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ESSAYS ON THE TRANSMISSION OF SCIENTIFIC KNOWLEDGE SURROUNDING INTRAUTERINE DEVICES

Donnelly, Kathleen

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ESSAYS ON THE TRANSMISSION OF SCIENTIFIC KNOWLEDGE SURROUNDING INTRAUTERINE DEVICES

Katie Donnelly

A DISSERTATION PRESENTED TO THE FACULTY OF PRINCETON UNIVERISTY IN CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

RECOMMENDED FOR ACCEPTANCE BY

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ABSTRACT

Long-acting reversible contraception (LARC) use has increased dramatically in recent years, with a nearly 5-fold increase between 2002 and 2012. One form of LARC, levonorgestrel intrauterine devices (IUDs), is quickly becoming the favored choice among health care providers across the U.S. and internationally. Many providers see IUDs as unequivocally beneficial devices, highlighting benefits such as a low side-effect profile due to local administration of hormones and high efficacy due to their long-acting design. Yet patients and reproductive justice activists raise counternarratives of IUDs as coercive and limiting patient autonomy. They underscore the fact that IUDs are more likely to be prescribed to low-income women and women of color and that many women report feeling pressured to select this method of contraception or to keep the device in when they no longer wish to use it. Through a multi-pronged, mixed-methods approach, including interviews with physicians and patients, ethnographic observations of digital and clinical settings, and primary document analysis, this project explores medical and lay narratives surrounding intrauterine devices (IUDs). Drawing on intersectional theory, this research analyzes the epistemic world of key groups of actors involved in the provision and consumption of intrauterine devices, including physicians, patients, and medical organizations. I delineate the epistemic logic of these groups and investigate what happens when these logics come into conflict, such as during clinical encounters between doctors and patients. I explore how broader power structures such as gender and race shape the resolution of these conflicts and the implications this has for women's bodies.

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CHAPTER 1: Medical Betrayals: *How Epistemic Discrepancies and Institutional Gaslighting Sow Mistrust*

Since March 2020, COVID-19 has been one of the most devastating public health crises in recent history. Perhaps surprisingly, the pandemic has revealed widespread medical skepticism—skepticism about the existence, severity, and origins of the pandemic, and about the safety of vaccines developed to combat it (Brubaker 2021). This skepticism pervades diverse communities, from the political right, to middle-class mothers, to Black Americans (Callaghan et al. 2021), and reflects a broader trend of declining trust in the medical establishment, and American institutions more generally (Brubaker 2021; Callon 1999; Eyal 2019; Prior 2003). While pundits and news media often frame this skepticism as a crisis of ignorance, sociologist Gil Eyal argues that it is really a crisis of uncertainty and risk, not knowledge and ignorance (Eyal 2019). Empirical work on masking and the pandemic supports the idea that people's opinions stem not from a dearth of information but from their particular epistemological orientation (Lee et al. 2021).

This conceptual shift changes the intellectual puzzle from asking how we can combat misinformation and distrust to asking: what are the differences in epistemological assumptions and values that have led experts and lay persons to radically different conclusions? As anthropologist Stuart Blume argues, the former question "unite[s] public health and medical professionals behind a banner of reason and rationality" while the latter "raise[s] serious, complex and potentially disruptive questions regarding the ways in which medical professionals behave" (Blume 2006:639). This perspective shift is sociologically important as it complicates our understanding of the relationship between lay people and experts.

Synthesizing insights from the sociology of expertise with intersectional and feminist theory, in this paper, I analyze medical distrust using the case of contraception. As with COVID-

19, doctors and public health officials routinely lament the spread of misinformation around contraception (Stevens 2018). The response of the medical community has been to double down on the scientific evidence and act as "mythbusters" (Stevens 2018). By contrast, I seek to understand the epistemic world of women who are critical of a popular form of birth control called intrauterine devices (IUDs).

Through a detailed, comparative analysis of 1) conversations happening in an IUD side effects Facebook group and 2) the beliefs and practices of OBGYNs, I discover that there is an epistemological discrepancy between group members and clinicians. I argue that this discrepancy creates a tension in clinical encounters that women experience as "medical betrayals." Synthesizing Eyal's work on betrayal (Eyal 2019) with Sebring's work on medical gaslighting (Sebring 2021), I define medical betrayals as forms of medical gaslighting that lead to an erosion in patients' trust in their providers, and oftentimes in the medical system more generally. Trust and gaslighting are two sides of the same coin, but the sociological literature on each has been relatively siloed. This paper links the literature on institutional trust, found in the sociology of expertise, with feminist and intersectional work on institutional gaslighting to demonstrate the wide-ranging impacts that gaslighting and betrayal has on lay persons' (mis)trust in expertise.

LITERATURE REVIEW

Trust, Power, and Scientific Authority in Medicine

Today, medicine seemingly paradoxically wields more power and influence over the lives of Americans than ever before *and* is the target of unprecedented skepticism and mistrust. As more and more aspects of human experience have come under the jurisdiction of medicine, offering us a "pill for every ill" (Busfield 2010), Americans are increasingly turning to alternative practices for conditions and experiences ranging from childbirth to the management of chronic illness

(Goldensher 2022). Sociologists of expertise argue that contrary to anxieties depicted in popular media, this does not signal the decline of science, but rather is a direct result of the increasing prominence of scientific authority (Brubaker 2021; Eyal 2019). If science and technical expertise are increasingly guiding political decision-making, then lay citizens have a vested interest in critiquing that expertise (Benjamin 2011). Thus, we have witnessed the declining professional authority of physicians and a move towards "patient centered" and "shared decision-making approaches" (Cockerham 2017). In the latter part of the 20th century, the efforts of gay, feminist, and anti-racist activist groups in particular were instrumental in ushering in a more democratic approach towards medical research and practice (Epstein 1996; Haraway 1988). The medical skepticism we see today represents a continuation of this movement; though, it now comes from all sides of the political spectrum (Brubaker 2021; Eyal 2019).

The evolution of expert-lay relations has not been smooth, however, and vestiges of the old, hierarchical model of expert authority are still present. Callon refers to this as a "crisis of regimes" (Callon 1999). In the context of medical research and practice, this leads to confused and contested doctor-patient relationships. Medical skepticism is often viewed not as a legitimate critique, but as an anti-medicine or anti-science stance to be corrected via patient education (Benjamin 2017; Blume 2006). Healthcare professionals, and even sociologists, double down on claims that alternative practices lack scientific rigor and attribute distrust to ignorance, misinformation, or cultural differences (Wang et. al 2019). However, this response avoids a difficult investigation into the conditions underlying the erosion of trust in the medical establishment (Blume 2006).

If we cannot attribute mistrust solely to ignorance or irrationality, then how may we understand it? Jennifer Reich argues that the shifting power dynamics in doctor-patient

relationships, combined with a broader societal trend towards increasing individualism and consumerism places the onus of healthcare decision-making on individuals (Reich 2016). Healthcare decisions are increasingly framed through a consumerist lens and individuals are encouraged to be savvy consumers, evaluating the risks and benefits of health interventions. This reflects an underlying phenomenon of biomedicalization, in which health has come to be viewed as an individual *moral* responsibility (Clarke et al. 2003). In this context, individual calculations of risk-benefit supersede community-level calculations. This, Reich argues, is why many parents opt out of vaccines, especially those who feel empowered to challenge expert recommendations and with the resources to insulate their children from the potential harms doing so (Reich 2016).

However, recent evidence from the COVID-19 pandemic complicates this narrative. Callaghan et. al (2021) investigate the correlates of intention to vaccinate against COVID-19 and found that the two most predicative factors of *not* intending to vaccinate were 1) being a woman and 2) being Black. Women were 71% more likely to not pursue vaccination and Blacks were 41% more likely to not pursue vaccination. These effects are greater than voting for Trump in 2020 and being conservative, which increased the likelihood of vaccine refusal by 29% and 18%, respectively. The primary reasons for women and Blacks vaccine refusal were concerns over safety and efficacy.

Gil Eyal offers us another perspective to understand medical mistrust (Eyal 2019). He similarly argues that the root of mistrust lies in risk, but rather than focusing on individual verses collective risk, he instead emphasizes a fundamental contradiction in the concept of risk itself that breeds mistrust. As the domain of experts has grown, so has the proliferation of risk analyses. However, despite expert claims, risk is not a completely knowable or calculable entity. When risks are calculated, it is always under certain assumptions, within certain boundary conditions.

Oftentimes, these assumptions prove false, boundary conditions are violated, and the "minimal risk" disaster materializes. These instances are experienced as "betrayals"—breaches that can instantaneously destroy institutional trust cultivated over long periods of time (Eyal 2019). "Access points" are sites where lay people encounter experts (e.g., a doctor's office visit) and thus where betrayals may occur (Eyal 2019). If the interaction between lay person and expert goes smoothly at these access points, trust is organically generated; however, if the interaction is negative, if it does not contain the expected settings and framings (e.g., the office is unclean, the doctor is rude or wearing plainclothes, procedures aren't adequately explained), people feel betrayed and their sense of trust is eroded.

While Eyal's concept of institutional betrayals is compelling, it overlooks the fact that such betrayals are not randomly distributed but are disproportionately experienced by women and other marginalized groups. Women are significantly more likely than men to be sent home when experiencing severe medical events, such as heart attacks and stroke (Adams et al. 2008), women with chronic illness like fibromyalgia, migraines, or endometriosis routinely face medical dismissal and suffer for years before receiving diagnoses (Barker 2009; Kempner 2014) and drugs taken by women are approved with less rigorous safety standards compared to similar drugs developed for men (Geampana 2016; Kammen and Oudshoorn 2002). Interestingly, Reich's work centers on mothers as they are the ones who tend to make vaccine decisions, yet the role of gender in shaping mothers' medical skepticism—for instance via their own past healthcare experiences—is underexplored. To understand the link between gender and medical skepticism, I turn to feminist and intersectional theory.

Feminist Epistemology

Intersectional and feminist scholars demonstrate that expert knowledge, far from being neutral, is inherently political and reflects entrenched social inequities (Benjamin 2017; Hill Collins 2002; Roberts 2014). Medical knowledge, thus, tends to be constructed in ways that align with hegemonic gender beliefs about male-female difference and male superiority (Fausto-Sterling 2000, Martin 1991), and medical practice has served as a tool to regulate and discipline female bodies in accordance with these hegemonic beliefs (Foucault 1990; Roberts 2014; Sebring 2021). One means of doing so is through what scholars have referred to as "medical gaslighting' (Sebring 2021). Gaslighting is a gendered phenomenon that attempts to create a "surreal" social environment by making victims feel crazy (Sweet 2019). In the context of medicine, gaslighting is a biopolitical tactic in which the experiences of women (and bio-others more generally) are pathologized and/or not recognized (Sebring 2021). Importantly, gaslighting is "not simply an interpersonal exchange, but the result of deeply embedded and largely unchallenged ideologies underpinning health-care services" (Sebring 2021: 1951). Betrayals, thus, are not accidents, but forms of institutional gaslighting that rely on gendered stereotypes and power imbalances (Sweet 2019). As with an abusive romantic relationship, positioning women as "crazy" is a central feature of medical gaslighting; and as with victims of intimate partner violence, women are left with a deep sense of distrust and (medical) skepticism.

Sweet importantly brings attention to the structural nature of gaslighting, which had previously been conceptualized only in individualistic, psychological terms. Likewise, Sebring's work is significant in its extension of the concept of gaslighting to the medical domain. I build on these scholars' work by examining the implications of institutional gaslighting on institutional *trust*. Gaslighting is the antithesis of trust; yet, despite the close relationship between these two processes, the literatures on institutional trust and institutional gaslighting have remained relatively

siloed, with the former situated in the sociology of expertise, and the latter in feminist and intersectional sociology. In this paper, I merge these two literatures to analyze the consequences of medical gaslighting on patient trust in the case of one reproductive technology: IUDs.

CASE STUDY: CONTESTING CONTRACEPTION

IUDs are T-shaped devices that are placed in the uterus to prevent pregnancy. In recent years, health experts have devoted considerable energy to promote these devices. Today, the IUD is the third most popular method of contraception, behind sterilization and pills, respectively (Guttmacher 2021). I have selected this technology as a case study because it is ripe for exploration of medical gaslighting, betrayal, and distrust for two main reasons: 1) reproductive medicine in general is a key site of medical gaslighting, and 2) the design of IUDs in particular increases the potential for medical gaslighting, betrayal, and distrust. Below, I elaborate on each of these claims.

Reproductive medicine as a key site of medical gaslighting

Cultural understandings of reproductive processes form the very basis for gender distinction and hierarchy—these understandings are what legitimated centuries of gender domination and continue to legitimate power imbalances today[1] (Connell 2005). Women's bodies are seen as fundamentally linked to reproduction in ways that men's bodies are not (Geampana 2016; Bordo 2004; Fausto-Sterling 2000). This linkage pathologizes women's bodies and frames them as fragile, hysterical, and in need of control (Roberts 2014; Kempner 2014; Barker 2009). Furthermore, reproduction and reproductive control lie at the center of the modern state (Foucault 1990). Through the control of sexual practices and individual bodies, states can control the growth and behavior of a population. Thus, contraception represents a key form of biopower.

[1] These understandings also shape racial distinction and hierarchy and have facilitated racial oppression. I do not have the data to speak to race in my analysis, thus I am not elaborating on this point here, but it is important to keep in mind.

