked against recordings for accuracy. The team recorded field notes and debriefed findings after each interview.

Data Analysis

We selected reflexive thematic analysis, which allowed us flexibility in rich inductive coding, engagement of researcher positionality and reflexivity, and application of an explanatory framework to elucidate latent themes from the data.[41] Six team members (C.S., L.O., A.C., V.W.,E.M., M.J.) coded transcripts with at least 2 coding each transcript and a single senior investigator adjudicating any disagreement. We organized codes and related field notes into preliminary themes according to our framework. The team convened regularly and used a consensus approach to refine the codebook and to synthesize final themes.[42] To enhance the credibility of our analysis, we utilized a paired coding approach to balance clinical and non-clinical perspectives, frequent team meetings to develop depth of understanding of our data, and used team discussion to understand discrepancies and collectively synthesize findings.[43] To improve rigor in the data analysis, we identified salient perspectives and assumptions shaped by our personal backgrounds and professional experiences and regularly discussed the ways that these preconceptions may influence our research conceptualization, analytical approach, and interpretation of findings.[44,45] Analysis was performed using Dedoose 9.0 software (SocioCultural Research Consultants).[46] The description of this study followed the Consolidated Criteria for Reporting Qualitative Research.[47]

RESULTS

We interviewed 30 participants (P1 to P30) that included 5 certified nurse midwives, 4 nurses, 1 social worker, 4 CPS professionals, and 16 attending or resident physicians from the specialties of family medicine (4), medicine-pediatrics (1), obstetrics and gynecology (3), pediatrics (8). Additional demographics are represented in Table 1.

We identified 3 themes: (1) levels of racism beyond the hospital structure contributed to higher rates of NDT for Black newborns; (2) inconsistent hospital policies led to racialized application of state law and downstream CPS reporting; and (3) HCP knowledge of the benefits and disproportionate harms of CPS reporting on Black families influenced their decision making about testing. Theme descriptions, relevant sub-themes, and representative quotes are presented in Table 2.

Theme 1. Racism Contributed to Greater NDT of Black Newborns

Participants observed historical, institutional, and interpersonal manifestations of racism in their practices. A midwife

noted that historical negative societal views of drug use in Black communities impacted their application of risk-based screening, "…long-standing implicit bias coming out of the 80's and the war on drugs." (P19) A family physician added that contemporary racialized views of drug use persist with cannabis use, "…an association in my mind with my African American patients." (P16) A labor and delivery nurse identified complex racialized community barriers, including late presentation to care as targeting Black patients for NDT, "...your first go-to should[n't] be a drug screen." (P22) A pediatrician framed drug testing as marginalizing Black people in a hospital with predominantly White HCPs, "...when families … have different coping mechanisms [staff] can … think that something [related to drug use] is going on." (P1) A midwife contextualized the disrespect and harm of NDT as obstetric racism, "...women of color are targeted in so many ways." (P19)

Table 1. Characteristics of Study Participants (N = 26)

Characteristic	No. (%)
Role	
Certified nurse midwife	5 (17)
CPS professional	4 (13)
Nurse	4 (13)
Physician (attending)[a]	12 (40)
Physician (resident)[b]	4 (13)
Social worker	1 (3)
Age, y	
20-29	2 (8)
30-39	10 (38)
40-49	7 (27)
≥50	7 (27)
Gender identity[c]	
Woman	24 (92%)
Man	2 (8%)
Race/Ethnicity[d]	
Arab	1 (4)
Asian	1 (4)
Black/African American	3 (12)
Hispanic	1 (4)
Mixed	1 (4)
White/Caucasian	22 (85)
Years in practice	
0-5	5 (19)
6-10	6 (23)
11-15	4 (15)
≥16	11 (42)
Years at institution	
0-5	5 (19)
6-10	11 (42)
11-15	5 (19)
≥16	4 (15)

CPS = child protective services.

Note: Data from 26 of 30 participants that agreed to provide demographic information. Valid or non-missing values are used for calculation of percentages.

[a] Attending physicians: 6 in pediatrics, 3 in family medicine, 2 in obstetrics/gynecology, and 1 in pediatric medicine.
[b] Resident physicians: 2 in pediatrics, 1 in family medicine, and 1 in obstetrics/gynecology.
[c] Participants self-identified their gender identity in a short open-ended answer.
[d] Participants self-identified their race/ethnicity in a short open-ended answer and could select more than 1.

