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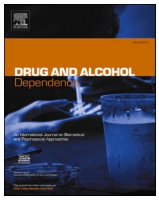

Health care provider decision-making around prenatal substance use reporting

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ABSTRACT

Background: Recent research has found that harms related to alcohol and/or drug (AOD) use during pregnancy are not limited to those associated with use itself; harms also result from policies and health care practices adopted in response, including reporting to Child Protective Services (CPS). This study sought to understand factors that influence health care providers' reporting practices.
Methods: We conducted 37 semi-structured interviews with hospital-based obstetricians/gynecologists, family medicine physicians, and emergency department physicians, focused on experiences with reporting pregnant/birthing people with AOD to government authorities. We deductively applied an implementation science framework, the Theoretical Domains Framework (TDF) to identify the relevant domains and then inductively coded within domains to identify sub-themes.
Results: Most participants saw reporting as someone else's job, primarily social workers. While a few participants associated reporting with increased connection to services, many participants expressed awareness of negative consequences associated with reporting. Nonetheless, participants were much more concerned about potential harms to the baby associated with not reporting and expressed considerable anxiety about these harms occurring if a report was not made. While a few participants described making reporting decisions themselves, most described interpersonal, hospital-level, and state policy-level factors that constrained their decision-making.
Conclusions: Many of the factors that influence physician decision-making in reporting pregnant/birthing people who use AOD to CPS are outside the control of individual physicians and require social, structural, and policy changes. Those that are individual-focused involve intense emotions and thus are unlikely to be influenced by solely didactic cognitive-focused trainings.

1. Background

Typically, when we think about health harms from alcohol and/or drug (AOD) use during pregnancy, we focus on harms caused by use itself. However, recent research demonstrates that while harms related to drinking and drug use during pregnancy come from use (Gorman et al., 2014; May et al., 2008; National Academies of Sciences, 2017; O'Leary and Bower, 2012; Salemi et al., 2020; Sayal et al., 2009; Sokol et al., 2003; Strandberg-Larsen et al., 2009) they also come from policies and health care practices adopted in response (Roberts and Nuru-Jeter, 2010; Subbaraman and Roberts, 2019; Subbaraman et al., 2018).

Two types of policy and health care practices that contribute to such harms are those related to reporting of pregnant people's AOD use to Child Protective Services (CPS) and those defining AOD use during pregnancy as child abuse/neglect (Roberts and Nuru-Jeter, 2010; Subbaraman and Roberts, 2019; Subbaraman et al., 2018). The federal Child Abuse Prevention and Treatment Act (CAPTA) requires health care providers to notify CPS about births affected by a pregnant person's substance use, and more than half of states have policies that require CPS reporting related to people's use of AOD during pregnancy and/or define AOD use during pregnancy as child abuse/neglect (Lloyd et al., 2019; Thomas et al., 2018). Rates of CPS reporting for maternal AOD use during pregnancy range from 0.3 % to 0.8 % of live births (Hoerr et al., 2018; Prindle et al., 2018; Putnam-Hornstein et al., 2016; Rebbe et al., 2019; Roberts and Nuru-Jeter, 2012). There are significant racial inequities in reporting, with health care providers reporting Black

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newborns to CPS or health authorities up to four to 10 times more often than they report white newborns (Chasnoff et al., 1990; Roberts and Nuru-Jeter, 2012; Roberts et al., 2015). CPS-related policies lead pregnant people who use AOD to both physically and emotionally disengage from prenatal care; they also contribute to increased preterm birth and low birthweight (Roberts and Nuru-Jeter, 2010; Subbaraman et al., 2018), and have adverse community-level impacts on Black communities, in particular (Roberts, 2002). Health professional associations have also expressed concern that reporting requirements related to AOD get in the way of providers' ability to provide care and treatment (ACOG, 2011; American Nurses Association, 2017); yet, there is little momentum to change these policies and practices.

Three studies have examined health care providers' perspectives on and experiences with reporting, two of which were conducted more than two decades ago. Overall, this limited research has found that while many providers are aware of reporting policies related to AOD use during pregnancy, they describe considerable variation in how policies are implemented and sometimes support the more punitive interventions associated with these policies. Specifically, a 1990 study of graduate medical education program directors in obstetrics/gynecology and pediatrics found that about one-third of respondents were unaware of reporting requirements in their state and about half of those who reported being aware had incorrect understandings of the legal requirements (Pelham and DeJong, 1992). In a 1998 quantitative study of obstetricians/gynecologists, pediatricians, and family practice physicians in Michigan, more than half supported enactment of a law defining maternal AOD use during pregnancy as child abuse/neglect (Abel and Kruger, 2002). In a 2019 qualitative study in Pennsylvania, obstetricians, midwives, and pediatricians noted biases in ways mandatory reporting policies are implemented. These providers expressed support for changing reporting policies, including eliminating the policies, and encouraged evaluations of reporting policies (Jarlenski et al., 2019). However, only one study was conducted in the past decade, and none examine provider decision-making about reporting, nor have they explored the factors contributing to health care provider reporting behavior. This type of information is essential to inform health care systems change and provider behavior change interventions.

In this study, we conduct in-depth interviews with hospital-based health care providers in labor and delivery and postpartum units and in emergency departments to understand factors that contribute to health care providers' decision-making related to reporting pregnant/birthing people's AOD use to governmental health authorities, police, or CPS.

2. Methods

2.1. Study overview

In March – July 2021, we conducted in-depth interviews to understand how hospital-based physicians make decisions about reporting pregnant people who use AOD to CPS, police, and health departments. The protocol was reviewed and approved by the University of California, San Francisco Institutional Review Board. The study team also met quarterly with a community advisory board (CAB) comprised of six individuals with relevant lived experience and from different areas of the U.S. The CAB's role is to inform multiple studies about policies related to substance use during pregnancy. For this particular study, the CAB provided input on our interview guide (e.g. adding additional questions) and feedback on findings (e.g. how accurately the findings reflect their own lived experience and how the findings may be used in future intervention and policy changes).

2.2. Study participants

Study participants were eligible if they were 18 or older, currently worked in a hospital-based labor & delivery or postpartum unit or emergency department, and had cared for at least one pregnant person who had used AOD in the past year. The study focused on physician experiences, although two advanced practice nurses participated. We purposively sampled providers from a range of specialties (obstetrics/gynecology; family medicine; and emergency medicine); a range of U.S. geographic regions; and urban and rural areas. We started recruitment via emails that the first and last author sent to colleagues, who then forwarded the emails to other individuals, listservs, and physician social media groups. We tracked participation by specialty, region, and geography and, after completing about one-third of interviews, began sending more targeted emails to recruit a more balanced sample. 57 people completed the eligibility screener; we reached out to schedule interviews with 46 people, 37 of whom completed the interview.