The biomedical paradigm surrounding contraception is informed by these gendered assumptions and biopolitical goals. Women are viewed as inherently "at risk" of pregnancy, raising the tolerance for contraceptive risk (Geampana 2016). Relatedly, pregnancy prevention is prioritized above all else, particularly for marginalized groups (Mann 2013; Mann and Grzanka 2018; Geampana 2016; Hanbury and Eastham 2016). This has led to an emphasis on contraceptive efficacy, even though efficacy is not the primary concern for most patients (Brandi et al. 2020, Biggs et al. 2020). Finally, medical professionals tend to minimize or dismiss risks of contraception, while emphasizing its benefits (Stevens 2018; Littlejohn and Kimport 2017).

By contrast, women often take an alternative, fluid approach to their own reproductive lives, adapting their birth control practices depending on their relationship status and their life circumstances (Downey et al. 2017). Pregnancy intentions of low-income and minority women do not fit neatly into the white, middle-class standards held by many medical professionals, casting doubt on measures of "unintended pregnancies" (Higgins 2017). The divergence between women's and physicians' assessments of contraceptive risk has also been documented. That is, women's tolerance for contraceptive risk is often lower than what providers deem acceptable (Littlejohn 2013; Geampana 2019).

Synthesizing this literature, I argue that divergences between lay and expert understandings of contraception create opportunity medical gaslighting, betrayal, and distrust. In this paper, I compare the dominant biomedical epistemic framework with that of the online IUD side effects community to identify what I call "epistemic divergences." I argue that these divergences lead to discordant experiences at access points, such as doctor's visits, that are experienced as betrayals.

Technoscientific features of IUD

IUDs are highly effective, long-lasting, and require little from users—"set it and forget it." IUDs can last for up to 5-7 years and require health care providers for insertion and removal. These technoscientific features limit the agency of users—this is not a coincidence, but by design (Takeshita 2012). They were developed by the Population Council in the mid-20th century explicitly as a technology to control "overpopulation," particularly in the Global South. In the early 2000s, a new generation of IUDs were rebranded in the U.S. to appeal to affluent, "modern" women. These devices quickly rose in popularity; today, the rate of IUD use for contraception is roughly the same as that of condoms (Guttmacher 2021).

Among healthcare professionals, the IUD is seen as a wonder device suited to address all manner of ills ranging from contraception to bleeding control and the management of menopause (Gomez, Fuentes, and Geampana 2014; Mann and Grzanka 2018) and even as a solution to poverty (Sanger-Katz 2018). However, reproductive justice advocates and lay users of these devices highlight the potential for IUDs to be coercive and to limit patient autonomy (Roberts 2014; Biggs et al. 2020; Dehlendorf et al. 2010; Gomez, Mann, and Torres 2018). Patient and provider differences in orientation towards IUDs have led some women to continue using IUDs when they no longer wish to or to self-remove the devices (Amico et al. 2016, 2017, 2020; Berndt and Bell 2021a).

Research questions

The IUD side effects Facebook group that is the subject of my research offers a lens into women's dissatisfaction with birth control and the ways in which they construct alternative epistemologies to challenge the claims of health care providers and researchers. I compare Facebook group data with data from in-depth physician interviews to examine the underlying epistemological beliefs and assumptions of the women who comprise this group, and how they

diverge from those of the biomedical paradigm. Building on the literature in the sociology of expertise with insights from intersectional and feminist theory, I argue that betrayals do not stem from benign epistemological differences, but rather are a form of medical gaslighting. That is, expert risk calculi are predicated on the assumption that women are inherently "at risk," and in need of regulation and control (Sebring 2021; Benjamin 2017; Hill Collins 2002; Foucault 1990). They rely on positivistic thinking that discounts patients' lived experiences. By contrast, lay calculi are shaped by embodied, subjective experiences with the goal of preserving bodily autonomy rather than creating bodily discipline. In the following analysis, I demonstrate how this epistemic discrepancy leads to experiences of medical gaslighting and betrayal. As with intimate partner violence, medical gaslighting creates a "surreality" that incites a deep skepticism where there was once blind trust (Sebring 2021; Sweet 2019). These experiences not only erode women's trust in their healthcare provider, but in medicine and dominant institutions more generally.

DATA AND METHODS

Facebook Group Data

The data for this paper come two sources. The first set of data is from a Facebook group devoted to the side effects of intrauterine devices, including Paragard (copper IUD), Mirena, Skyla, Kyleena, and Liletta (hormonal IUDs). While the group is technically private (you must be a member to read and post comments), there are over 30,000 members and the only criterion for joining is being interested in IUD-related side effects. Given the size of the group and the low threshold for joining the group represents a quasi-public space[2].

[2] Thus, my institution's IRB determined that this project does not constitute human subjects' research.

I collect the data from this group in two key ways. The first method is what scholars have called "deep lurking" (Markham 2013) or online ethnography. I became a member of this Facebook group in November 2020. I opted to receive notifications from the group when new posts are made, which is often several times per day. For an 18-month period, I visited the group's page on a bi-weekly basis and read through posts as well as the profiles of the posters to get a sense of the conversations and people that comprise this community.

In addition to lurking, I also collected and systematically analyzed 150 "conversations" from the group. I refer to posts and their associated comments as conversations as there is often a fair amount of back and forth on these threads, typically in real time (in the span of several minutes to a few days). In total, these conversations contain nearly 3000 unique units of text (i.e., posts or comments). In this way, I practice something akin to "hearsay ethnography" (Watkins and Swidler 2009). Hearsay ethnography allows researchers to learn about conversational interactions *in situ*, rather than second-hand via interviews, and without the observer bias effect of participant ethnography. In its original conception, researchers hired insiders to record everyday conversations in journals which were then turned in to researchers to be analyzed. In this study, I have the added benefit of cutting out the middleman, as the conversations already exist, ready to be analyzed in a digital space. Thus, I am able to gain an insider view on conversations happening in this space without participants' knowledge of my presence as a researcher (Barker 2008). The posts and comments that comprise my sample were collected monthly between March and September 2021. At each iteration of data collection, I copy-and-pasted ~450 posts and comments from Facebook into an Excel document. Posts were ordered by Facebooks "new activity" sort function and were collected in the order they appeared. I did not exclude any posts or comments from my collection.

Physician Interviews

The second source of data comes from in-depth interviews with physicians from around the country. Physicians were recruited via professional organizations such as the Society of Family Planning, personal connections, and snowballing. I conducted a total of thirty-five in-depth interviews with physicians, ranging from sixty to ninety-minutes in length. Twenty-six respondents are OBGYN residents, six are academic OBGYNs (attendings), 2 are private practice and staff OBGYNs, respectively, and one is a private practice family medicine physician.

Sample

A. Facebook Group Sample

The Facebook group is moderated by four white women. Based on their profile pictures, three appear to be middle-aged (40s, 50s) and one appears to be in her 20s/30s. The women are from diverse ends of the political spectrum. For example, one moderator sports American flag gear in her profile picture and regularly posts content critical of Democratic policies and elected officials, while another uses "Black Lives Matter" and "Climate Strike" banners over her profile photos. This cooperation among politically disparate individuals aligns with prior work on alternative medical communities (Goldensher 2022). What unites these women is their skepticism of the pharmaceutical industry and their belief in natural and holistic healing. Two of the moderators work in wellness industry and at least three of the four moderators are critical of COVID vaccines. One moderator is college educated, two have high school degrees, and one has no educational information that is publicly viewable. The group members are similarly diverse, though it was difficult to obtain reliable sample information given that many profiles had limited demographic information available. I explain this in greater detail in the methodological appendix.

As found in prior studies of online fora, the members of the Facebook group I study post with varying frequency, with many posting only once, a few posting very frequently, and a

majority who do not post at all (Barker 2008). Women mainly use the Facebook group to vent or seek advice about symptoms related to their IUDs. Consistent with prescribing patterns (Guttmacher 2021), the most commonly discussed IUD is the brand-name, hormonal IUD, Mirena. Of the 150 conversations I analyze, 52% mention Mirena. 23% mention its generic counterpart, Liletta, 22% mention the copper IUD, Paragard, 13% mention Skyla, and 6% mention Kyleena. The latter two are hormonal, brand-name IUDs that were developed more recently and contain lower hormonal concentrations.

B. Physician Sample

Table 1 below outlines the sample demographics of my interview respondents. Providers were overwhelmingly female (82.86%), white (71.43%), and from highly educated families. Over half of providers had parents with graduate degrees. The average age among providers was 33.45 and the median was 30.

Table 1: Provider Demographics

Total N = 35		
Gender	**%**	**N**
Male	17.14	6
Female	82.86	29
Race	**%**	**N**
White	71.43	25
Black	8.57	3
Hispanic	2.86	1
Asian	11.43	4
Other	5.71	2

Age	***M***	***Mdn***
	33.45	30
Parental Education	**%**	**N**
High School	2.86	1
Some College	5.71	2
College	31.43	11
Graduate Degree	57.14	20

Analytical approach

To get a broad sense of the topics that women discuss in the group, I uploaded the Excel file of group conversations in MaxQDA in such a way that each "document" represented one "conversation," comprised of a single post and its associated comments. I then ran a word frequency analysis that revealed the proportion of documents in which any given word occurred. I then narrowed down that list to include only words that were related to symptoms. I used MaxQDA's dictionary function to group related words and re-ran the analysis to find the frequency of occurrence of these broader categories.

To identify the conceptual themes that I discuss in my findings, I used a flexible coding approach (Deterding and Waters 2021). Again, using MaxQDA, I assigned index codes to documents to tag them with themes and concepts that had emerged from both lurking and my review of relevant literature. Such codes include symptom categories, and a typology of posts, such as "seeking advice," "social support," etc. I then conducted additional analysis on those coded sections to apply more fine-grained analytic codes. Analytic codes were comprised of a combination of inductive, emergent themes and themes that I identified in my review of the

literature (Deterding and Waters 2021). Using MaxQDA's code comparison functions, I consolidated codes that had overlapping features and eliminated codes that applied to few cases. I used the same flexible coding approach to analyze provider interviews. Ultimately, I was left with three key themes, which I discuss in the findings.

FINDINGS

Matching Clinical and Personal Side-Effects

Importantly, while group members routinely complain that providers dismiss their complaints and suggest they are unrelated to the IUD, the symptoms that they discuss closely mirror those listed in the adverse events section of Mirena's prescribing information insert (see Figure 1)[3] (Bayer Pharmaceuticals 2020). In Table 2, below, I show the most common symptoms women report and the frequency with which they are discussed, as well as the key words used to identify each topic.

Table 2: Prevalence of symptoms discussed in Facebook group

Symptom	**Key words**	**Occurrence rate (% of documents)**
Bleeding	period, bleeding, blood	64.0%
Pain	pain, painful, cramps	51.3%
Mental Health	anxiety, depression, mood, panic, suicidal	47.3%
Weight gain	weight, bloating, lbs	32.7%
Hair loss/skin problems	hair, skin, acne	29.3%

[3] This is just the information for Mirena; adverse events vary slightly for other types of IUDs.

Perforation/embedded IUD	embedded, perforated, surgery	16.0%
Cysts (ovarian, breast)	Cyst	12..7%
Libido	libido, sex drive	10.0%

The main side effect, discussed in 64% of the conversations I analyze, is irregular bleeding. Pain is the second most discussed symptom, occurring in 51% of the conversations. In nearly half the conversations analyzed women discuss mental health concerns, particularly anxiety and depression. Women describe experiencing panic attacks, sleepless nights, thoughts of suicide and other mental health symptoms after the placement of their IUD. Other common concerns include weight gain or bloating, mentioned in about a third of the post threads, hair loss and acne, mentioned in 29% of conversations, ovarian cysts, or cysts in the breast, mentioned in 12% of the post threads, and loss of libido, mentioned in 10% of the post threads. This list of symptoms is not exhaustive but gives a sense of the kinds of side effects discussed in this Facebook page.

Referring to the drug package insert we see that clinical trial participants reported similar adverse events. Again, bleeding was the most common adverse event. One third of participants reported unscheduled uterine bleeding, and an additional 12% reported increased uterine bleeding. Pain was also a common clinical trial symptom, with nearly a quarter of trial participants experiencing abdominal or pelvic pain, 16% experiencing headaches, roughly one in ten experiencing breast pain, and 8% experiencing back pain. Psychiatric disorders are also listed among the adverse events, with 6% of trial participants reporting depression. Acne, hair loss, gastrointestinal issues, and cysts are also listed. Despite the close match between clinical trial symptoms and patient symptoms, group members expressed feeling dismissed by doctors as I discuss in the next section.

Figure 1: Image of Adverse Reactions Table from Mirena Prescribing Information

Table 2 Adverse Reactions ≥ 5% Reported in Clinical Trials with Mirena

System Organ Class	Adverse Reactions	% (N= 5,091)
Reproductive system and breast disorders	alteration of menstrual bleeding pattern, including:	
	unscheduled uterine bleeding	31.9
	decreased uterine bleeding	23.4
	increased scheduled uterine bleeding	11.9
	female genital tract bleeding	3.5
	amenorrhea	18.4
	genital discharge	14.9
	vulvovaginitis	10.5
	breast pain	8.5
	benign ovarian cyst and associated complications	7.5
	dysmenorrhea	6.4
Gastrointestinal disorders	abdominal/pelvic pain	22.6
Nervous system disorders	headache/migraine	16.3
Musculoskeletal and connective tissue disorders	back pain	7.9
Skin and subcutaneous tissue disorders	acne	6.8
Psychiatric disorders	depression/depressive mood	6.4

Other adverse reactions occurring in <5% of subjects include alopecia, (partial and complete) device expulsion, hirsutism, nausea, and PID/endometritis.