Theme 2. Hospitals Racialized Application of State Law and CPS Reporting

Several participants perceived that the lack of a standardized institutional policy led to variable and subjective application of state law resulting in greater testing and risk of CPS reporting for Black patients. A family physician felt that state law was difficult to operationalize into specific indications for NDT, "…nobody has clarity including the state." (P17) A labor and delivery nurse expressed concerned that the absence of "streamlined set criteria… leads to bias." (P22) A certified nurse midwife observed that HCPs' retain discretion to suppress NDT orders based on patients' race, ethnicity, and socioeconomic background in ways that privilege "a fancy [White] professor who just smokes weed every now and then." (P24)

Theme 3. Knowledge of CPS Reporting Influenced Testing Decisions

Some felt CPS reporting was critical for child protection, some were concerned that CPS reporting caused harm, and others lacked awareness of outcomes of CPS reporting. A pediatrician disclosed, "I don't know what happens when CPS is contacted," (P2) regarding lack of knowledge about the process of investigation for alleged abuse or neglect after filing a CPS report. One pediatrician stated, "Without that test we can't protect the baby," (P9) perceiving that biologic test results were necessary to trigger an investigation to ensure the newborn's safety if the parent used substances during pregnancy. Another pediatrician contextualized the positives of a CPS home visit as "more like a resource safety net" (P26) to identify social and material needs. A CPS professional noted that reports of substance exposure require an investigation but "we have to dig ... and see if there's some other neglect tied to it" (P10) in order to open a case against the parent. A social worker agreed that when a case is not opened there is "nothing on this record under CPS." (P7)

Other participants explicitly raised concerns about the harms of CPS reporting, particularly to Black people. A family physician noted that reporting for PSE was "mostly a punitive thing" (P18) and exacerbated mistrust of the health care system among Black and Brown communities. A midwife felt that Black patients may not disclose substance use to their treatment team because "you're going to be treated badly for [it]," (P24) and the risk of CPS reporting outweighed the benefit of getting care. A CPS professional reflected that reporting triggered a chain reaction of unknown consequences, "where we don't know what could potentially happen as they move

Table 2. Themes and Representative Quotations

Subthemes	Quotations
Theme 1. Levels of racisim beyond the hospital structure contributed to higher rates of NDT for Black newborns	
Negative historical views of drug use in Black communities	"We pretend to ourselves, we call it risk-based screening, but it automatically assumes that a woman of color is more at risk to use than others. I think it's this long-standing implicit bias coming out of the 80s and the war on drugs. I think that there's an implicit bias that women of color will use heavier than [White] women do and so therefore there's an increased level of harm." (CNM, P19)
Racialized views of contemporary drug use patterns	"Whether [they] are intentional or not, there are definitely associations that we make that are involuntary associating skin color and substance use. Marijuana use in particular is nearly ubiquitous, but with the patients that I take care of, I have an association in my mind with my African American patients." (Family medicine attending, P16)
Racialized poverty, barriers, and lack of access to early prenatal care	"Poor Black single women and their babies are tested more frequently … maybe they have more limited prenatal care … It is just a very complex situation that doesn't mean that your first go-to should be a drug screen." (Nurse, P22)
Drug testing is used to police Black culture, related to race discordance between staff and patients	"Our staff is mainly higher socioeconomic status … and more Caucasian than not. So, I think cultural norms of interactions within a healthcare setting, and I think when families express questions differently or have different coping mechanisms people can become frustrated or think that something is going on." (Pediatrics attending, P1)
NDT is an aggression like obstetrical racism	"Seeing in numbers and graphs really hits home to prenatal providers how different it is and how women of color are targeted in so many ways. We have the maternal morbidity and mortality rate and stuff but it's all these other little—not even micro aggressions—these other aggressions like access to prenatal care and access to mental health." (CNM, P19)
Theme 2. Inconsistent hospital policies led to racialized application of state law and downstream CPS reporting	
State law is too ambiguous to apply	"I think it would be very, very helpful to get more clarity in the state law. I almost feel like nobody has clarity including the state." (Family medicine attending, P17)
Lack of clear policy leads to bias	"I'm concerned that when it's not a streamlined set criteria and it's more subjective that it can be used for some populations and not others, and I think that leads to bias, or is the result of bias. Which is concerning for me." (Nurse, P22)
HCPs retain discretion to not order NDT which creates inequity	"If there's a fancy [White] professor who just smokes weed every now and then … people may not order the drug screen … but that's not equitable." (CNM, P24)
Theme 3. HCP knowledge of benefits and disproportionate harms of CPS reporting on Black families influenced their testing decision making	
Lack of knowledge following CPS reporting	"I don't know what happens when CPS is contacted. I know that they meet with the family, I know they do a home visit." (Pediatrician, P2)
Need for child protection when risk of PSE exists	"The drug screen is more to have objective concrete data to satisfy legal aspects of things versus safety … Without that test we can't protect the baby." (Pediatrician, P9)
Goal of sending NDT results is to protect children	"My goal is to ensure that we have a safe place for kiddos, and to ensure that if parents need additional help and resources that we are able to get them additional help and resources to have a family thrive." (Pediatrician, P3)
CPS provides resources	"CPS does do a one-time visit strictly whether or not this mother has appropriate resources and doesn't need additional help in taking care of their child… To some degree [CPS is] supposed to be more like a resource safety net for helping mom and baby." (Pediatrics attending, P26)
Substance exposure alone does not merit opening a case against the family	"Substance exposure, in and of itself is not a reason for us to investigate. So also, you know when those mandated reporters typically call me, and we have to dig and ask more questions and see if there's some other neglect tied to it." (CPS professional, P10)
No permanent CPS record for isolated substance exposure	"When we all have isolated marijuana use—and no other issues—all CPS does is investigate but they don't open an actual case. So, in the scheme of things, there's nothing on this record under CPS for this family." (Social worker, P7)
CPS creates mistrust	"It feels like to me that [a CPS report is] mostly a punitive thing that then ties up the medical community into more mistrust of the medical community which happens more because of history in Black and brown communities of having some level of mistrust of doctors." (Family medicine attending, P18)
Risk of CPS reporting creates unsafe system for Black people to disclose drug use	"[Black] people are taught that we have to wear a certain mask when we come into health care and that there are certain things [like drug use] that we should not bring up and … certain things that you know you're going to be treated badly for." (CNM, P24)
CPS can reduce harm by providing resources instead of opening an investigation	"Instead of putting them into our system where we don't know what could potentially happen as they move through, we actually go the other route and give them those preventive services. And so that we're only bringing the people in who truly are suspected of abuse and neglect." (CPS professional, P10)