2.3. Data collection

After reviewing online eligibility screens, a study team member scheduled interviews with eligible participants. The first author, who has a doctorate in public health, obtained informed verbal consent and conducted all interviews, which lasted a median of 44 min (range 24, 1:07). Two participants were people with whom the first author had previously met with either by telephone or video conference, although neither were colleagues or collaborators. Interviews were audio-recorded and transcribed verbatim. Participants were remunerated with a $50 gift card.

We used an interview guide informed by the Theoretical Domains Framework (TDF), a meta framework that synthesizes psychological constructs from a wide range of health care provider behavior change theories to inform health professional behavior change interventions (Francis et al., 2012). The TDF includes the following domains: (1) knowledge, (2) skills (3) social/professional role and identity, (4) beliefs about capabilities, (5) optimism, (6) beliefs about consequences, (7) reinforcement, (8) intentions, (9) goals, (10) memory, attention, and decision processes, (11) environmental context and resources; (12) social influences; (13) emotion regulation, and (14) behavioral regulation (Atkins et al., 2017). The TDF is relevant, as it identifies psychological constructs relevant to the behavior under study and also identifies training approaches to create behavior change within TDF domains (Michie et al., 2008). Importantly, the TDF incorporates rational as well as emotional aspects of provider behavior (Francis et al., 2012). Given the stigma surrounding AOD during pregnancy and judgments relating to maternal fitness (Terplan et al., 2015), addressing emotional aspects is necessary. The guide addressed TDF domains relevant to our study questions and allowed us to explore participants' broader views and experiences on the topic of reporting. The interview guide asked participants to tell us about their experiences caring for patients who may have used alcohol or drugs during their pregnancies and experiences in which the participant or another member of the care team had to make a decision about whether to report the person to an outside government agency due to their use of alcohol or drugs during their pregnancy. The interview guide was structured so as to explore whatever cases came to mind when asked about caring for people who may have used alcohol and/or drugs during their pregnancies and did not provide a definition of alcohol and/or drug use or use disorder.

We continued recruitment until we had sufficient participants from our recruitment categories (specialty, region, and geography) and until no new themes emerged in interviews, suggesting we had reached thematic saturation (Mason, 2010).

2.4. Analysis

Analysis focused on reporting decisions that occurred in the hospital and were about reporting of pregnant/birthing people who used AOD. It deductively applied the TDF, following methods outlined by others (Atkins et al., 2017). Specifically, the first and second authors read transcripts, applied TDF codes to transcripts, and then discussed coding

experiences and refined coding decisions. The first and second authors then dual coded transcripts until achieving an inter-rater reliability kappa greater than 0.6, discussing each discrepancy (Atkins et al., 2017). We then separately coded the remaining transcripts. Of note, while many participants described reporting decisions for other contexts (e.g. domestic violence, physical child abuse, infectious disease), per guidance about applying the TDF (Atkins et al., 2017), we did not include those discussions in the current analysis.

After coding all transcripts, we identified the more common TDF domains, and assessed whether these varied by specialty and geography. We then inductively coded sub-themes that emerged within each domain. The whole study team reviewed and interrogated these sub-themes and sample quotations. We revised the sub-themes and sample quotations based on these discussions.

3. Results

3.1. Participants

Thirty-seven people participated, including 15 obstetricians/gynecologists (including two advanced practice nurses), 12 emergency medicine physicians, and 10 family medicine physicians [Table 1]. Participants were from all U.S. regions, with slightly more from the Midwest. Nine were from rural areas. Most identified as female (n = 25, 68 %), were in their 30s (n = 24, 65 %; range 20–60s); and identified as white (n = 23, 62 %).

3.2. Relevant TDF domains

A total of 870 excerpts from the 37 interviews were coded into the 14 TDF domains, some into multiple domains. The most common TDF domains were Social/professional role and identity (237 excerpts); Environmental context and resources (205 excerpts); and Beliefs about consequences (171 excerpts) [See Table 2]. Social influences (114 excerpts); Emotion (106 excerpts); Memory, attention, and decision processes (98 excerpts); Knowledge (78 excerpts); and Intentions (71 excerpts) were also commonly described [See Table 3]. There were no notable differences in how common themes were across specialties or regions.

Table 1
Participant characteristics.

Variable	% (n)
Specialty	
Obstetrics/gynecology	41 % (15)
Emergency medicine	27 % (10)
*Family medicine**	32 % (12)
Age	
20s	5 % (2)
30s	65 % (24)
40s	19 % (7)
50s	5 % (2)
60s	3 % (1)
"middle age"	3 % (1)
Gender	
Female	68 % (25)
Male	27 % (10)
Genderqueer	5 % (2)
Race/ethnicity	
White	62 % (23)
Hispanic/LatinX	3 % (1)
Black	5 % (2)
Asian	16 % (6)
Native American	3 % (1)
Multiracial	8 % (3)
Other	3 % (1)
Rural	24 % (9)

*Note: one of the family medicine physicians also works in the emergency department

Table 2
Most common TDF domains, along with sub-themes and sample quotations.

Domain	Subtheme	Sample quote
Social/professional role & identity	The reporting process is someone else's job	*"I would never be the one to notify them or make that decision." – Ob/gyn south*
		"It's the physicians' decision to involve social work. And then social work is responsible for following their particular guidelines." - EM northeast
	I'm part of a collaborative process related to reporting	*"I had the nurse manager involved, as well. Then the postpartum nurse and then the social worker." – Ob/gyn midwest*
		"All of the CPS referrals themselves at our hospital are placed by social workers. But the social workers, typically, seek the consent of the treating physician and/or the PCP before going ahead with it. So it tends to be a pretty shared decision." - FM west
	I sometimes play a role in the reporting process	*"Had we not reached out to the social worker, that policy would have just kind of carried the day and the social worker would likely have just called CPS, possibly without even looping us in." – FM west*
		"I've had to do it before, so it wasn't a huge deal to me. It's unfortunate when you have to make that call, but it's like breaking bad news. It's just part of the job." - FM & EM west
	The reporting process is mostly social work's job	*"What I find is that for the most part, social work leads the conversation, writes the policies, and the rest of it, whether it's NICU staff or pediatric staff or obstetric staff, we follow whatever the policies and procedures are that are established by social work" – Ob/gyn west*
		"Once we involved the social worker, we are really not involved in the decision-making about whether the case gets reported or not…it is like per hospital protocol solely in the hands of the social work department" – Ob/gyn east
	Doctors do play a role in changing hospital & state policy	*"The team that actually cares for patients with substance use disorders in pregnancy has been working closely, in the state that I'm in, with DCF, to change the way reporting is done." – Ob/gyn east*
		"Interestingly, there are a lot of people interested in making changes, I think from both the obstetric and the pediatric side…There are many hospital committee meetings about this throughout the time I've been here…a lot of people who are very invested in trying to make it a little bit more evidence-based and equitable." Ob/gyn east