Epistemological discrepancies

Nuisance side effect vs identity crisis: "If anything, and I mean anything costs you your peace, it's too expensive"

The first epistemic divergence I identified centers on the significance of side effects. The medical establishment routinely characterizes the IUD as a device that is well-tolerated, framing side effects as mild and temporary "annoyances." One physician I interviewed put it this way:

> *I would never highlight negative effects of IUD to a patient ever…Because they're a great form of birth control. They're highly effective. And for some people, you have to recognize that the benefits of good birth control outweigh some small annoyances.*

Likewise, another physician explained to me that "there is not the perfect birth control." She counsels patients that they "can't have everything" and that they need to accept some side effects in order to prevent pregnancy. This framing of contraception as a "necessary evil" has been found in prior work (Morison 2022). Often, physicians rationalized their minimization of patients' side effects by comparing them to the effects of pregnancy, as has also been found in prior studies (Geampana 2016). In a separate interview, a physician admitted that "everyone would be pretty annoyed" hearing about the side effects of contraception, but she contextualizes these risks in terms of pregnancy:

> *You got to put it in terms of, you think about things like driving. That's really scary too. If someone were to tell you the risk every single time you were to walk into the car. Yeah. I'll use analogies about the risk of pregnancy, about how when you are pregnant and you show up to labor and delivery, a third of pregnancies end up in cesareans. And so that's a one third chance of a laparotomy.*

Similarly, another physician emphasized that "the risk of pregnancy is always so much more" than any contraceptive risks because pregnancy could kill you.

However, women in this group do not view the drug as highly tolerable nor do they see the side effects simply as nuisances, but rather as profoundly distressing changes to their physical and mental health that constitute a loss of personal identity. The following are excerpts of an exchange on a post about IUD removal (emphasis mine).

It ruined my life: high anxiety, suicidal ideation, ibs, lots of food allergies, extreme thirst- two weeks [after] removal – [I was a] **whole new person**
I was literally on the verge of killing myself toward the end. Felt better within a couple weeks after removal. Felt a huge sense of relief literally immediately when it came out
I am 3 months post iud removal and **I am finally feeling back to myself**..

> Exactly this. I could just feel relief.
>
> I FELT myself changing every day. **Like coming back in my body.**

Group members frame the side effects they experience as an identity crisis. Women talk about "losing themselves" after beginning the IUD because of the mental health or physical effects. There is a tone of grief in these posts, with women seeming desperate to "get back to themselves." The women in these posts describe feeling like a different person while on the IUD and the relief they feel once the IUD is removed and they "return to themselves." Women's identity crises are amplified by the dismissive nature with which physicians treat their concerns, which causes them to feel isolated or like they are "going crazy." In the following thread, women share how their symptoms along with the dismissive clinical encounters they experienced seriously jeopardized their mental health, in some cases causing them to feel suicidal.

> I went to a very dark, scary place... anxiety like no other, depression, dark thoughts, exhaustion that hit out of nowhere, crying spells, **I thought I was literally going crazy**!
>
> same here that thing is the devil !
>
> me too! Scariest time of my life! And the **doctors said I was overreacting** and wanted to put my on more pills 🙄🙄🙄
>
> **Same! So so scary, and isolating!** Paired with crazy water retention and weight gain, cramps,
>
> I nearly bleed to death and felt suicidal...**It's time this was out in the open.**

For these women, the risks associated with IUDs *did* outweigh the benefits. As one group member put it, "If anything, and I mean anything costs you your peace, it's too expensive!" Furthermore, group members' risk calculation differed from that of physicians as they don't view pregnancy as the alternative to suffering these side effects. Rather, many prefer less invasive forms of contraception such as condoms or fertility tracking.

Evidence based medicine vs. embodied experience: "*Physicians need to be re-educated!"*

In addition to the epistemic discrepancy over the *significance* of side effects, a second divergence centers around the *etiology* of women's symptoms. When I asked providers what the biggest challenges are in contraceptive counseling, the number one response was "dispelling myths or preconceived notions," as one physician put it. Providers lamented the fact that women relied on "experiential knowledge," in the words of another physician, and saw communal information sharing as a threat. Physicians advised patients not to use Google or Facebook to find medical information and saw patients' friends and family members as adversaries. As one white male physician put it, "a lot of times, mothers poison the well." Physicians use evidence to dispel these myths, drawing on combat imagery. For instance, one interviewee explained that she tries "to be ***armed*** with evidence-based medicine" (emphasis mine) when patients draw on embodied experiences. Likewise, another respondent noted that she finds it challenging to "***battle***" patients' disinclination for certain methods. Thus, when patients express side effects that physicians don't believe are supported by current evidence, it creates a tension in the clinical encounter. In a separate interview, a respondent expressed her frustration with these situations:

> *It can be very frustrating when someone says they don't want to get pregnant, but also is not happy with any of the birth control options, and so ends up not getting anything. Sometimes they get symptoms which are not supported in the literature, like headaches or mood swings. And there's no published evidence that the Nexplanon or the IUD causes those things. But the patient really believes that, you know, 'All of this started when you put the IUD in,' and they really attach any symptoms. I've heard a lot of different things attached to the birth control. And so, they can't take the side effects, so they want it out.*

The corollary of physicians' skeptical attitude toward patient symptoms can be found in the posts and comments of Facebook group members. A recurring theme in the Facebook group

is woman being told that the symptoms that they are experiencing are not related to their IUDs. In the following exchange, one woman describes how her OBGYN attempted to convince her that her side effects were the result of stress. She rejects this idea, however, arguing that she had a stressful lifestyle before she had the IUD, yet only experienced mental health symptoms after its insertion.

> **My OB convinced me it was not my IUD, and just my lifestyle** that caused severe headaches, 45 lbs of extra weight (no matter what I ate or how much I worked out), and severe anxiety and depression, but after reading all your experiences I felt like I wasn't the only one. Here's to getting my body back, mentally and physically!

Another commenter similarly expresses frustration with her providers' refusal to acknowledge weight gain as a symptom of her Mirena.

> I'm so tired of not being able to lose weight while on the Mirena😭 So tired of crying every night about how I look & everything I have tired is not working. **My doctor continues to tell me that there's no correlation between the Mirena & weight gain, but I beg to differ**.

While doctors lament the "myths" and "misinformation" women share among friends and through online groups such as the one that I am studying, the women in this group flip the script on medical misinformation by suggesting that is their doctors who are in fact misinformed. Drawing on their own experiences, as well as those of fellow group members, women assert that doctors are wrong to praise IUDs and to dismiss their side effects. They privilege the embodied experiences of themselves and others and reject the idea that the side effects are in their head or are caused by other lifestyle factors. Instead, they employ an embodied form of causal reasoning to defend their belief that the IUD is the sources of their distress. This is exemplified in the exchanged below (edited for brevity and clarity):

> I just wanted to thank y'all for sharing your stories and experiences on here! 💕I got my Liletta out after 2 years of absolute hell…after reading all your experiences I felt like I wasn't the only one.
>
> No , you are not the only one .

> 🤦‍♀️.. yes ladies we aren't crazy... all these side effects are awful and from the stupid IUD'S.. **they need to be illegal**!!!
>
> My OB completely blew off what I was telling her and suggested I see a 'lifestyle coach'. **She asked if I was stressed (I have 3 kids, so obviously lol) but I was before and once I had that IUD my stress + anxiety went through the fricken roof.** They are so terrible and I hate how OB's vouch and make their patients feel like they are just crazy.
>
> **I feel like our doctors are also victims here**. **Somehow, they have been blinded to the reality of how dangerous these devices are and taught to assume side effects are unrelated**. My OBGYN is a wonderful person, but I feel like she has unintentionally destroyed my life - and possibly countless others.

This Facebook group serves as a source of affirmation for these women that they are in fact not crazy, that these side effects are related to the IUD, and that they have real impacts on their lives.

My findings align with prior work demonstrating that when women's embodied experiences differ from providers' understandings of biomedical knowledge, providers assume patients to be irrational or unreasonable and provider preferences take priority (Mann et al. 2022; Berndt and Bell 2021b). Evidence-based medicine seeks to optimize patient care by relying on scientific evidence "proven" by randomized control trials to make clinical decisions (Timmermans and Angell 2001). While the goal of this approach is to *manage* uncertainty in medical decisions, this singular focus on scientific evidence may inadvertently and erroneously *erase* these uncertainties. Rather than acknowledge potential gaps in the scientific literature when women express symptoms that are not supported by current research, providers assume these symptoms are "unrelated" or "in women's heads."

Contraceptive coercion

Finally, women and physicians differ over the fundamental goal of the clinical encounter. While providers are often focused on pregnancy prevention, women prioritize bodily autonomy over contraceptive efficacy. This discrepancy in goals can result in contraceptive coercion. Echoing previous studies, I find that while nearly all providers espoused a shared decision-making

approach to contraceptive care, their practices surrounding contraceptive care, especially early LARC removal, often disregard patient preferences (Manzer and Bell 2022). Several physicians described to me that they would attempt to persuade patients to keep the IUD in for longer to see if their symptoms improve or to look for other solutions to their side effects (e.g., therapy for mood effects, dermatological drugs for acne). Respondents also described witnessing colleagues pressure patients to insert IUDs, refuse IUD removal, or heavily discourage patients from obtaining removal. When I probed further, physicians explained that many doctors prioritize population health goals over patients' contraceptive desires, as one respondent explained:

> *It is a frequently expressed frustration that we have patients who come for terminations of pregnancy and then decline contraception afterwards…I think there's an assumption that if a woman has many children that she needs to want the same type of spacing or the same size family that we consider normal*

Similarly, another physician described the following experience she had as a medical student during her family planning rotation:

> *I had the attending be like, 'Okay, let's see how much you learned this past week. And this lady is coming in saying she wants to get her IUD out, but I want you to go in and come out and have convinced her to keep it in. And then if you do that successfully, we'll know that you really learned something.'*

This emphasis on contraceptive efficacy above all else was experienced by Facebook group members as a restriction on their reproductive autonomy. In line with prior research (Biggs et al. 2020; Senderowicz 2019), group members share stories of doctors pressuring them to have IUDs inserted or refusing to remove IUDs when they wish to discontinue the method. IUD removal is

the largest topic of conversation, with the word "removed" or "removal" occurring in 72% of conversations. One member recounts her experience attempting to have her IUD removed,

> "Next doctor said no without a reason. As did the next two doctors. I'm dying in agony and was told many times my side effects were from my lifestyle and stress or that I was a crazy female."

Similarly, this commentor celebrates finally having her IUD removed after she was initially refused,

> "I AM FREE OF THE HORRID THING. I didn't see my normal gynecologist and DAMN that was a mistake. The doctor I saw literally told me that I needed to get on another form of BC because I'm going to contribute to the world's population problem. WHAT THE ****"

Some women feel the need to resort to extreme measures, such as deception, to get the healthcare they need. In the following post, a woman shares her experience of being denied IUD removal.

> Hi 🤷 I'm sure some of you remember me posting about having the Liletta IUD I had it placed on Friday and have been having numbing and tingling on my right side from my hip to my toes following some bad cramps but no bleeding and just feeling off... well yeah **I called my ob today to get it removed and she STRAIGHT up told me "NO"** I've been fighting with them all freakin day to get it removed. I don't want it I shouldn't of ever got it and they scheduled me an appointment for tomorrow to "Check the placement" because she says it probably moved and that's why I'm feeling pain and numbness… how can they freakin tell me no!!!?? I'm not leaving the clinic until they take it out! 😞😞😞

Women commiserate and offer support, but also suggest strategies to help her obtain removal.

> Alot of **women have removed it themselves**!!..
>
> Just ridiculous.
>
> Record the next conversation and **threaten to go public** locally she will lose patients and money and reputation
>
> They can and will tell you no or your insurance can refuse to pay for the removal! I'd **call planned parenthood or find a new ob and say you want to have a baby**. I know it sounds really bad but when you say that they have to/will take it out. They can't force you to be on BC
>
> **Ask them to document in your chart** that you want it removed along with a list of the reasons why you want it removed and they are refusing to do so. That usually changes things…

> Your body, your choice, right?! **Tell them you changed your mind and you want to get pregnant...** This is BS!!
>
> My friend said she told her practitioner if they did not take hers out right that second **she would go out into the waiting room and remove herself. They took it out right then and there**! **…**

The strategies suggested in this thread—calling Planned Parenthood, lying about desiring, documenting the refusal in the medical chart, and self-removal—are not anomalous, but routinely shared in posts.

Epistemic divergence and medical gaslighting

Overall, women's narratives suggest an alternative epistemology that counters that of the medical community. There are three axes of epistemic divergence. The first axis of difference centers on the meaning of risks associated with the IUD, the second around the evidence used to ascertain these risks, and the third around the objectives of contraceptive counseling. Taken together, these three tenets reveal the basic organizing principle of the alternative epistemology represented in this Facebook group, which I will call the "body as agent" perspective. This organizing principle runs counter to that of mainstream medicine, which operates under that I will call a "body as subject" perspective.