CNM = certified nurse midwife; CPS = child protective services; HCP = health care professional; NDT = newborn drug testing; PSE = prenatal substance exposure.

through," (P10) noting that a system that focused on treatment would be more appropriate. Finally, one participant hoped that testing would connect families to resources and "to get [the parent substance use] help and resources to have a family thrive," (P3) but did not articulate how sending NDT results might actually connect families with these supportive services.

DISCUSSION

This qualitative study of HCPs and CPS professionals illuminates how racist practices in NDT may be perpetuated at the institutional level by dominant power structures. Consistent with our explanatory framework, HCPs recognized that structural racism underlies higher rates of drug testing on Black newborns. Similar to previous studies, we observed that HCPs lacked knowledge regarding the disproportionate harms of CPS reporting for Black families, found state law to be confusing and difficult to implement, and held beliefs that reinforce current practices and maintain racial inequities.[31-33]

Health care professionals can be powerful change agents when their beliefs and attitudes support implementation of new practices to achieve health equity.[48] Many HCPs in this study, however, lacked knowledge about harms of reporting, especially to Black families, including the generation of mistrust of the health care system, avoidance of health care and substance use treatment, substantiation of abuse and neglect claims, family separation, and harm of exposure to the foster care system.[14,49] While some HCPs in our study suggested that universal biologic testing could eliminate the inequities seen in biased application of risk-based testing, prior studies show inconsistent results regarding a reduction in racial inequities with either standardized risk-based or universal testing policies.[6,27,50] The Doing Right at Birth course is a self-paced tool that HCPs may use to develop knowledge regarding family-centered substance use care in pregnancy, legally mandated reporting requirements, and how to advocate for changes to ensure that reporting of families to child welfare meets, but does not exceed, legal requirements.[51]

While this study focused on the level of the HCP, our results reflect institutional policies and interpersonal bias characteristic of a racialized organization that must be addressed as part of the implementation of reforms that focus on safety, dignity, and justice for Black birthing people.[28] At the institutional level, systems change requires aligning goals toward supporting the birthing parent–infant dyad and framing needs of birthing parent and child as mutually supportive.[52] Interventions to guide health care system transformations could employ the Cycle to Respectful Care to commit to antiracist institutional transformations[53] and the Birthing Bill of Rights to provide equitable care, focusing on providing interventions for family-based supports.[54] Clinical practice guidelines and exemplar approaches exist to guide hospital policy that moves focus from testing and reporting to a holistic approach to substance use treatment focused on harm reduction and support of the family unit.[55-57]

Further state and federal policy changes are needed to attain health equity for Black families. We advocate for delinking substance use with CPS reporting; mandated reporters should instead perform a holistic assessment and make CPS reports only when factors beyond substance use create a concern for abuse and neglect.[58] An anonymous notification processes for PSE separate from current CPS reporting and compliant with the Child Abuse and Prevention Treatment Act, such as enacted in Vermont, should be implemented.[59-61] Health care professionals can advocate for the allocation of additional substance use treatment resources focused on pregnant Black people to reduce harm from involvement of child welfare systems.[62]

While reflective of the overall lack of racial, ethnic, and gender diversity in the health care workforce, our study sample is limited to a predominantly White and female demographic and does not capture the distinctive experiences of Black and other minoritized HCPs.[63,64] Given the crucial role of social workers in CPS reporting, our study is limited by having only 1 social worker interviewed. Another qualitative phase of our study explores the diverse perspectives of patients affected by NDT to collectively inform future patient-centered and antiracist interventions.

CONCLUSIONS

Health care professionals recognized structural racism as a driver of disproportionate NDT. Their beliefs, lack of knowledge, and skill limitations were barriers to dismantling power structures impeding systems level change. Ongoing work at our institution includes implementation of risk-factor–based NDT criteria paired with an equity dashboard to track and continuously improve racial inequities in testing, education tools to improve patient knowledge of state law and institutional testing protocols, and improved counseling and linkage to treatment for pregnant people using substances. Beyond health care system change, state and federal policy changes are needed to ensure health equity for Black families and to eliminate reports to CPS for prenatal substance exposure when no concern for child abuse and neglect exists.

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Key words: child abuse; health inequities; racism; implicit bias; qualitative research

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had full access to all the data in the study and took responsibility for the integrity of the data and the accuracy of the data analysis.

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Supplemental materials

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