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Table 2 (*continued*)

Domain	Subtheme	Sample quote
Environmental context and resources	We (do or do not) have a state reporting policy. Following state reporting policy is just what I'm required to do.	*"kind of bound by those requirements, including the ultimately the legal ones in the state statute." – FM midwest*
		"If it was not for the rule, I would probably not report substance use in pregnancy." – FM midwest
		"*Certainly, in [state], I had never read a policy or heard about being required to report someone who was pregnant using substances prior to delivering their baby." – EM west*
	When hospital reporting policies exist, they tend to be very clear	*"because of the institutional policy that we have to report everybody with an illicit substance use." – Ob/gyn midwest*
		"We actually had a policy, if anybody had any positive urine screens or known history, we had to report to social work at the hospital, and then social work would decide based on the history if DCFS needed to be called." – FM midwest
	Hospital policies sometimes reflect (perceived) requirements of state law and also can exceed what's required by state law	*"I think our hospital policies are just very much…saying like, 'Follow existing state protocols as mandated reporters.' So, there's no addition nuance to our hospital policies." – EM midwest*
		"there are social work department policies that involve universal DCFS reports if positive urine drug screen within 90 days of delivery that are not related to state law… Wow, that's kind of drastic." – Ob/gyn east
		"where I'm working now, hospital policy sort of trumps all.Because I find, often, hospital policies are more restrictive than the state policies, out of a liability or risk mitigation." – Ob/gyn east
	Presence of hospital policy/ protocol prompts attention to reporting question	*"The discussion around this case started with the social worker just kind of operating on the assumption that we would be reporting to CPS. So it took some preemptive action – on my part and my colleague's part – to head that off" – FM west*
		"She did see the social worker, and they did talk with her about it because we have a form that we have to fill out if there's any report or evidence of exposure in pregnancy, and sort of that form which we do usually in the office during prenatal care, but we can do it anywhere if it hasn't been done, triggers you to kind of explain what will happen after birth too." – Ob/gyn east
	Varying experiences with absence of hospital policy/ protocol	*"As far as I know, the hospital doesn't have any policies about this and so thankfully there was like no piece of paper shoved in front of my face telling me I had to do something that I didn't want to do or anything like that, so yeah. I was not aware of any policies requiring that I do anything, so there was no impact." – EM midwest*
		"Just that it was up to me. It was ultimately my call. There wasn't really, oh I don't have any personal responsibility in this. My hand isn't forced by hospital policy and making a report. It was up to me to report or not report. There was nothing to hide behind, I guess. It was on my shoulder as a decision." – FM west
	CPS practices differ in different geographies (and sometimes we're also navigating Tribal CPS)	*"you can do different things, or you can do the same thing in different, um, counties, but you'll have different outcomes. Like you can actively use up until birth and be completely intoxicated and unable to care for a baby because you're-you're intoxicated. And you'll still end up going home with the baby. While if you live in another county, you won't." – Ob/gyn south*
		"*But, particularly, in the tribal space, we've heard of people getting reported to CPS and actually having their infant taken away early in pregnancy because they're on buprenorphine for opioid use disorder." – EM west*
	Each hospital is different in terms of how they handle reporting	"*the attitudes at that hospital… are very different. And so there's a lot of reporting, you know, a patient has been sober the whole pregnancy but there was some positive UTOX way in the past and they get reported to CPS…So I recognize that I'm in a little bit of a bubble here with the folks that I work with because there's, I think, a nice amount of awareness and patient-centered care around substance use disorder and pregnancy. But you don't have to go far to see quite a variation in that." – EM west*
		"this happened at a hospital that was near but not on a reservation…On the reservation, if the patient comes in pregnant on meth they actually get arrested and get taken to jail.So, I think maybe actually coming to us for pregnancy care was actually a - I don't know - safer decision for her." – FM midwest
	Presence of social workers to assess and make report… and can make doctors not know what to do on their own	*"I understand that we're all mandatory reporters, but in the hospital setting, when somebody comes through labor and delivery and is still in the hospital, we have a robust kind*

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Table 2 (*continued*)

Domain	Subtheme	Sample quote
		of social work division. You know? And all of the patients who have a positive urine drug test are evaluated by social work. And then they do an evaluation to determine whether or not Child Protective Services needs to be involved in the case. And if they make that call, then they do the referral for them to open a case. So, I have not had to do that. I don't know if that's the right word, but that's just not, we have a whole, like, group of providers that take care of that for us." – Ob/gyn east
		"We have a great ED social work team. A few of them have been in the system for a while. And so, I think, the strength of that is they have a really in-depth knowledge of the system. But a weakness is that I haven't had to do a lot of these things on my own." – EM west
	Pregnant people with SUD can or cannot get good services & care in my community	*"We don't really have any like helpful alcohol abuse or drug abuse - I mean, there are some rehab facilities, but they never have beds available in any sort of timely fashion. So, I'm sure we gave her the phone number for the alcohol abuse center, but there's no way to ensure that she gets seen by them." – EM midwest*
		"So even access to treatment and being able to engage in longitudinal care is quickly whittling away in the city. So even the ability to create an alternative future in which people would actually be engaged is getting harder and harder." – Ob/gyn midwest
	Noticing and navigating the racism related to reporting, in individuals, in protocols, in CPS responses	*"Another dynamic is this hospital is staffed primarily by white people, and this person was from the [name] tribe. She's indigenous, so I think there's probably some racism at play there too." – FM west*
		"if the protocol is identifying black women always, then that's not really, necessarily helpful, and it's clinically not helpful at all." – Ob/gyn midwest
		"I practice…in a place where most of the patients we take care of are patients of color. But, often, the patients with poly substance use are white. But our patients of color who don't use poly substances are here, more often, having some kind of authority figure called than our patients who are white who have poly substance use disorder during pregnancy. And that is distressing. And it's always sort of in the back of my mind." – Ob/gyn east
		"I know that when CPS gets involved, black babies are less likely to be reunited with their families. Like, I don't like – they are like the police for families." – Ob/gyn east
Beliefs about consequences	Reporting can connect people to services	*"CPS has access to support that nobody has – I mean, we don't have access to. I mean, they can sit down with a patient and come up with a parenting plan that involves helping with daycare and helping with just different – you know, WIC access, facilitating transportation, and all sorts of things that I don't have." – FM west*
		"The goal is to get mom help, right? We're not calling the police. We're not trying to have her arrested. We are trying to bring the resources to bear that would allow her to get the help she needs so that she gets reunited with her child in a safe way." – FM & EM west
	Reporting can have negative health consequences for the birthing person, baby, and dyad	*"sort of worsen a mental health situation of a patient" – FM & EM west*
		"I don't want a child ripped away from their parents unnecessarily…I mean, it's harmful to the child. It's traumatic. It's traumatic to the parents and the child but to the whole family. Being in foster care is traumatic." – FM midwest
		"knowing that just the stress of that immense fear of like losing her baby was – it could, very likely – I mean, if not be causing it, definitely, contributing to her hypertension." – EM west
	Reporting can lead people to disengage from care	*"if we report these patients they won't come in when they're using these substances and they won't seek care – either prenatal care or care for substance abuse disorder – because there may be legal ramifications of coming to seek care." – FM midwest*
		"The other ones that were concerning to me were further deepening some mistrust that she had with the medical system, further deepening or potentially introducing mistrust into our relationship, especially as I was going to continue to be her primary care and MAT provider and her pediatrician" – FM west
	Not reporting means the baby will be harmed, and might die	*"the child would be hurt, neglected." – EM midwest*
		"The big thing that kept crossing my mind as I thought about not reporting was just what if something were to happen to this baby related to unsafe living situation or this patient feeling too overwhelmed to kind of keep up with the tasks of parenting." – FM west