In line with Sebring's work on medical gaslighting, I argue that in the eyes of medical experts, bodies are seen as subjects to be controlled via medical technologies and regulations (Foucault 1990, Sebring 2021). In this "body as subject" paradigm, women are seen as inherently "at risk" of pregnancy and goals for clinical encounters are informed by this assumption (Sebring 2021, Geampana 2016). Positivistic evidence is privileged over firsthand experience, again shaping expert risk calculi (Sebring 2021). On the other hand, the "body as agent" perspective that is represented by this Facebook group, privileges individual, embodied experiences. Bodily

autonomy is valued over contraceptive efficacy. Below is a brief heuristic showing the differences between the two epistemologies:

Table 3: Differences between dominant and alternative epistemologies surrounding IUDs

Axis of difference	**Dominant Medical Paradigm on Contraception**	**Alternative Epistemology on Contraception**	**Resulting "betrayal"**
	"Body as subject"	*"Body as agent"*	
Meaning of risk	Minimization of risks and emphasis on benefits of contraception	Side effects constitute a painful identity crisis	Medical dismissal
Source of evidence	Evidence-based medicine	Privilege embodied experience & critical of financial motive in medicine	Institutional misinformation
Goal of clinical encounter	Main goal = pregnancy prevention	Autonomy over body is more important than pregnancy prevention	Contraceptive coercion

In the final column of the table, I outline the betrayal that is experienced as a result of these epistemic divergences, leading to a breakdown in trust between provider and patient. Patients feel

dismissed by providers' characterizations of the significance and source of side effects and feel coerced into choosing or continuing with provider-preferred forms of contraception. These experiences leave women feeling isolated and "crazy." The betrayal that women experience in their clinical encounters leaves them in a state of disbelief or "surreality" (Sweet 2019) and incites a deep sense of medical skepticism.

Collective reframing and resistance

The collective nature of this group allows women to resist individual experiences of medical gaslighting. As Sweet (2019) emphasizes, gaslighting depends upon victims' isolation. Through sharing their experiences with one another, group members recognize their clinical experiences as betrayals. Women reframe their personal experiences through conversation and develop a collective counter-epistemology. They exchange tacit healthcare knowledge (Foster 2016) to resist future instance of medical gaslighting (e.g., coaching on how to obtain IUD removal) and channel their anger into critiques of dominant power structures. Conversations take on a political nature as women begin to suspect that the medical community is not simply ignorant, but willfully suppressing knowledge. For instance, in the following exchange group members examine the role of the FDA.

So **does the FDA know** that IUD's and other forms of birth control cause suicidal thoughts and even behaviors, and illness? **Do they just not care**? Do they truly not know? Has anything ever been formally brought as a complaint?
I actually think they are all **$$$ driven and don't care. Pharmaceuticals own the world**. I put in complaint to Bayer and FDA. They don't care. They don't care they are destroying lives and families.
they won't care because both ppl from Monsanto who belongs to Bayer now and **people from Bayer actually sit at the FDA board.** The FDA is a joke. And **most of the people who sit at its board are men** and men from big companies or big pharmaceutical groups or whatever. It's totally corrupted
Wondering the same. **Woman suffering is accepted.**

> I went back to doctor with symptoms at least x10 times**. They ignore serious symptoms for $$$$$.** They are making $$$ from these toxic devices
>
> I**t's just not right what is happening to us woman around the world…**

Thus, women's experiences of medical betrayal lead them to question not only individual doctors, but the pharmaceutical industry and regulatory bodies producing contraceptive knowledge. As found in other alternative healthcare communities, women are not ignorant of official information and recommendations surrounding intrauterine devices, rather they are critical of the source and motivation of that information (Reich 2016; Epstein 1996). They highlight profit motivations and gender imbalances that bias information produced by pharmaceutical companies and regulatory bodies like the FDA.

Oftentimes, the betrayal, anger, and mistrust that women's contraceptive experiences create bleed into domains beyond contraception entirely, as the following quote illustrates.

> "[We're told] our foods are "safe" our water is "safe", medicine, body products, vaccines, etc. I don't believe any of it… […] just my opinion. **Plus there are all kinds of studies done to disprove the safety of these things but the studies aren't taken seriously just like studies taken on female contraception isn't taken seriously.**"

The commentor here likens vaccine, body product, medicine, food, and water safety issues to the case of contraception. She suggests that studies on the dangers of these items "aren't taken seriously" just as research on female contraception is not.

In some cases, women demonstrate outright hostility towards expert knowledge. In one exchange, a member expressed skepticism that another woman's mental health issues were related to the IUD (a minority opinion among the commenters). This member was a scientist and appealed to her scientific authority, urging other members "to think more critically. There are hundreds of factors here at play, many which are unknown." A second member angrily responded:

> "You know what we have all had enough of people like you who think a few letters after your name and you know it all. I was told by so called medical professionals it was this and it was that. None of which was true."

Notably, the user says "we"—not "I"—have had enough of experts, suggesting the collective nature of the group's alternative epistemology. This response captures the group's critical stance towards medical authority.

DISCUSSION

I began this paper with the task of understanding medical distrust not as the result of ignorance or misinformation, but as the product of epistemological discrepancies between experts and lay persons. As with earlier work on the HIV/AIDs epidemic, vaccine hesitancy, and other alternative healthcare movements (Reich 2016; Epstein 1996), I find that women in the IUD side effects group I study have a distinct epistemic orientation that runs counter to that of the biomedical paradigm. I extend this work by arguing that such *epistemic divergences* between lay persons and experts produce *medical betrayals*. Following Eyal (2019), I understand betrayals as breaches that destroy long-cultivated trust. I build upon this work by incorporating power into the concept of institutional betrayals. Drawing on intersectional and feminist theory, I argue that betrayals are not random, but socially structured. Expert knowledge reflects hegemonic power structures (i.e., the patriarchy), thus certain groups (i.e., women) are more prone to experiences of medical betrayal. Because these betrayals are not recognized as such by experts, they constitute forms of gaslighting—that is, they draw on the cultural association of femininity with irrationality to leave women questioning their sense of reality and feeling crazy (Sweet 2019).

In the case of contraception, providers' failure to acknowledge the subjective meaning of contraceptive risks leads women to feel dismissed and disregarded by the very institutions that are meant to care for them. Specifically, I find that health care providers take a "body as subject" approach, which leads them to minimize or dismiss symptoms that women experience as painful

threats to their sense of self, take a narrow, non-reflexive view of what constitutes evidence, and prioritize pregnancy prevention over women's preferences. By contrast, women take a "body as agent approach" that privileges bodily autonomy. This discrepancy leads them to feel betrayed by their providers, damaging the trust that is central to the provision of medical care. I argue that the failure of health care professionals to critically engage with the unique epistemic position of many contraceptive users is an example of medical gaslighting (Sebring 2021) and undermines the health of these users in serious and complex ways. Furthermore, I argue that the medical distrust these women display is not a reflection of ignorance but a logical response to the medical gaslighting they experience.

Medical gaslighting not only compromises women's health but disrupts patients' sense of trust in institutions more broadly. Betrayals can instantaneously break trust that has been built over lifetimes (Eyal 2019). Many IUD users in the group I study become skeptical not just of IUDs or their OBGYN but of the greater medical and scientific community. Women question how deep the betrayal goes, becoming suspicious of other institutions. My findings illustrate how, ironically, privileging population health over individuals may ultimately backfire. That is, when patients' subjective, embodied experiences are not valued, it is experienced as a breach of trust that can lead them to reject other tools of population health, such as vaccines.

While I focus on women in my analysis, medical gaslighting also occurs among other marginalized populations (Adams 2012; Benjamin 2016; Peck and Conner 2011). These findings shed light on cases such as COVID-19. While there has been widespread media attention on Trumpian anti-vaxxers, research has found that being a woman or being Black is *more* predictive of vaccine refusal than voting for Trump in 2020, being conservative, or being religious (Callaghan et al. 2021). Exploring the role of medical betrayals in the lives of marginalized populations may

offer a new means of understanding their attitudes towards the pandemic and towards mitigation strategies like vaccines. This spillover effect is likely not limited to contraception. We could imagine other areas where lay people feel betrayed by experts and begin to grow suspicious of expert authority as quite large—for instance, in educational or legal institutions.

Trust and gaslighting are antithetical phenomena, yet thus far work on each has been siloed. This work merges these literatures to argue that medical distrust is rooted in socially patterned experiences of medical gaslighting. The implications that this has on people's sense of trust in the medical system is underexplored. Understanding the role of gaslighting in the production of distrust is critical to improving our understanding of American's trust (or lack thereof) in medical institutions and beyond.

METHODOLOGICAL APPENDIX

A. Facebook group sample demographics

To analyze sample demographics, I selected a random sample of 100 group members. I used cues from profile pictures, liked content and group memberships, public profile information, and the content of their posts and comments to determine members' age, race, parity, marital status, geographic location, and educational and occupational information.

Of the 100 members I sampled, 65% are white, 12% are Black, 18% are Hispanic and 5% are Asian. The majority have children (58%) and 42% are married. Nearly a fifth of the sample

are single mothers (17%). For a quarter of the sample, I was unable to determine whether they had children or were married. The sample is young—41% were around 26-35, 36% were around 18-25. Around one fifth of the sample is in their late 30s or older. Over 90% of the sample is American, with over a third residing in the South (37%). Education and occupational data is limited, but 9% of members list high school degrees, 10% indicate that they've completed some college, and an additional 10% graduated from college. The majority of profiles (71%) do not list educational data. Several members (11%) list careers in the medical services industry, such as nurse, nurse's assistant, or medical technician. Retail and customer service positions are also common (9%). Again, the majority of profiles (60%) did not list occupational data. Results are outlined in Table 1.

Table 1: Sample Demographics

Race	%	N
White	65%	65
Black	12%	12
Hispanic	18%	18
Asian	5%	5
Children		
Yes	58%	58
No	17%	17
Unknown	25%	25
Marital Status		
Married	42%	42
Unmarried	33%	33
Unknown	25%	25
Education		
High School	9%	9
Some College	10%	10
College	10%	10

Age	%	N
18-25	36%	36
26-35	41%	41
36-45	18%	18
45+	5%	5
Place		
Northeast	12%	12
West	6%	6
Midwest	11%	11
South	37%	37
International	8%	8
Unknown (USA)	26%	26
Occupation		
Medical Services	11%	11
Retail/Customer Service	9%	9
Teacher	4%	4
Military/Police/Firefighter	2%	2
Stay at Home Mom	3%	3
Student	2%	2

Unknown	71%	71	Other	9%	9
			Unknown	60%	60

The results from this formal analysis are consistent with the general impression of group demographics that I have gathered through lurking and analyzing group conversations. However, these results need to be interpreted with caution as there is a large amount of missing data. As noted above, I was unable to ascertain educational or occupational information for 71% and 60% of profiles, respectively. Likewise, for a quarter of profiles, I was unable to determine whether the individual was married or had children. I was also unable to determine geographic location for a quarter of profiles.

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CHAPTER 2: Myths Among the MythBusters:

How Medical Residency Structures Limit EBM and Reproduce Medical Inequality

INTRODUCTION

In the last two decades, evidence-based medicine (EBM) has emerged in the healthcare community as a strategy for improving and standardizing patient care (Timmermans and Oh 2010).

However, EBM has so far done little to move the needle of health disparities between men and women, and between white women and women of color (Short and Zacher 2022). American women continue to face unique and stubbornly persistent healthcare challenges compared to their male counterparts (Short and Zacher 2022). These challenges are even greater for low-income and minority women (Monk 2015; Phelan, Link, and Tehranifar 2010; West 2004). The durability of the association between social disadvantage and health, despite advancements in medical technologies and practices—such as EBM—has been termed "fundamental cause theory" (Link and Phelan 1995). Approaching the health of marginalized women from this theoretical vantage point, in this paper I employ ethnographic and interview-based data to identify mechanisms that reproduce gendered, racialized, and classed inequities in clinical encounters despite the implementation of EBM.

Forces shaping gender-, race-, and class-based health disparities are complex and multifaceted and include both biological and social factors. The clinical encounter has been theorized as a one potential driver of healthcare inequality. Women, racial minorities, and low-income patients are more likely to face discrimination and medical dismissal during doctor-patient interactions (Adams et al. 2008; Barker 2009; Fisher 1984; Gordon et al. 2005; Kempner 2014; Peck and Conner 2011). Thus, I focus my analysis on this stie. Specifically, I use the case of contraceptive counseling as reproductive care is a site of particularly stark healthcare disparities for marginalized women (Tucker et al. 2007)

I find that while EBM is touted by nearly all healthcare providers the structure of residency programs as well as individual-level factors constrain residents' ability to practice it. Major constraints to EBM in OBGYN residency programs include time, limited training in research methodologies and statistical analysis, limited formal didactic time, the marginalized status of

family planning in the field, and professional hierarchy. Thus, while providers see themselves as "MythBusters" (Stevens 2018), they unconsciously internalize and reproduce myths themselves. That is, I find that when residents lack a nuanced understanding of the medical data, they default to positions shaped by 1) gendered beliefs around women's health, 2) a bias toward pharmaceutical forms of contraception, and 3) classed and racialized norms of motherhood fitness. Ultimately, this leads them to prioritize contraceptive efficacy over patient goals and exhibit dismissive attitudes towards patient concerns. Because residents nearly exclusively counsel marginalized un- and under-insured populations—who are overwhelmingly Black, Brown, and poor—in the outpatient setting, these findings have stark implications for medical inequality.