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Table 2 (*continued*)

Domain	Subtheme	Sample quote
		"The risks of not reporting are danger to the child. The child could be in a lot of danger. The child could die." – FM midwest

Abbreviations
Ob/gyn=Obstetrics and Gynecology,
EM=Emergency Medicine,
FM=Family Medicine

With very rare exceptions, the government authority that participants discussed reporting to was CPS. Most reporting described occurred in labor and delivery and postpartum units once there was a newborn rather than in emergency departments where the person was still pregnant.

3.3. Key sub-themes identified within the most common TDF domains [Table 2]

3.3.1. Social/professional role and identity

Some physicians described reporting as within their own job responsibilities and some mentioned that physicians have a role in changing hospital and state reporting policies. More typically, however, they described reporting as someone else's job. Specifically, they explained that the reporting process is either other professions' – typically social work – responsibility or, particularly for ED physicians, the responsibility of obstetrics units to which they transfer pregnant/birthing patients. These perceived responsibilities appeared influenced by the local environmental context, particularly hospital size or urban v rural location. For providers in urban areas or larger hospitals, participants described relying on social workers for navigating reporting requirements and processes and thus depending on them for reporting decisions. Providers in rural areas and smaller hospitals described not having social workers to rely on and thus having more reporting responsibility.

3.3.2. Environmental context and resources

Participants described the influence of various contextual factors, including policies, local agencies, and racism, on reporting decisions. Participants described navigating both state and hospital reporting policies. Those who reported having a state policy tended to describe following the policy as a requirement of their job. Experiences with hospital policies varied more. When participants were aware of their hospital having a policy, they described the policy as being concrete and specific. It appeared that having a hospital policy prompted attention to whether to report; it was unclear whether the absence of hospital policy affected attention to reporting. Hospital and state policy requirements did not always align.

The environmental context varied beyond policy. Participants described significant variation in how CPS responds to reports across (sometimes neighboring) jurisdictions. There was also variation across jurisdictions in how often hospitals report, what warrants a report, and who is responsible for reporting decisions. Furthermore, participants noted variable service availability for pregnant/birthing people who use AOD in their local context. While some – particularly in urban areas – described having a range of treatment and related services, others – especially, although not always, in rural areas – described an almost complete absence of treatment or related services. A few perceived reporting to CPS as the only pathway through which birthing people could obtain services.

Multiple participants mentioned noticing and navigating racism in their hospital and geographic context. Participants reflected on how their own biases may influence reporting decisions and described noticing and navigating racism in: other individuals, racial discordance

Table 3
Common TDF domains, along with sub-themes and sample quotations.

Domain	Subtheme	Sample quote
Social influences	Anecdotes, experiences, and information shared by colleagues influence providers reporting practices	"*we felt like it was fairly likely because the attending that I was working with had seen cases like this frequently and that's what she told me usually happens.*" – *FM midwest* *"I had been talking, the week prior to this scenario, with one of our hospital social workers who was telling me this horrifying story about a parent who brought her baby home to a tent encampment in [city]. And the baby was found dead at age ten days because of cold exposure. And I think that, for me, it was – the big thing that kept crossing my mind as I thought about not reporting." – EM midwest* *"The only reason I was aware of that is because we…have a maternal mortality and an infant mortality committee, and substance use is a common theme in both…committees." – Ob/gyn east*
	Other specialties/roles initiate the concern for individual cases	"*a lot of times, Social Work will bring it to our attention before we necessarily even know.*" – *Ob/gyn east* *"specifically the people that I have noticed that push for it, and in this specific situation were pushing for it, were the nursing staff." – FM west*
	Others' (perceived & actual) expertise is typically deferred to, although some are skeptical	"*I would say I probably had a lot of influence there. Because, I mean, the social worker had only just met the patient inpatient, so she sort of takes my word for it, more or less.*" – *Ob/gyn midwest* *"I've never seen a situation where social work has said, "We need to involve CPS," and the provider has said, "No, we're not going to." I've just never seen that happen." – FM west* *"the two people [social workers] who hold the power here speak with a lot of authority. And I think not always clear if that's grounded in state mandates or hospital mandates or a personal opinion." – Ob/gyn east* *"there are, like, there are situations where the social worker - who, albeit has a lot more knowledge than I do in these situations…As a resident, you know, I always defer to the judgment of the social worker. But there are circumstances and situations where I feel like I would have gotten Child Protective Services involved, and it was recommended not to." – FM midwest*
	Consulting with others can relieve pressure of having to make decision	"*that's how I made that decision by, you know, consulting others and taking the burden just off of me.*" – *EM midwest* *"the way our hospital works, and I actually like this aspect of it, but it's probably selfishly so, if we're*

(*continued on next page*)

Table 3 (*continued*)

Domain	Subtheme	Sample quote
		concerned about needing to report to CPS or needing to report a patient legally after delivery, we will consult social work, and then social work will go and make an assessment and give a recommendation to the provider. So, it takes a little bit of that pressure off." – FM west
	There's both consensus and disagreement at the individual level and between different specialties/roles	*"I think there was consensus in the sense that everybody was kind of conflicted, but ultimately I think we all felt like making the report was a reasonable decision." – FM midwest*
		"*people don't always agree with the decisions that are made I think in all directions. But it is like per the hospital protocol solely in the hands of the social work department." – Ob/gyn east*
		"I think the physicians generally feel like Child Protective Services is not that helpful unless it's a more extreme situation. And that there is a lot of discord between the physicians and the nurses and social workers." – Ob/gyn midwest
	Navigating hierarchy from both directions	*"But, also was frustrated with the policy and was just like, I don't know, I mean, we're powerless, we're trainees and, you know, we're doing what we're supposed to do." – Ob/gyn east*
		"the fact that I am a trainee was an interesting dynamic in the decision, too, in the sense that I felt nervous that, if I were to choose incorrectly, I would be judged more harshly for that choice because I'm less experienced. You know, we had two nurses with a combined like 30 years' experience, and then, hospital social worker that had been there for – I don't know – I think ten years or something – and just people who have seen this scenario a lot. And so I felt nervous that, maybe, my input was not going to be as respected or that I, you know, would get stronger pushback if I didn't make a decision that felt comfortable to all the parties involved." – FM west
		"I didn't get a lot of pushback. I did get a few people being like, "Well, but it's like the rules," and I was like, "Well, I'm the doctor and I don't really care."" – FM west
	There's pressure to conform to group norms regarding reporting (and reporting adjacent) practices	"*I was asked by multiple nurses about whether or not I needed to order a urine drug screen on the patient and/or on the baby afterwards. The current practice seems to be that most providers will do that and have that be their sort of decision-making point about whether or not to refer to CPS. I've been told that it's "the rules," but I'm not aware that there's actually any legal rule around that." – FM midwest*
		"a lot of people on the care team sort of think it's a policy, but I guess it's not, to get a UTOX on that patient. So, there's a lot of pressure from me as a provider to order to a UTOX when I didn't feel like it was necessary for her." – FM west
	Someone else can come and override the decision	*"But even with shared decision-making, we would have made that decision regardless, even if she said she didn't want us to do it." – EM midwest*
		"I had recommended against even doing the U tox, but they did it. And then, once it came back positive, I had declined reporting it and the social worker reported it" – Ob/gyn midwest
		"So, the NICU nurse took it upon herself to call DCFS because the patient was on Suboxone. The NICU nurse felt that's what she should do. We had a whole policy about Suboxone and everything [where this situation wasn't supposed to be reported]." – FM midwest
Emotion	The emotions about these cases are intense.	*"At the time, honestly, at the time I felt like I'm going to walk out of this room and I'm going to start crying at a very inappropriate place. Like I need to get somewhere so I can process all this…. And I felt like, yeah, so charged up. I described it as sort of feeling like manic. Like I just had all this energy and nowhere to put it. And I know I needed to sit down and write my note, was the most helpful thing I could do. But I just like was pacing. I needed something to do because it was just so much adrenaline from the delivery." – FM midwest*
		"the case that comes to mind is one that, it presented like a lot of obstetric trauma for me and the patient. And so, that's the one that, like, is seared in my memory." – Ob/gyn west
	Providers are worried, anxious, and scared about reporting and about the patient/their situation, as well as doing the wrong thing	*"worry about what would happen for this family, no matter which way things went." – FM midwest*
		"*the big thing that kept crossing my mind as I thought about not reporting was just what if something were to happen to this baby related to unsafe living situation or this patient feeling too overwhelmed to kind of keep up with the tasks of parenting. And that fear was kind of the risk that was a big motivating factor." – FM west*
		"*but I was worried; I mean, first and foremost that her ability to parent or the custody of her child was at risk. I think that's the fundamental fear." – FM west*
	Having to make the reporting decision is a lot of	*"You know, you face all of that. You take all of that. You say in*

(*continued on next page*)

Table 3 (*continued*)

Domain	Subtheme	Sample quote
	pressure and providers are anxious about doing the wrong thing	*your mind, "Okay, I'm doing the right thing because I'm trying to protect this child. And then, you know, the authorities that you get involved, you know, they have a different opinion. And then, you're in this, kind of, negative loop where now the mother doesn't trust you. She's cleared, so she'll never come back to this hospital. You've no idea what happened to this child. You have no idea what's going to happen to them. And you're, kind of, leaving it in the hands of, you know, another - another authority or another facility. And you just hope that they do the right thing. And I think that can - that can put you in a difficult situation, because you don't want to alienate these patients either. And you don't want to alienate them where they're not willing to come back for appointments, or willing to come back for visits. But, at the same time, you want to do the right thing." – FM midwest*
		"instinctive backing away from being asked to take on so much responsibility" – 7 FM west
		"I'm actually relieved that in-in this-in this state, I don't have to be the one to contact the government agencies" – Ob/gyn south
	Providers are frustrated, angry, and annoyed about both reporting & patient/ their situation	*"I can't just get mad at people for using drugs, or else I'd be mad all the time. But the heroin one – yeah – I was a little upset with that. You know? I get that some people are addicted. And, you know, it is classified as a disease and viewed as a disease. [But, at the] same time, you know, I feel people have resources available. So I was a little upset with that one. You know? That like she could have done something to hold herself over until she had the baby." – EM midwest & west*
		"it can be some levels of frustration, where patients may not be making the best decisions" – EM midwest
		"feeling backed into a corner where you need to make that call. It's unfortunate to be in that position. It'd be great not to be put in that position." – FM & EM west
		"I would get really frustrated by that; that, you know – faults in our system, faults in this society, and not just – I don't think anyone in my care team was at fault. Just like, that we weren't able to get her to the point where she wanted to go and get better." – Ob/gyn east
	Providers are also just sad about patient's situation and their life	*"Just sad that this woman ended up in this situation where she clearly has some mental health and substance abuse issues, and*

Table 3 (*continued*)

Domain	Subtheme	Sample quote
		ended up having a newborn child that she's responsible for and clearly not capable of caring for." – EM midwest
		"To be, you know, to really, kind of, feel for her, you know? To almost, like, hurt in a sense. You know? And to be sad. And it's very sad to see, you know. And addiction, a lot of it is very sad to see. " – EM midwest
		"it's really sad…just her life" – Ob/gyn south
Memory, attention, and decision processes	Calling CPS is not necessarily the decision-point for doctors	*"I feel like the main decision point in my experience has been whether or not to consult social work." – FM west*
		"most providers will [order a urine drug screen] and have that be their sort of decision-making point." – FM midwest
	Weighing two less than ideal choices	*It was a real struggle, you know, balancing patient autonomy with the safety of the pregnancy." – EM west*
		"if I think that there's going to be damage to the fetus, I'm more likely to report. If I'm questionable about is there going to be damage to the fetus and I think that reporting would really ruin that person's life, then, I'm a little less likely to report." – EM midwest and west
	Living in the grey area	"*It's not like, 'Oh, I had this, like, mastermind plan when this situation came across.' It really was, like, let's re-educate myself on, like, when do I need to report? And, like, when do I not? You know? And even that was not, like, a very black-and-white thing. And it's extremely grey*" – EM midwest
		"I don't have in my own mind a strict criteria of things that I would report people for besides the things that I had told you. Most people are in the gray, you know, of reporting" – Ob/gyn midwest
	Deliberative process of considering specifics of situation	"*She showed to me every evidence that she's going to take proper care of the baby. And then, I think probably the third thing is just, you know, what's her history, to some extent. Does she have a history of different – or, has she lost custody before. If so, what were the circumstances, are they the same circumstances before, has there ever been any recent cases documented in their medical record of child neglect or abuse. I think all of those are the things that I look at." – Ob/gyn midwest*
		"I think the reason why it was felt that was definitely going to need to be reported was because this mom wasn't stable and was still actively using. And so that would not be necessarily an environment that you could take a newborn into. I think she also didn't have, like, stable housing