LITERATURE REVIEW

Medical education and evidence-based medicine

Since it's conception as a field, medical sociology has been concerned with how doctors learn to do clinical work (Becker 1961). The field shifted away from this focus after the 1980s; however, there has been a recent resurgence in research on medical education (Jenkins et al. 2021). This is much needed as medicine has changed in profound ways since early studies on medical education were conducted (Timmermans and Oh 2010). Timmermans and Oh have documented the rise of 1) the rise of patient consumerism, 2) the increasing power of the pharmaceutical industry, and 3) the advent of evidence-based medicine over the past two decades. Likewise, we have seen rapid changed in the demographic composition of doctors. Medicine was previously almost exclusively the domain of white men. Now, women make up roughly half of medical school classes and racial diversity has also grown (Underman and Hirshfield 2016). The impact that these transformations have had on medical education is an empirical question that remains underexplored.

The educational impact of paradigmatic shift towards evidence-based medicine (EBM) is one such example. EBM is currently viewed as the standard for medical practice and is defined as:

> "the conscientious, explicit, judicious and reasonable use of modern, best evidence in making decisions about the care of individual patients…It is a movement which aims to increase the use of high quality clinical research in clinical decision making. EBM requires new skills of the clinician, including efficient literature-searching, and the application of formal rules of evidence in evaluating the clinical literature." (Masic, Miokovic, and Muhamedagic 2008)

In theory, EBM holds potential to reduce uncertainty in medical decision making, thus reducing medical inequality and biases in doctor-patient interactions. However, limited research suggests that EBM may not change the structure of resident education in significant ways (Norman and Shannon 1998). Timmermans and Angell's (2001) landmark study on the role of EBM in medical residency training finds that while all residents they studied value EBM, they are sharply bifurcated on what that means in practice. Through interviews with pediatric residents, they discover that residents are either "librarians," who consult the medical literature, or "researchers," who critically evaluate it (Timmermans and Angell 2001).

Librarians consider any reputable published resource to be "evidence," and thus often referenced textbooks, "cheat" books, reviews, and guidelines, whereas researchers turn to primary literature and critically evaluate study data, methods, and analytic strategies. Librarians tend to overstate the certainty of research and recommendations, while researchers embrace uncertainty and have a more skeptical view of research findings. Ultimately all residents remain under the authority of attendings, thus Timmermans and Angell do not find that EBM has had the democratizing effect that was predicted. Finally, EBM does not replace clinical judgement as some

feared. Both librarians and researchers employ what Timmermans and Angell call "evidence-based clinical judgement," that combines evidence and experience.

More recent research has found that the increasing complexity of health systems forces residents to adopt a style of efficiency that compromises their ability to practice EBM. Through ethnographic observations and in-depth interviews with internal medicine residents, Szymczak and Bosk (2012) find that "training for efficiency" is the organizing ethos in medical residency programs and that this stems from the overwhelming complexity of modern medical systems. While they do not explicitly focus on their study on EBM, they note that in light of this demand for efficiency, mastery of biomedical knowledge and the management of uncertainty become secondary concerns. Likewise, residents often employed strategies that were knowingly at odds with best practices due to bureaucratic and physical barriers (Szymczak and Bosk 2012).

These studies suggest that EBM's impact on patient care may not be as straightforward as promised; however, many open questions remain. While Timmermans and Angell demonstrate that residents take diverse approaches to EBM, the impact of each of these approaches on patient care remains unknown. Likewise, Symczak and Bosk suggest that bureaucracy is a constraint to EBM, at least in the field of internal medicine; however, it is not clear if this applies to other fields of medicine or if there are other constraints to EBM. It is important understand these questions because for all of EBM's promise to standardize and improve patient care, healthcare inequalities have remained stark since the advent of an EBM approach.

Women's health and intersectionality

Despite advancements in medical technologies and practices such as EBM, women continue to suffer poor health outcomes compared to their male counterparts. A vast literature on women's health reveals that while women have longer life expectancies than men, they spend a

greater portion of their lives in sickness (Short and Zacher 2022). Women face more stressful life events and chronic stressors. They are more likely to suffer from autoimmune diseases, chronic pain and conditions like migraines, irritable bowel syndrome, and fibromyalgia; are more susceptible to mental health issues like depression and low self-esteem; and are exposed to higher levels of violence, especially sexual and domestic abuse (Norman and Shannon 1998). American women face unique health challenges compared to women from other high-income nations. American women's life expectancy is among the lowest of Organization for Economic Co-operation and Development (OECD) countries (OECD 2019), even though US per capita healthcare expenditures are the *highest* out of all OECD nations (WHO 2021). Likewise, American women are more likely to die during pregnancy or childbirth than women in other wealthy countries, and the maternal mortality rate has risen over the past few decades (Kassebaum et al. 2016; MacDorman et al. 2016). These patterns are magnified for young, poor, Black and Brown women. Low-income and minority women are more susceptible to a variety of negative health outcomes, including hypertension, obesity, and domestic abuse (Kassebaum et al. 2016; MacDorman et al. 2016) . Maternal mortality rates among Black American women are nearly four times the rate among white women, even though Black and white women experience a similar prevalence of pregnancy-related complications (Tucker et al. 2007).

While biological factors may shape some of these healthcare disparities, the clinical encounter itself has been demonstrated as a driver of healthcare inequality. Compared to men, women are more likely to experience insensitive or unsatisfying clinical encounters (Fisher 1984; Barker 2005; Kempner 2014) and less likely to receive accurate diagnoses of both acute and chronic conditions (Adams et al. 2008). Women are also more likely to be denied pain medications due to assumptions that their complaints are psychosomatic (Chen et al. 2010; Zhang et al. 2021).

Similar patterns have also been observed for Black and low-income populations (Peck and Conner 2011; Gordon et al. 2005). While affluent, white patients today feel more comfortable challenging doctors' decision-making, low-income patients and patients of color often exhibit deference in doctor-patient interactions Likewise they are more likely to have brief, asymmetrical, and less informative clinical encounters.

Fundamental cause theory

Scholars have long found a durable association between social disadvantage and health, despite advancements in medical technologies and practices (Chen et al. 2010; Zhang et al. 2021). Link and Phelan argue that social disadvantage is thus a "fundamental" cause of medical inequality. Their theory posits that socioeconomic status drives health disparities across time and space, even as social structures and their correlates to health outcomes shift. This is because it is the inequality itself that produces a health advantage for higher status individuals. Fundamental cause theory has four essential features: 1) SES effects multiple health outcomes, 2) it does so through multiple risk factors, 3) the mechanism linking SES to health involves access to resources that promote good health, or mitigate risks or impacts of illness and disease, and 4) the link between SES and health is reproduced over time through the replacement of intervening mechanisms (Phelan et al. 2010). This theory has since been extended to include racism as a fundamental driver of health inequity, as research has found a persistent association between race and health, even when controlling for SES (Clouston and Link 2021; Williams and Sternthal 2010).

While much of the literature on fundamental causality has focused on population-level patterns in health outcomes, a 2005 paper by Lutfey and Freese uses ethnography to identify the multiplicity of mechanisms that produce inequality in a specific case (Lutfey and Freese 2005). Studying two diabetes clinics—one that serves predominantly low-income patients, and one that

serves mostly high-income patients—Lutfey and Freese find that SES shapes patient outcomes in multiple ways. Specifically, they find that SES affects: 1) providers' assessments of problems patients face in diabetes managements, 3) providers' acquisition of information about patients; 3) the identification of solutions; and 4) the assessed and actual likelihood that solutions will be successfully implemented. Low-SES clinic patients are more likely to be seen by residents as opposed to attending physicians; are less likely to have continuity of care; have less access to in-clinic educational resources; face provider bias; and struggle with resource and structural constraints that impede their ability to follow treatment regimens.

Fundamental causality in the provision of contraceptive care

In this paper, I build on the work of Lutfey and Freese (2005) to identify how race, gender, and SES affect patient care in the context of contraception. Reproductive health is a particular area where women are underserved. Women's reproductive health has been historically under-researched (Short and Zacher 2022). Hegemonic feminine ideals of chastity impact women's access to sexual health care, such as preventative vaccines, contraceptive technologies, STI (sexually transmitted infections) screening, and abortions. Barriers to care are sometimes erected by parents or doctors, such as occurred in the case of the HPV vaccine (Carpenter and Casper 2009). Other times they are erected by the state, as in the case of restrictive abortion laws or the lack of federal funding for women's health clinics. Women spend on average three decades of their lives trying *not* to become pregnant (Sonfield, Hasstedt, and Gold 2014). Over 85 percent of women have used a highly or moderately effective, reversible, medical method of contraception, like the pill, shot, or intrauterine device (IUD) (Daniels and Jones 2013) (Daniels et al., 2013). Yet, women's contraceptive care is fraught with challenges and unintended pregnancies remain common, accounting for nearly half of all pregnancies (Finer and Zolna 2016).

Until the Affordable Care Act (ACA) was passed in 2010, health plans did not have to cover birth control. Today, plans sponsored by certain exempt religious employers still have no obligation to provide coverage (healthcare.gov). This exemption was broadened under the Trump administration so that virtually any employer with a moral objection to birth control can qualify. Furthermore, insurance constraints often limit the supply of birth control medication patients can receive (Frederiksen et al. 2022). This poses a barrier for many women; roughly a third of women using hormonal contraception report missing taking their birth control because they were not able to access it in time Frederiksen et al. 2022. The 2022 *Dobbs vs. Jackson Women's Health Organization* Supreme Court decision overturning *Roe v. Wade* threatens the future of contraceptive access. Several states have recently proposed legislation limiting or banning access to long acting and emergency contraceptives (Felbin and Spanfeller 2022).

When women *can* access contraception, it can be a challenge to find a suitable method. Women change methods or discontinue contraception at high rates. The median woman has used at least three methods, and nearly a third of women have used five or more methods. The figures are even higher for Black and Latina women; over two-fifths of Black and Latina women have discontinued hormonal contraception due to dissatisfaction. The primary reason for women's dissatisfaction with birth control is method side effects (Littlejohn 2013). These challenges are compounded by unsatisfying, dismissive, and painful clinical experiences surrounding contraception. Women report experiences of contraceptive coercion (Biggs et al. 2020; Dehlendorf et al. 2010; Gomez, Mann, and Torres 2018), provider dismissal of their symptoms (Berndt and Bell 2021), and painful experiences during the insertion and/or removal of long-acting contraceptives(Hall and Kutler 2016). Again, these burdens are disproportionately shouldered by poor women and women of color (Gomez et al. 2018; Mann 2013).

What sustains gender-, class-, and race-based barriers to adequate contraceptive care? Ridgeway and Correll argue that that cultural beliefs about gender serve to maintain and reproduce gender hierarchy (Ridgeway and Correll 2004)). These beliefs are particularly important in social relational contexts like clinical encounters and are not fixed but are continually updated and redefined to maintain gendered power imbalances. A gender belief salient to this context is that of the "hysterical woman." This trope dates back to the Victorian era, when many illnesses suffered by particularly women, especially highly educated, white women, were thought to be caused by their nerves and delicate constitutions. The term hysteria comes from the Greek "hystera," meaning uterus, as oftentimes women's reproductive systems were thought to be the source of their afflictions (Barker 2009; Kempner 2014). Vestiges of this thinking are still present in modern medical practice (Barker 2009; Kempner 2014).

Patricia Hill Collins argues that in addition to gender beliefs, social interactions and meta-narratives are shapes by "controlling images" that apply specifically to Black women (Collins 1990). For instance, the image of the "welfare mother" which depicts Black mothers as highly fertile, lazy, and bad mothers has justified limiting the fertility of Black women through coercive sterilization and contraception programs (Collins 1990; Roberts 2014). Likewise, Briggs argues that "the corollary to the hyper-impressionable nervous systems of white women was the belief that Black women could feel little, even being somewhat exempt from pain" (Briggs 2000:262). The false notion justified painful gynecological experimentation on enslaved Black women's bodies (Briggs 2000) and recent research findings suggest this thinking continues to inform contemporary medical practice, such as the denial of pain medication to Black patients (Hoffman et al. 2016).

Synthesizing feminist and intersectional work on gender beliefs and controlling images (Barker 2009; Briggs 2000; Collins 1990; Kempner 2014; Ridgeway and Correll 2004) with Lutfey and Freese's methodological approach to analyzing mechanisms underlying fundamental causality (2005), I employ ethnographic and interview-based data to identify mechanisms that reproduce gendered, racialized, and classed inequities in the provision of contraceptive care. Drawing on both patient and provider perspectives through a combination of in-depth interviews and ethnographic observations of clinical encounters, I analyze how the structure of OBGYN residency programs constrains providers' ability to practice EBM and in turn assess how these constraints impact patient care. I find that structural constraints limit residents' ability to read and digest medical literature. In the absence of a deep understanding of evidence, residents often rely on informal channels, such as word-of-mouth, to receive medical information. Furthermore, I find that residents unconsciously draw on cultural stereotypes—particularly gender, class, and race beliefs—to fill in knowledge gaps. Residents who are less educated on contraceptive mechanisms of action and best practices are more likely to have strong pro-IUD stances, use coercive counseling approaches, and are more dismissive of patient concerns. While experience seems to mitigate some of these shortfalls, because residents nearly exclusively counsel marginalized un- and under-insured populations in the outpatient setting, this finding has stark implications for medical inequality.