(*continued on next page*)

Table 3 (*continued*)

Domain	Subtheme	Sample quote
		or necessarily much of a support system." – Ob/gyn east
		"this is all very much "it depends on the scenario." But at least in this case it was like, "Well, we should report this because this is a consistent pattern." They had been using meth pre-pregnancy and they came again into labor on meth, so I think because of the…multiple occasions of having this I think we felt more pressed to report it." – FM midwest
	It just becomes apparent at some point	*"it wasn't like a tsunami. It was just like…you're kind of… standing in your house and there's like a little bit of water and you just kind of go about your day. And then, you look up, and there's more water around your knees, and then,…you're drowning. That's kind of it is. Right? It's just like, 'Oh, you know.' It's just like, slowly, like you see her trajectory. You kind of look in her medical record. You kind of see her history. And it's just like, 'Ah, well, we're going to call DCFS.'"* – Ob/gyn midwest
		"There was obviously the initial, like, questioning, but overall, I mean, for our team, like, this was almost a no-brainer. Like, you know, this is – you're actively using, you already have DCFS involvement." – EM midwest
	Disconnect between clinical reasoning and external reporting requirements	*"in regards to this case, I would say I think we all agreed that this was consistent with the rule and that we should have reported this. But I think we all felt conflicted because we didn't necessarily think that was going to be the best thing for either the mom or the baby." – FM midwest*
		"Is it just like you are legally mandated and that's why you're doing it, or can you use your clinical judgement and say, "Hey, you know what? The chart would tell me something different than what the law is telling you."" – Ob/gyn midwest
	Challenges with urgent and appreciating less urgent decisions	*"I wish I could have more time in these moments to reflect on the pros and cons and possible, um, impacts – negative or positive – that impact everyone…involved in the situation" – Ob/gyn south*
		"*it all transpired in like the course of 12h or something.She delivered at 36 weeks. And so we had been preparing for this decision. But she had an early delivery. So we're like, whoa, we're not ready." – FM west*
		"We all felt very confident that a CPS referral would need to happen. And so we were able to actually talk to the patient about that, starting at 32 weeks. She was very understanding. And, when it came time to make the referral on the postpartum unit, it was – it felt fine – almost not a big deal. Because it was kind of an expected part of the care." – FM west
Knowledge	I don't know the reporting policies in my state/hospital	*"I don't know if there's any specific hospital policies in regards to the case. There might be, and I'm sure there's probably something, but I'm not 100 % aware of any specific policy or any state policy." – EM midwest*
		"I feel like there's probably something around substance use disorder and pregnancy that I should know about, but I don't." – FM west
		"I did at one point know what those rules were, but I actually don't remember what they are now because it was quite a long time ago that I learned that. So there is something that I don't know what it is exactly." – Ob/gyn south
	I know what the state/county policies are	"*most of us were aware of the mandatory reporting rule around this meth use and pregnancy, so that was probably the main policy that drove it." – FM midwest*
		"the reporting policies in my state, I don't know as well. In the county, they definitely push for any positive U tox to be reported, including marijuana." – Ob/gyn midwest
	This is what the evidence says about effects of substance use during pregnancy or about CPS reporting	"*the evidence is pretty clear that states where, like, the sort of, like, punitive approach to prenatal OUD or prenatal substance use generally ends up having rather negative consequences on both, like, maternal and infant health, like, in terms of, like, family separation." – Ob/gyn east*
		"I just think that the correlation between cannabis use and unsafe environments for children is not well proven." – Ob/gyn midwest
		"Because I also have a master's in public health. I'm aware of the data that shows that kids that grow up in families where they're not well cared for, you can predict what happens to that kid 20 years from now…I think the goal is always to stop that cycle from ever developing." – FM & EM west
	There is a formal process to train us on the policies	*"Department meetings. And if they're urgent, they get emailed out to everybody." – FM midwest*
		"all of those like in-service, we actually have an in-service with legal once a year, to all the providers. So, they do touch the-the reporting as well." – 5 Ob/gyn south
		"If you do not follow the protocol, then there is a system that flags you and CC's the…the chair of labor and [delivery], and then they remediate you basically…If they notice there's a deviation from the protocol

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Table 3 (*continued*)

Domain	Subtheme	Sample quote
		because the provider didn't like flag something within 12h or whatever, they'll kind of flag it to be addressed." – Ob/gyn east
	I got some training on reporting as part of medical school training or residency	"*I think it came up just first during probably med school. Like my ped rotation. I think we may have had a lecture about it during residency." – FM midwest*
		"in our medical school, we had a law and ethics curriculum where we learned about these things, but it's kind of limited in its utility because you learn most of these laws are state-by-state, and so we learn about them in [state], and then you go off to residency somewhere else, and now suddenly that's no longer helpful." –EM south
		"Through residency, we did get training on this, like, when to report, when not to report. Especially with, like, pediatrics, on our rotations there. There's specific didactics on that." – EM midwest
	They maybe include it in onboarding at my hospital, but I typically gloss over that	"*I don't know that there was any specific orientation to that. It might be in like the annual employee review stuff, but I gloss over it and don't read very closely." – FM midwest*
		"I think that some of it just came through like orientation to the job. I think we had to do a mandatory reporting training. I think that we had hospital risk management come and talk to us about reporting." – FM midwest
	There's an informal process where we get information about hospital policies	*"I learned about them mostly through informally talking to our social workers, who I do work with a lot." – Ob/gyn midwest*
		"On the job training. So, as residents and just working with other attendings. And pretty much just learning by working in the environment" – EM east
	I sought out learning about state/hospital policies on my own	"*when I first came to [state], I sought out the policies because they're different than [previous state]." – EM west*
		"I looked it up on the Internet." – EM midwest
		"So part of it, I think, is my own research interest. So I had to learn. [laughs] So I had to do – I had to go through – I looked to the department of – or the [state] State Legislator to look at the requirements for mandated reporting, and then, through DCFS, for mandated reporting, through the website there." – Ob/gyn midwest
Intentions	Clear internal principles that guide own reporting (and reporting adjacent) practices	*"My role is often redirecting towards the pregnant person's needs or postpartum person's needs, and not just this alarmist sense of safety for a neonate." – Ob/gyn east*
		"I think that it is important to report the drug, you know, positive drug screen.because it – it protects the child." – Ob/gyn south
		"Yes, everybody's allowed to have mental health problems and substance abuse problems. Even if it's unpalatable, it's how life goes, and so I just don't think that there should be additional punishment of those people by reporting to some sort of legal agency unless there is an actual child that they're abusing or neglecting that is existing" – EM midwest
	Mixed views about CPS	*"I see them as like the police, sort of this entity that unleashes more violence than it is meant to. But I also see them as an agency that has a lot of power that fragments families" - Ob/gyn east*
		"and an ineffectual system that isn't necessarily interested in caring for either the woman or the newborn" – Ob/gyn west
		"They can help that mom with transportation, with housing, and with food, and with stuff that I just can't do. So, it's not - and sometimes moms will get into that and realize, "Oh, my god. They're helping me with this. This is not what I expected." So, it's good." – FM west

Abbreviations
Ob/gyn=Obstetrics and Gynecology,
EM=Emergency Medicine,
FM=Family Medicine

between providers and patients, hospital protocols, and CPS responses in their jurisdiction. They were particularly concerned with biases in who hospital protocols identify and report and concerned that CPS reporting results in exposure to a racist system that has more severe negative consequences for Black birthing people and babies.

3.3.3. Belief about consequences

A few participants believed reporting a pregnant/birthing person to CPS could help connect them to services. Many believed that the pregnant/birthing person, baby, or dyad might experience negative consequences from a report, including stress, disengagement from care, or harm to the baby from the foster care system. Participants were considerably more concerned with what they perceived as likely harm to the baby, including death, if they did not report. As one participant described,

"The risks of not reporting are danger to the child. The child could be in a lot of danger. The child could die." – Family Medicine, Midwest.

This belief about consequences to the baby of not reporting was connected to other domains, particularly social influences and emotions. The concern that the baby would be harmed or could die appeared to come less from people's own direct experiences and more from anecdotes and case descriptions participants heard from colleagues or as part of committees. Descriptions of consequences sometimes referenced anxiety and fear.

Most participants were not concerned about possible personal or professional consequences if they did not report; to the extent this was mentioned at all, it was mentioned as a theoretical risk that participants saw as highly unlikely to happen.

3.4. Key sub-themes identified within other common TDF domains [Table 3]

Social influences. Participants noted the exchange of patient case descriptions and the shared reference points that develop amongst groups of colleagues. In many cases, these anecdotes involve exceptional cases where a baby died. And even when participants could recognize something as an exceptional case, the anecdotes and associated emotions influenced their decision-making.

"I had been talking, the week prior to this scenario, with one of our hospital social workers who was telling me this horrifying story about a parent who brought her baby home to a tent encampment in [city]. And the baby was found dead at age ten days because of cold exposure. And I think that, for me, it was – the big thing that kept crossing my mind as I thought about not reporting was just what if something were to happen to this baby related to unsafe living situation or this patient feeling too overwhelmed to kind of keep up with the tasks of parenting. And that fear was kind of the risk that was a big motivating factor" – Family Medicine, West.

A few participants described making reporting decisions on their own; these instances involved decisions made by emergency department physicians, e.g. *"I saw them in the emergency department. I did not report at that time." – Emergency Medicine, Midwest.* More commonly, when participants described involvement in reporting decisions, they described being involved in a process where they made reporting decisions with others, either in collaboration or with one or more colleagues serving in a consultative role. Participants valued that consulting with others relieved the pressure of having to make a decision on their own. They also consistently expressed deferring to social workers' expertise. Yet, of note, a few expressed skepticism about whether social workers, to whom reporting decisions are often assigned, actually have the expertise. As one described.

"the two people [social workers] who hold the power here speak with a lot of authority. And I think not always clear if that's grounded in state mandates or hospital mandates or a personal opinion." – Obstetrics/gynecology, East.

Participants described other ways power dynamics influenced their interactions with others. Trainees in particular noted feeling powerless to challenge their understanding of the reporting requirements, even when they disagreed. Participants also noted that even if they did not make a report for a case, someone else could always override the decision.

"I had recommended against even doing the U tox, but they did it. And then, once it came back positive, I had declined reporting it and the social worker reported it" – Obstetrics/gynecology, Midwest.

3.4.1. Emotions

Participants described intense emotions that come up in caring for pregnant/birthing people who use AOD and in decision-making about reporting.

The primary emotion participants described was being worried, anxious, and scared. Much of these emotions were specific to the consequences to the pregnant/birthing person and baby if a report was made versus not, with a notable worry that the baby would be harmed or could die if a report was not made. Also present was a more generalized worry that things would be difficult for this patient and their baby regardless of whether a report was made. Less common, but also present, was anxiety about making the wrong decision – both feeling overwhelmed by the responsibility of having to make a decision and fear of being judged for making the wrong decision. The latter was especially acute for earlier career physicians including residents.

Participants also described feeling frustrated, angry, and annoyed. For some, this was at the patient and their situation; participants who expressed this also expressed awareness that they were not supposed to feel this way. For most others, the frustration, anger, and annoyance were directed at the failure of institutions at adequately caring for patients and at being put in a position by both patients and policies of having to make a report. Finally, participants described feeling sad about patients' situations and their lives and their suffering.

The emotions related to reporting are not just about the reporting decision, though. They are about this patient and their situation as well as previous patients who use substances. Coping supports and mechanisms appear rare.

The theme of emotion was linked to multiple TDF domains, with co-occurrence of the emotion code and other TDF domains across multiple domains. This finding reflects that the emotional aspects are not isolated, but rather embedded throughout the clinical and reporting aspects of these cases.

3.4.2. Memory, attention, and decision processes

As noted above, making an explicit decision to report to CPS was not necessarily the decision-point. Instead, for physicians in our sample, their decision-point tended to be whether to order a urine toxicology test or refer to social work. Participants portrayed these decision points as setting off a cascade of events that more typically than not in the labor and delivery units essentially mean a report will be made.