Data and Methods

I conducted a total of sixty-five in-depth interviews with physicians and women who had recently received contraceptive counseling. Interviews typically ran around sixty to ninety-minutes in length. Thirty-five interviews were with physicians—twenty-six OBGYN residents, six academic OBGYNs (attendings), 2 private practice and staff OBGYNs, respectively, and one

private practice family medicine physician. The remaining twenty-eight interviews were with women who had recently received contraceptive counseling. Inclusion criteria for women were that they be over 18 years of age, have recently received contraceptive counseling (preferably in the last three months, but I allowed up to the past year to increase the income and racial diversity of my sample), and reside in the New Jersey/Pennsylvania/New York tri-state area.

In addition to these interviews, I also conducted four months of ethnographic research in two clinics—a complex family clinic and general gynecology clinic—at a major academic hospital in the Northeastern US. I observed OBGYN attendings and residents, as well as other providers and staff members, such as nurse practitioners, nurses, and medical assistants, as they went about their daily tasks. Through the course of this ethnography, I observed forty-five contraceptive counseling appointments firsthand, as well as countless interactions between health care providers and staff members.

To identify the conceptual themes that I discuss in my findings, I used a flexible coding approach (Deterding and Waters 2021). Using the qualitative coding software MaxQDA, I assigned index codes to sections of each document (i.e., interview transcript or fieldnote entry) to tag the section with descriptive codes. For interview transcripts, these codes reflected sections of my interview guide and for field notes, these codes reflected the type of observation I was recording (e.g., contraceptive consultation, staff interaction, etc.). I then conducted additional analysis on those coded sections to apply more fine-grained analytic codes. Analytic codes were comprised of a combination of inductive, emergent themes and deductive themes that I identified in my review of the literature (Deterding and Waters 2021). Using MaxQDA's code comparison functions, I consolidated codes that had overlapping features and eliminated codes that applied to few cases.

Sample

Table 1 and Table 2 below outline the sample demographics of my interview respondents. I divide provider respondents into two categories—resident and post-residency physicians. Residents were overwhelmingly women (84.6%), white (69.2%), and from highly educated families. Over half of residents had parents with graduate degrees. They were also young. The average age among residents was 29.6 and the median was also 29. Post-residency physicians were, as expected, slightly older, with an average age of 47.9 and a median age of 43. They were mostly women (77.8%), white (77.8%), and from highly educated backgrounds. All post-residency physicians had a parent who'd at least completed college, and the majority had a parent with a graduate degree.

Table 1: Provider Demographics

	Residents *N = 26*		**Post-Residency Physicians** *N = 9*	
Gender	%	*N*	%	*N*
Male	15.4	4	22.2	2
Female	84.6	22	77.8	7
Race	%	*N*	%	*N*
White	69.2	18	77.8	7
Black	11.5	3	0	0
Hispanic	3.8	1	0	0
Asian	7.7	2	22.2	2
Other	7.7	2	0	0

Age	*M*	*Mdn*	*M*	*Mdn*
	29.6	29	47.9	43
Parental Education	%	*N*	%	*N*
High School	3.8	1	0	0
Some College	7.7	2	0	0
College	30.8	8	37.5	3
Graduate Degree	57.7	15	62.5	5

The patients that I interviewed were more diverse. All identified as female. Roughly 30% were white, 30% were Black, 15% were Hispanic, 19% were Asian, and 7% were multiracial. The average age was 27.9 and the median was 26. Most had parents with college or graduate degrees, (46.2% and 30.8%, respectively). 8% had parents with some college, and 19% had parents with high school or less. Most respondents had insurance through an employer, their university, or the marketplace (85.2%). 11% had Medicaid. Only one respondent was uninsured. About a fifth of the respondents were married and about 30% had children.

Table 2: Patient Demographics

Gender	%	*N*	**Insurance**	%	*N*
Female	100.0	28	Employer	70.4	19
Race	%	*N*	University	7.4	2
White	29.6	8	Marketplace	7.4	2

Black	29.6	8	Medicaid	11.1	3
Hispanic	14.8	4	None	3.7	1
Asian	18.5	5			
Other	7.4	2			
Age	*M*	*Mdn*	**Marital Status**		
	27.9	26	Married	22.2	6
Parental Education	%	*N*	Unmarried	77.8	21
Less than HS	11.5	3			
High School	7.7	2			
Some College	7.7	2	**Parental Status**		
College	46.2	12	Children	29.6	8
Graduate Degree	30.8	8	No Children	70.4	19

Findings

Myths among the MythBusters

I find that while EBM is touted by all residents, in practice their contraceptive counseling approaches often did not follow medical guidelines. When residents lack a nuanced understanding of the medical data, they default to a pro-LARC (long-acting reversible contraception) stance and are dismissive of patients' concerns, even when they hold validity. Likewise, they tend to underestimate the efficacy of non-medical forms of contraception, such as fertility awareness and lactational amenorrhea. Furthermore, I find that residents' assessments of contraceptive risks are often rooted in cultural stereotypes rather than true medical risk. I argue that this default position

emerges from gendered, classed, and racialized assumptions about patients' reliability and parental fitness (Ridgeway and Correll 2004; Hill Collins 1999). Thus, while OBGYNs see themselves as "MythBusters" (Stevens 2018), they unconsciously internalize and reproduce myths themselves. Specifically, I find that resident counseling is shaped by 1) gendered beliefs around women's health, 2) a bias toward pharmaceuticals, 3) classed and racialized norms of motherhood fitness.

A. Women's complaints as psychosomatic

In my interviews, residents often surmised that patient complaints were in-fact "in their heads." This was particularly true for mood-related side effects, such as anxiety and depression. Mood changes are the number one side effect reported by contraceptive users, with roughly half of women reporting this side effect (Briggs 2000:262). To understand how residents counsel women on mood-related side effects, I presented them with the following vignette:

> *A patient comes in and is complaining about her IUD. She has had the IUD for nearly a year and thinks that it has been contributing to her anxiety and depression. How would you treat this case? What other information would need to know to determine how to proceed?*

The majority of residents answered this question by saying that it was highly unlikely to be related to the IUD and implied or clearly stated that it was likely to be psychosomatic. The following quote from Abbey—a white, third year resident—exemplifies a typical response:

> **A lot of times, people will attribute problems to their birth control that are actually coming from other medical problems or from their outside social circumstances**. So, you kind of do want to get a little bit more information about that. And then I would tell her that most of **... It's not a known side effect that it would cause anxiety or depression, and that if that's happening, there might be another reason** and kind of see if there's

> any other risk factors in her medical history, or she's ever had anything like it before. I've kind of mentioned earlier, **some people really will just have this mental block up** where they've decided that their Mirena is causing this problem, this problem, this problem. Even if it's totally unrelated and they just want it out. **And if the patient just wants it out, there's nothing you can do**. You talk to them about what you think is going on and that you counsel them that it's probably not from that. **But if they have idea that it's that, and they're not going to let go of it, then we will just take it out for them.**

Abbey dismisses the hypothetical patients' experience of anxiety and depression, emphasizing that these are not known symptoms of the IUD. It was common for residents to refer to data in a general sense when negating the mental health effects of IUDs, yet when I probed them for specifics, they often admitted that they weren't familiar with specific research. An example of this arose in an interview with Jason, a white, third year resident. He had mentioned several times in the interview that the "data shows" that mood effects were possible with IUDs but less likely to occur than with oral contraceptives. When I asked him what data he was referring to, he said:

> **I don't know. I wish I knew. This is maybe urban legend within our residency or maybe within our medical school and other residencies. I haven't seen the primary literature myself, but I've heard from several sources that it's possible**, but less of a thing. It is on our consent form that it's a possibility that it could have effects on mood. But now I'm going to go look it up after we get off of this.

Despite the fact that mood effects are listed on the hospital consent forms and the fact that he was not personally familiar with the literature on IUDs and mood effects, Jason still minimized the possibility mental health side effects. Likewise, Chole—a white, female, first year resident—

dismissed the hypothetical patient's mood effects as unrelated to the IUD due to the IUDs local mechanism of action and the fact that the "hormone doesn't get into the blood supply":

> "If she's worried about the hormone in the IUD affecting her mood or anxiety and depression, it is pertinent to know that **the hormone doesn't get into the blood supply.** If you take a pill, it goes through your digestive system, your intestines absorb that hormone into the blood supply, and then it can circulate in the whole body and have a different effect. What it does is it disrupts the natural rise and fall of those hormones. **So if you don't have progesterone in the blood, it's never going to get to the brain, it's never going to get to the organs that would make you feel anxious or depressed.**

While hormonal IUDs do primarily work locally, it is not accurate to say the hormone doesn't get into the blood supply. In fact, pharmacological information listed in drug package inserts shows that the progestin serum concentrations for Mirena and Nexplanon—a contraceptive arm implant—are nearly identical after three months (at around 200 pg/ml). Furthermore, medical research has found that IUDs are associated with mood effects and as mentioned above, this side effect is listed on drug package inserts as well as procedural consent forms (Bayer Pharmaceuticals 2020; Skovlund et al. 2016).

Thus, residents' assumption that that women's experience of mood effects is "in their heads" is not rooted in scientific evidence, but rather in the idea that women's health complaints are not real (Barker 2008; Kempner 2014). This is significant given that when patients don't feel heard by their physicians, it undermines their healthcare and, in some cases, their quality of life. For instance, one woman I interviewed (#3) who after starting the birth control patch experienced severe depression that left her unable to get out of bed many days, describes being "brushed off" by health care providers:

> "And they told me, "It's going to get better. You're going to feel better." They'd say, "Well, maybe you're mentally ill." And I was like, "But it literally started the month that I started taking this, I don't understand." And they just sort of brushed away my concerns and I started to believe like, 'Maybe I do have a mental illness, what is wrong with me?'"

Her health care provider's dismissive response led her to question her own sense of reality and to continue with the patch for nearly four years, despite her negative experience. Her depression became so severe that she ultimately dropped out of college and never finished her degree. After four years of struggling with side effects, she decided to discontinue the patch against her provider's advice and found that her depression resolved within six months of stopping the medication.

B. Pro-pharma bias & women's responsibility to contracept

Likewise, residents often demonstrated a bias toward pharmaceutical forms of contraception, even when this was not supported by the data. This echoes findings that both gynecology textbooks and providers tend to emphasize benefits and downplay risks of pharmaceutical forms of contraception (Bertotti and Miner 2019; Stevens 2018). Karen, a white, third year resident explained to me that she counsels post-partum patients to use a medical form of birth control to avoid short-interval pregnancies. She advises patients that they can get pregnant even if they're breastfeeding and discourages condoms as a primary form of contraception:

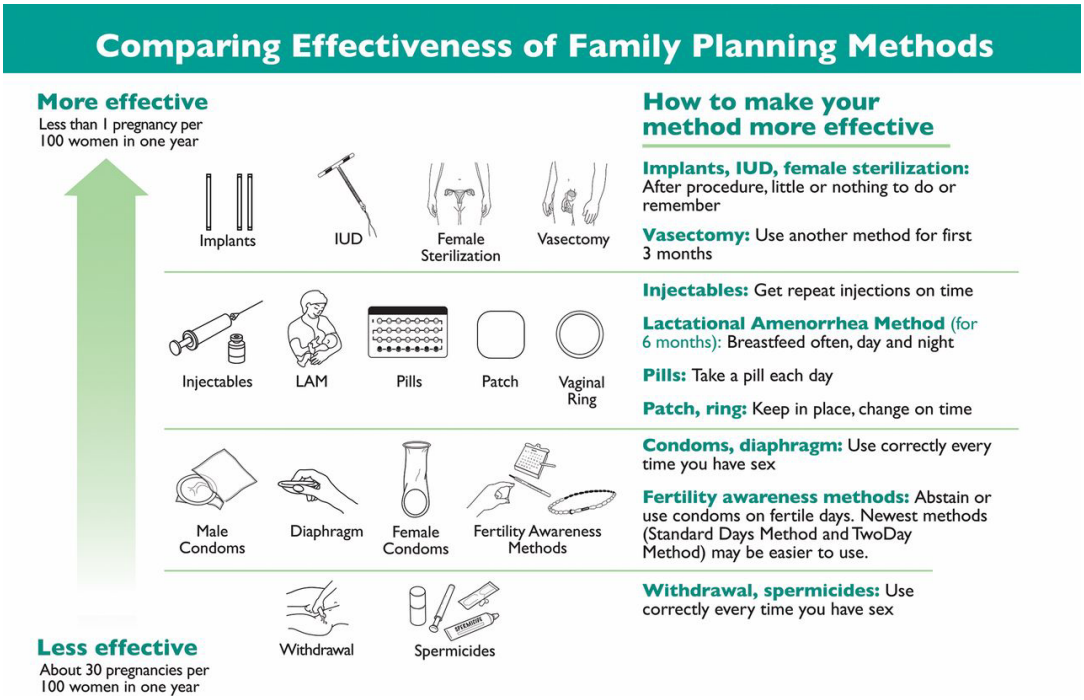
> "So, in a situation of being postpartum, I do try to talk about how important it is to wait at least a year in between pregnancies to allow her body to recover and allow the best possible outcome for the baby. And so, **I say even if you're breastfeeding, even if you don't get your period back, you definitely still can get pregnant.** And so, it's important that we try to find a method that will keep you from getting pregnant at least until it's a safe window

to do so. So, I present that as the reason**. And then I again try to encourage patients to use something other than condoms,** especially if there's a good reason for them not to get pregnant, like having just had a pregnancy or medical complications that would keep them from ... for which pregnancy would be not so great for their health."

However, again, this resident's counseling is not rooted in scientific evidence. According to the World Health Organization, lactational amenorrhea has a similar contraceptive effectiveness as oral contraceptive pills and injectables for the first 6 months after birth (see Figure 1 below). Likewise, condoms are the third most common form of contraception, behind sterilization and pills. Over 13% of women use condoms as their primary method to prevent pregnancy (Guttmacher Institute 2021). Family planning organizations such as PowerToDecide[4] assert that condoms are an acceptable primary birth control, especially as they are the only method that protect against pregnancy *and* STDs (McKay 2021).

Figure 1: WHO Contraceptive Effectiveness Chart

[4] Ironically, PowerToDecide's contraceptive information website Bedsider, was touted by nearly all OBGYN interviewees as one of their go-to sites for patient education.



Source: World Health Organization (2020)

Similarly, residents often equated not using a medical form of birth control with not using birth control at all. Lena, a Black, first year resident, expressed her frustration with patients who have no plans to get pregnant, but don't want a prescription for birth control:

> "I find it challenging as a provider ranking a healthy balance between making sure that the patient is hearing you and understanding that this is something that's very important. And if they're telling... **Making sure that they understand, if they're telling you things that are incongruent, meaning I don't have plans to be pregnant in the next six months to a year, but they're also telling you, I don't want birth control at this time.** It's like making sure that they understand that there's a disconnect between what they're saying, but not in like a pushier forceful way. **So I find it very challenging to maintain a balance between making sure that they're hearing what you're saying and that they know that birth control is an important if they don't have plans to become pregnant, but also**

like respecting patient autonomy that they are autonomous individuals who have the right to make their own healthcare decisions. **Because I do want them to understand that it makes no sense what you're saying**. Like if you don't want to be preg... Like how are you going to prevent your... If you don't want to be pregnant, you don't want to be in a situation where you're in the ER with an undesired pregnancy. Like how can we help you with that?"

Lena either didn't acknowledge or didn't accept as valid the possibility that patients may want to use non-medical forms of birth control such as condoms or fertility awareness methods. Likewise, she seemed to be unfamiliar with literature on pregnancy intentions. Research finds that many women have fluid pregnancy intentions (Higgins 2017). So, a patient who says she "has no plans" to get pregnant in the next 6-months may or may not be ambivalent about actually becoming pregnant. Thus, an unintended pregnancy doesn't automatically translate to this Lena's imagined worst-case scenario of winding up "in the ER with an undesired pregnancy."

Residents' frustration with patients' decisions to *not* use medical forms of contraception is felt by patients. In my interviews with women, respondents expressed feeling pressured to select a medical form of contraception in encounters with healthcare providers. They felt that providers' emphasis on birth control was greater than their concern for patient well-being. A 33-year-old Latina mother of two described her physician's disapproval of her preferred birth control method—a combination of natural family planning and condoms—at her postpartum appointment:

Resp. #1: He said, 'I want to talk about birth control, what are we using?' I said condoms. 'Making sure we're safe? Condoms are not very effective. They have 30% chance of failing, fail rate or whatever.' Then he just went to saying that there's a new birth control and I think you'll do well with it and basically, just gave me the prescription.

Me: Yeah. What did the doctor say about when you mentioned that you track your cycle? Did they have any kind of-

Resp. #1: That's not reliable. That's not, yeah. That's not a reliable method, either. Just like the condom arguments, right. It's not reliable. Your cycle can change. Sometimes it's 21 days instead of the 28.

When I asked her what she thought her doctor's goals were for the appointment, she couldn't think of another reason besides "controlling the amount of kids I have" and lamented the fact that doctors "don't really actually take the time to listen to you or understand you and really what you're looking for**."** When I probed for details about the contraceptive counseling she received, she laughed at the notion that her provider would explain the risks and benefits of the pill they prescribed, saying:

> "Oh, no. Never. Wow. Never. [*Laughing*] Yeah. No, you get that on the box and if you want to take the time and read it, great. Never, it's crazy. Right. This... I'm sorry. I know you cannot tell me your opinion, but it's crazy…I'm 33 years old, okay. I've been taking birth control, like I said since I was 10, nine, whatever. Not one doctor ever told me. They usually just focus on, this has less, this has doesn't have a lot of hormones, it should be good, it should make you feel okay. They never tell you that you can have an aneurysm or you can have headaches, you can have heavy bleeding, they don't tell you any of that."

The combination of providers' pro-birth-control stance and limited counseling on risks left this respondent feeling "cheated". Ultimately, she feigned interest in the medical birth control her healthcare provider prescribed in order to end the interaction and avoid being shamed.

C. Norms of motherhood fitness

Finally, I find that provider counseling is shaped by norms of motherhood fitness (Collins 1990; Mann 2013). For instance, when I asked Sheryl, a second year OBGYN resident, what the main

challenges she faced in contraceptive counseling, she answered, “one of the things that I see as a challenge is when a patient really wants to get pregnant, even though it's not in her best interest.” When I asked her to clarify what she meant with this statement, she explained:

> “Because I just don't think it's in her best interest…but maybe who am I to judge because it's a 17-year-old who's about to have her third kid…Yeah, I think that's probably the biggest barrier or challenge…That they may never have the support to take care of those children, that they might never finish school, things like that. That they might not be able to have essentially the best life that they could have. And sometimes it's that they might be stuck in a crappy relationship with somebody.”

I asked her how she navigated these situations, and she explained that in order to avoid appearing judgmental, she uses data to back up her personal beliefs and persuade patients into using contraception, saying:

> “there's a lot of data that shows that your current baby, the one that you just had, is going to do better if you are able to space out your children a little bit more.”

Delia, a second year, OBGYN resident who was an outlier among her colleagues, found this line of thinking to be a common among the health care providers she worked with. Criticizing this stance, she explained:

> “I think that we are afraid in this country of people in poverty getting pregnant and having lots of kids. And I think there are certain social norms that are prevalent in the medical community to have a small family…. Pushing IUDs on people, especially in the immediate postpartum setting or even honestly in the post abortion setting, I think is something that still happens.”

Patients are very aware of provider stereotypes of motherhood fitness and these assumptions lead to negative clinical experiences, especially for patients of color and low-income patients. In my interviews with women, respondents from these populations described feeling shamed and belittled by healthcare providers and didn't feel that their contraceptive decisions were supported. A 26-year-old Black woman on Medicaid explained to me that the doctors and nurses were not supportive of her decision to use condoms after the birth of her son. She described being heavily pressured to use a hormonal form of contraception, which made her feel judged:

> It wasn't the best feeling at all. I kind of made me feel kind of like I had a teenage pregnancy, and somebody was trying to make a decision for me to protect me and save me from myself. You know how when you're young, they say, "Oh, you're not doing it right," or, 'This is the right way. You're not doing it ...' It kind of gave me that feeling, like somebody wanted to take that choice from me, and I'm a grown woman. So, it kind of made me uneasy. It did.

She went on to share that sex was "the furthest thing from [her] mind," as she had severe tearing from the childbirth and her main goal was just to "pee properly." She wasn't worried about contraception because she wanted to focus on her healing. Yet, providers' adamancy about contraception made her feel like she "wouldn't have been supported in any other decision but to be on birth control."

> It was kind of like an authority figure telling me, "Yeah, you need to do this," kind of in a way that ... It wasn't like we were talking as grown women. It was like she was an authority figure, and I was a child. That's how I felt... The doctors, I don't know if it was intentional or if it's just based on their experience, but I kind of felt like I was a teenage mother, like it was something for me to be shamed about. Meanwhile, I'm grown. I'm 24, I live in a

house, I have a job. My son is taken care of. He has everything that he could possibly need, and I'm just going to my appointments alone.

A 34-year-old white mother echoed this sentiment, noting the stigma she felt when she was on Medicaid:

> Just the condescension that you get when they think that you're on Medicaid, they really don't want you getting pregnant. I mean, that's definitely a feeling is like, ***"Don't you dare get pregnant. You better stay on this hormonal birth control that's killing you because nothing could be worse than a poor woman getting pregnant."*** That's definitely the feeling.

Limitations to evidence-based practice of contraceptive care in residency

While EBM holds the potential to mitigate the erroneous assumptions and stereotypes shaping residents' counseling, I find that the structure of residency programs constrained residents' ability to practice EBM. Specifically, I find two kinds of EBM limitations: 1) limitations that affect residents' ability to read and understand evidence, and 2) limitations that affect residents' ability to put evidence into practice. Major constraints to EBM in OBGYN residency programs include time, limited training in research methodologies and statistical analysis, limited formal didactic time, the marginalized status of family planning in the field, and professional hierarchy.

A. Time

Time was noted as a major reason why residents rarely read primary literature. Residents work 70–80-hour work weeks are expected to master a broad array of topics within OBGYN, of which contraception is a small part. Residents admitted that they rarely read any primary literature, let alone literature specific to contraception. Sheryl, an Asian, second year resident said the following when I asked her how often she reads medical literature:

> "I got to be honest, I do not often [read medical literature]. If I'm reading any sort of publication, it is usually one of the ACOG practice bulletins. So, I don't think I've read one…I think the closest thing that I can think of reading recently would've been termination of pregnancy. Yeah, I don't think I've read one on contraception lately…"

When I followed up on this, she explained that the reason for not reading medical literature stems from a lack of time due to residency service requirements. She expressed a wish that these requirements would be reduced so that residents could have more time to focus on learning:

> I think the best thing to do, truly, honestly, would be to maybe ease up on some of the service or give us maybe more time where we are able to do some of the things because I'm not just talking about contraception or whatever, but there's just so much impetus on you to do things in your free time. And if you're working 70 to 80 hours a week, you don't really want to use your free time to be doing more work. So sometimes I think it's just very hard to read. And then also [didactics] is supposed to be protected time, but sometimes we get called to do other things....**so yeah, I mean I personally just feel too burnt out to learn sometimes**"

In addition to limiting residents' ability to read medical literature, time was also noted as a barrier to putting best practices into effect, particularly in the inpatient setting. For example, Jason, a white, third year resident, described a postpartum patient interaction that went negatively. The patient felt that he had been coercive in his counseling and a midwife brought up this concern to the resident. The resident welcomed the feedback, but also acknowledged that the circumstances of the encounter made it difficult to remember to use correct language in his counseling. As he describes, he was trying to see many patients in a short time period and thus phrased his question in a less than ideal way:

"The midwife had feedback for me…the patient you saw thought you had been coercive in your counseling or maybe the midwife read my notes or something, I can't remember, anyway she taught me different approaches to bringing up [contraception]…to start it off with an open-ended question rather than 'what do you want for birth control?' **I think I had been rounding on this patient and trying to see 15 post-partum patients before 6:30 in the morning and just said, 'what are you taking for birth control?**'"

B. Limited training in research methodologies and statistical analysis

Like, Timmermans and Angell (2001), I found that residents felt they lacked the methodological knowledge or statistical skills to critically evaluate research. They preferred to rely on summaries and guidelines that present data in a more digestible formal. Stacey, a white, third year resident, explained it to me this way:

"I mean I would say that I read [academic articles] sometimes, but mostly just in journal clubs or things that we have to do. I guess part of that, I would say for me personally, I don't really enjoy reading research studies personally. I think some of that is just because I don't feel super strong in my ability to digest if it's a good study. And part of that probably is just because I'm not super interested in research. So, developing those skills wasn't the most important to me. I prefer to read what the recommendations are from my college, like ACOG, or the Society of MFM, or reproductive ASRM, like those. I prefer that essentially when studies come out because sometimes they're contradictory. Sometimes they have really small patient numbers, like those sorts of things. If something really life-changing comes out in a study, then it's going to be published in my guidelines, like ACOG, and so that's what I trust mostly."

C. Limited formal didactic time and contraception's marginalized status in the field

Another barrier to EBM in resident's contraceptive care is the limited formal education they received on contraception. This was a major factor that came up in every in interview I conducted. To offer some background of the educational structure in residency programs, residents typically have formal didactics once or twice a week for a total of ~3 hours. This time is meant to be protected for educational lectures or workshops. Residents must cover all pertinent topics in obstetrics and gynecology during didactics so, as one first year, white, male resident put it, "it's hard to cover the same topic twice." On top of this, family planning tends to be given less emphasis than other OBGYN subfields. For instance, not all programs have family planning rotations and when family planning programs do exist, abortion, not contraception, tends to get more attention in instructional time. This is due to a perception that contraception is "easy" and not worth instructional time as Nyla, a South Asian attending OBGYN explained to me:

> "**One of the main challenges I think for my site in particular is having the department and residents recognize the sub-specially of Family Planning and the amount of evidence that can go into patient care around contraception**. I think it's a little bit still a work in progress. It definitely has increased over the last ten years but could increase more. We don't have a dedicated rotation for the residents and so kind of having that full time with the residents and having them do a presentation at the end of their rotation, all those things that you would have if you had a dedicated resident. So, carving out resident time for that is a challenge…. [Family planning] is a newer entity and we're a newer society. And so, people have done contraceptive care for a long time and feel pretty comfortable with it. So, to say that you could do it better or more evidence based I think is a little bit more of a culture change..."