In terms of their own decision processes, participants described processes of weighing two priorities – typically pregnant/birthing person autonomy and safety of fetus or infant. As they weighed choices, few described making the same decision each time. More commonly, participants described living in the grey area where they considered the specifics of each case as they decided whether to engage in a reporting process. For some, this was a deliberative process of considering details of the specific patient and their situation. For others, it was more intuitive, with people describing the decision as something that just becomes apparent at some point. Separate from whether the process was deliberative or intuitive, participants described a disconnect between their clinical reasoning and what they perceived as more stringent reporting requirements.

3.4.3. Knowledge

Some participants described having little knowledge of whether there are relevant reporting policies and, if so, contents of policies. Others mentioned knowing what the policies are. Participants also often brought up what they described as current evidence about effects on fetuses and children of pregnant and parenting people's AOD use and effects of CPS reporting and child removal.

A few participants described a formal process to train them on policies. This ranged from formal training with monitoring to ensure compliance to updates at departmental meetings and in-services. More common was training that was dated (i.e. during medical school or residency), limited, or included in hospital onboarding, which was glossed over by physicians. Most common were informal processes, where people get information through talking with social workers. Finally, a few described learning about policies on their own, including looking information up online.

3.4.4. Intentions

Some participants demonstrated clear internal principles guiding their own reporting and reporting-adjacent practices (i.e. ordering urine toxicology testing and referring to social work). For several, these internal principles were about the importance of focusing on the pregnant/birthing person rather than buying into what they described as "*an alarmist sense of safety for a neonate*." They expressed a strong belief that CPS is a source of punishment, violence, and fragmentation of families and that people should not be punished for having substance use disorders.

For a few, these internal principles were about the importance of reporting to CPS, seeing it as necessary to protect or help the infant. These physicians do not see CPS reporting as punishment. As one said,

"I take a little bit less of a punitive philosophy and more of a kind of access to services and protection and safety approach to reporting" – Family Medicine, West.

The context people were in did not necessarily allow them leeway to

align their perceived reporting obligations with their intentions. Some participants described actions they took at individual and institutional levels to head off what they perceived as unnecessary reporting, advocate for individual patients, and advocate for policy change.

3.5. Less relevant TDF domains

Fewer excerpts referenced Optimism (43 excerpts) and Beliefs About Capabilities (19 excerpts). Reinforcement (8 excerpts), Goals (4 excerpts), and Skills (1 excerpt) were referenced even less frequently. No interview described Behavioral Regulation.

4. Discussion

This is the first study to use an implementation science framework to understand hospital-based physician decision-making about reporting pregnant/birthing people's AOD use to government authorities. It found that individual, interpersonal, organizational, and policy level factors influence providers' decision making, with considerable variation across physicians. The government authority that providers described involving was almost exclusively CPS.

While there were a range of perceptions and experiences about the extent to which reporting decisions are physician versus social worker responsibility, it is apparent that hospital-based physicians do play roles in reporting decisions for individual patients and in changing hospital policies. They generally believe reporting can have some negative consequences for the pregnant/birthing person, baby, and parent/baby relationship, but also believe that not reporting will lead to a baby being harmed and possibly dying. This fear of what could happen if they do not report was intense and appears influenced by anecdotes and experiences rather than evidence about how common these cases were or whether reporting meaningfully decreased risks.

TDF sub-themes indicate notable conflict (internally, interpersonally, and between individuals and hospital and state reporting requirements) about reporting decisions. The intense emotions participants described were not paired with descriptions of supports to help providers process and cope. These findings suggest that, while relevant, trainings that only focus on didactic and cognitive aspects will be insufficient. Efforts to provide social support as well as stress management and coping techniques (Michie et al., 2008) might be relevant to explore.

Some providers also perceived and experienced their decision-making as constrained by hospital and state policy and the possibility that any decision to not report can be overridden by anyone else in the hospital. Thus, individual reporting decisions are unlikely to change unless policies change, or, if providers perceive a policy as more stringent than it actually is, that providers receive information clarifying actual policy requirements. Public health policies, including those related to pregnant people's AOD use, should be based in the best available evidence. Published research to date has not found that state policies requiring CPS reporting related to pregnant people's AOD use have a public health benefit (e.g. (Faherty et al., 2019; Subbaraman et al., 2018)). These state-level CPS reporting requirements, especially when combined with policies that define use during pregnancy as having legal significance for determinations of child abuse/neglect, just serve to increase reporting and further involvement in the child welfare system (Maclean et al., 2022). They also serve as a barrier to prenatal care (Roberts and Pies, 2011), limiting opportunities for health promoting supports. New policies that create and sustain supportive conditions in which birthing people who use AOD, their children, and their families can thrive are needed.

Notably, multiple participants mentioned racism as something they noticed and navigated in relation to reporting decisions. Indeed, there are significant racial inequities in reporting (Chasnoff et al., 1990; Roberts and Nuru-Jeter, 2012; Roberts et al., 2015). Efforts to reduce reporting inequities by standardizing hospital protocols have been unsuccessful and may just institutionalize the racism present prior to the protocol (Roberts et al., 2015). Broader efforts to address racism in health care in general, in relation to policies and protocols related to pregnant/birthing people's AOD use in particular, and in CPS are needed.

This study has some limitations. First, since we recruited through existing networks, our sample may not represent the range of providers. However, we obtained a sample from all U.S. regions and both urban and rural geographies, and captured a wide range of beliefs and perspectives. Second, the study excluded other physician specialties (i.e. neonatologists and pediatricians) as well as other professional roles, particularly social workers and nurses, that may also play a key role in reporting decisions in the hospital. Future research should explore decision making among these other groups of health care providers. Third, it is not clear how themes and sub-themes we identified precisely influence physician behavior or the extent to which themes and subsets of themes are present for a broader population of physicians. Future research might explore these questions. Fourth, while the interviewer had not previously interacted with the vast majority of participants, she has published extensively on related topics and had interacted with a few participants prior to conducting the interview. Thus, despite the interviewer's efforts to communicate that all perspectives were welcome, some interviews may be biased by social desirability.

5. Conclusions

This study documents multiple factors that influence physician decision-making about reporting pregnant/birthing people who use AOD to CPS. Many of the factors are outside the control of individual physicians and require social, structural, and policy changes. Those that are individual-focused tend to involve intense emotions and thus are unlikely to be influenced by solely didactic cognitive-focused trainings.

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Contributors

Sarah Roberts led the study; led development of the interview guide; communicated with community advisory board; led outreach and recruitment; conducted all interviews; led data analysis and interpretation; and drafted the manuscript. Claudia Zaugg supported outreach and recruitment; collaborated in analysis and interpretation of the results; organized the community advisory board; and provided revisions to the manuscript. Noelle Martinez provided feedback on the interview guide; provided feedback on the analysis; participated in interpretation of results; and provided revisions to the manuscript.

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Conflict of Interest

The authors have no conflicts to declare.

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