Thus, the didactic structure of residency programs combined with contraception's marginalized status in the field means that the main source of residents' formal education on contraception often comes from medical school. Lena, a Black, first year resident, explained to me that in her first year they had no formal education on contraception in residency and that residents were expected to know the information from medical school:

> "**But so, the one year of didactics we've mostly had in-services. We haven't had any formal education on contraception.** It usually comes up…usually we talk more about like details of contraception in a clinic setting. Or if we have specific questions for our attending, if we forget something. 'What is the mechanism of action of the patch? I can't remember.' But it's not, like I said, it's not like something that we've received formal education on. You should know this stuff before residency**...It would be kind of embarrassing if you didn't know. You should know. It's in medical school you learn all the basic science**...So now we just learn how to use and how to insert and how to counsel, not how the things work. **"**

However, medical school education is often limited as well. Residents explained to me that they had one or two lectures on contraception, totaling around 1-3 hours contraceptive instruction in all of medical school.

D. Professional hierarchy

Finally, even when residents do have a good understanding of the evidence, it can be challenging to put best practices into effect due to the hierarchical nature of medicine. Several residents described witnessing their attendings using coercive counseling strategies or, conversely, denying patients contraception such as intrauterine devices (IUDs) based off outdated guidance. However, residents were reluctant to intervene due to workplace power dynamics and ultimately

felt the patient suffered the consequences. Irene, a white, first year resident explained the power dynamics in her residency program and how she felt they facilitated coercive counseling:

> "So, when you're a resident, you basically will go see a patient, but you still have to present that patient in that whole situation to an attending. So**, you don't ultimately have the final say in what happens,** it's the attending because you're technically practicing under their license whenever you're a resident. So, I might go in, talk to a patient, she might be like, "Yes, get this IUD out of me." And then I'll go out to the attending, whoever I'm precepting to, and be like, 'This patient wants her IUD out. This is why.' And then they might be like, 'Yeah, but do they really want it out? Or they just are confused about the side effects, and they really should just keep it because they already had four babies and we don't want them to have another one. So go back in and try to get them to keep it in.'"

Likewise, Callie, a white, first year resident explained that she felt powerless to intervene when her attending made decisions that were not evidence-based:

> "It was frustrating. **I felt very helpless because after expressing that I didn't agree with what he was doing and why, he's my boss.** He's my attending at the end of the day. I have to defer to him even if the patient wanted it. If he says no, he says no. ... I think his thought was that there was a chance she could have been infected and he didn't want to put it in if she was infected. And he thought there was just too much going on inside her uterus after doing a D&C so he said no. **Oh, and then he said that he doesn't like giving, this is crazy... he doesn't like giving Mirena to people who haven't had a baby yet** because apparently that's how it used to be marketed, it was to give Mirena to multiparous women, **which is also not evidence-based and not a thing**."

Asymmetrical knowledge and practice in contraceptive care

A major consequence of residency educational structures is that there are asymmetries in residents' knowledge and practices around contraception. Residents often rely on self-study and word-of-mouth knowledge to inform their counseling and on-the-job decisions. While a handful of residents consult the primary literature on contraception to make decisions, the majority gain an understanding of "evidence" through observations of or informal discussions with colleagues and mentors, or from presentations from pharmaceutical representatives. For instance, Tereasa, a white, first year resident noted that there isn't much formal education on contraceptive mechanisms of actions, but attendings would offer verbal refreshers in clinical settings:

> "Here I would say it's more like when you go tell your attending, 'oh this patient wants Mirena' and they're like 'oh okay, do you know how Mirena works?' and I say, 'oh no I forgot how it works,' and they go with you."

While all OBGYNs routinely provide contraceptive counseling, attendings vary widely in their use of evidence-based contraceptive care, both between and within residency programs. Thus, residents—who rely on these mentors for much of their knowledge base—similarly vary in their contraceptive beliefs and practices depending on the program they are in and who they have relationships with in those programs. Some residency programs have robust family planning departments, while others are virtually non-existent. Kelly, a white, fourth year resident, noticed that her peers in other residency programs receive less contraceptive education than she does in her own program:

> "I genuinely do think my residency education has been pretty good around contraception, but sometimes **if I'm talking with friends from med school who go to other programs it seems like there aren't as many conversations I think just about really taking into account the sort of whole social picture.** I don't know. I feel like IUDs specifically are

really really in some cases a socially charged thing. Even, oh my gosh, I'll get on a tangent. But forced placement of IUDs or implant for incarcerated people or people who are on food stamps or whatever. Though I think that's not really education about how the IUD works but I really think it's still important to have sort of those formal conversations so that everybody has a chance to think about that**.... And I do think that maybe my formal didactic training has been a little bit stronger on the mechanisms of action and the frequency of different side effects or adverse events.** And I think that's important. I do hear again, friends I know at other residency programs who maybe gloss over side effects too much. And so, patients are led to believe that an IUD has no side effects at all and then they're frustrated when it does."

Likewise, within the same residency program, attendings from different OBGYN subspecialities tend to have wide variance in their beliefs and practices surrounding contraception. Irene, a white, first year resident who plans to specialize in family planning, explained how while her family planning attending practiced evidence-based contraceptive care, this was not always the case for other attendings and co-residents:

"**I think in terms of my [family planning attending] we very much align**. She's always the one that's like 'we'll take it out.' If other residents are like 'oh but she just got it a week ago,' she'll be like 'no, we're just taking it out.' so I would say yes in terms of my mentors**, but there are definitely other people who I would not consider my mentors whose view I do not align with**…**I think some people just see a young person, we don't want them to get pregnant, give them an IUD.** We don't think they're going to be reliable, we don't think they're going to remember to take birth control pills, so we're just going to assume they can't handle that. Give them an IUD**. Or a person who already had three**

> **kids and we obviously don't want them to have another one, so try to get them to have an IUD**. Or a really complicated patient that has a history of substance abuse, no prenatal care, came in we didn't know the gestational age, it was a whole mess. Try to get them an IUD, they really need an IUD. These people that just see complicated patients and just assume like 'oh gosh I don't want to have to deal with that delivery in the future, so give them an IUD.'"

Workshops and presentations from pharmaceutical companies—sometimes called "in-services"—during residents' official didactic time were often noted as another key way residents refreshed their understanding of contraceptive mechanisms of action. During these workshops, sales representatives from Bayer (the maker of Mirena IUDs) will review the science surrounding their product and then instruct residents on how to insert the devices. They typically distribute model uteruses to residents so that they can practice insertions. Karen, a white, third year resident, explained:

> "We'll usually have a Mirena IUD placement station and things like that to get hands on with the trainers for that, especially for the interns who haven't done it before… There's a lot of reps that day. So, I think it's usually there is a rep from Bayer [who does the trainings] and we get the handout trainers, and that's where I got my little one that hangs on…my IUD that hangs on my badge."

Because there are so few formal lectures on contraception, it is reasonable to assume that these workshops hold greater weight in residents' minds, raising questions about the potential bias in the information they hold around IUDs.

Individual-level factors promoting EBM

I also found variation in physician knowledge and practices by individual-level characteristics. Namely, I found that respondents with a personal interest in family planning, mothers, and those with more professional experience were more likely to practice evidence-based contraceptive counseling. They tended to have more nuanced understandings of the data and be less dismissive of patient experiences. These individuals were in the minority of my respondents and tended to be attending physicians, rather than residents.

A. Family planning subspeciality

While most residents told me they rarely read primary literature, the family planners I interviewed regularly did so. Todd, a white, private practice OBGYN who specializes in family planning asserts that he "read[s] massive amounts of gynecologic literature." He goes on to explain,

> "I'm very connected to the contraceptive community because I've been on the board of Planned Parenthood. I'm also on the board of one of the other organizations for reproductive justice, I guess would be the new term. I'm a provider so I'm supposed to stay up to date."

Tanya, a white academic OBGYN specializing in family planning, echoes this, saying:

> "I'm part of a large academic division. We have a weekly didactic session where we review articles. I am myself a researcher. I attend the SFP [Society of Family Planning] meetings. I keep up on their bulletins. I subscribe to the Contraception journal. I'm a reviewer for Contraception, for the Green Journal…For me it's like part of the fabric of my daily work life."

Tina a white, academic OBGYN specialized in family planning contrasts her knowledge of contraception with that of her generalist colleagues, underscoring that they have little incentive to stay up to date on contraceptive research:

> "So, I think that if you're a general OBGYN, so you're seeing patients in the office for the depth and breadth of gynecology practice, and you're trying to stay up to date on recommendations in obstetrics as well**. It can just be a lot to try to stay up to date and current on all those things. And I think that sometimes contraception doesn't necessarily seem as critical. And I guess now that I'm talking about it, it's also not the most financially rewarding, right?** If you stay up to date on the latest fibroid management, you might increase your surgical numbers, or you might be able to attract people who know that you're good at managing abnormal bleeding or fibroids or surgically more skilled, whatever it is, whereas offering contraception at a well woman visit doesn't necessarily add to your RVUs as a private practitioner."

Importantly, unlike many of the OBGYN residents I spoke to, family planners typically do not rely on information from pharmaceutical representatives, as Todd explains,

> "Drug reps come in sometimes and offer new information, but unless it's something really different, I don't need that kinds of information. My partners are also very up to date on this stuff. If something has been in our magazines, we talk about it."

Tina similarly critiques the role of pharmaceutical representatives at medical conferences, worrying that her colleagues rely too much on information they receive from these sources.

> "We go to conferences, to try to bring ourselves up to date. And I think that drug reps…part of their job is to remind people about at least what the manufacturer wants you to know about the most up to date information about that particular technology. I don't think that

those are necessarily things that you can rely on to stay up to date on any topic, right? [You can't rely on] your yearly conference, and the hope that someone will drop by and tell you their commercial message. I think that it's really important that you read the subspecialty literature as well. And I think that's where most people should be getting their information, as opposed to the more commercialized message from the pharmaceutical companies."

B. Professional Experience

Similarly, I found professional experience to be associated with more nuanced, patient-centered approaches to contraceptive counseling. For instance, Lynn, a white, attending OBGYN, reflected on her career noted that the has changed her opinion on contraceptive side effects after years of clinical experience:

> I think **the longer I'm in practice, the more I see the variability in how people respond. And the more that I believe that it is truly genetic physiologic differences in how people's bodies respond as opposed to people imagining things.** I think that early in my career, I believed much more strongly that people imagine that they're having headaches from the IUD and they want to blame it on something, but it's not really from the IUD. And I think over time, and as I see more patients and have more experiences, I have come to a greater understanding, but I think people just truly have genetic differences in their susceptibility to different side effects. And I'm very open with patients now about saying, I don't know if you're going to be one of those people or not

After years of clinical experience, Lynn no longer assumes that women's complaints are psychosomatic, and instead believes that people have different genetic susceptibility to side effects from contraception. While this gap in experience was greatest between attendings and residents, counseling differences also exist between junior and senior residents. As Kelly, a white, fourth

year resident explained, junior residents tend to be more "biased towards IUDs" in their counseling:

> "There are occasionally times people, **particularly junior residents, don't adequately consider the reasons a person might not want an IUD** and so again have counseling somewhat biased towards IUDs"

Echoing this sentiment, Tanya, a white, attending OBGYN, explained that a large part of her role as a mentor involves combatting this IUD bias among her residents:

> I think the lesson around not about how making it least coercive is the thing that I spend the most time thinking about right now in my education. And really, I think residents come from a really good place and are enthusiastic about offering contraception to patients. And I think rightfully so, like many of them are drawn to OB-GYN because they feel like being able to offer contraception options to women is a way to empower women and to give them control over their lives. But sometimes their enthusiasm can bleed into your patients feeling coerced or feeling like somebody's trying to sell them something. And so to really kind of back away from that and just be like... I really teach people to ask consent even to offer contraceptive counseling. That patients don't have to sit and listen to like all of the options, if that's not something they're interested in.

Tanya explains that residents are often enthusiastic about contraception and have good intentions but are unaware of how their enthusiasm can at times be perceived by patients as coercive.

C. Motherhood

Mothers also stood out among the respondents. They were more likely to accept patients' contraceptive ambivalence and were the only subgroup of respondents who told me they counsel patient on natural family planning methods. Delia, a white, second year resident and mother of

two, explained that her own experience having children and meeting other mothers sparked an interest in natural family planning methods. However, she emphasized that this was not the norm in her residency program and that her colleagues "think [she's] a nut" for being interested in these topics:

> "I have brought up **lactational amenorrhea** as a birth control option for women who decline other forms of birth control and I over and over have been told that nobody knows what I'm talk...that **my colleagues don't know anything about it. And I think it's similar for natural family planning**…we don't learn about it. We don't learn about it and also it's not as good of a contraception method and so for a type A, high achieving 29 year old medical resident, it's unacceptable to have a 90% effectiveness rate. But for a stay-at-home mom who's 26 and wants a bunch more kids anyway, they're just coming at it from a very different place. And so, I think it's both lack of training, we're not trained in it and also our own biases is making us dismissive of what I think for other women who are declining other forms of birth control, a good option to at least empower them to have that information…**I'm a mother, I have two little kids, and in having kids I've made friends with a lot of other moms who feel very differently than I think I felt five years ago about contraception.** I grew up in a very religious background and so I have a number of friends who, for religious purposes, decline contraception. And so when they have asked me as a doctor, I've looked into it on the side privately because I want to be able to counsel them…**In my program, they think I'm a nut for even being interested in this.**"

Lynn, a white, attending OBGYN, echoed this sentiment, explaining that her experience with motherhood gave her a new understanding of pregnancy ambivalence:

> "And I think **it took me a very long time to understand pregnancy ambivalence**, and the real role of that in many women's lives. And I think in many ways I also **didn't understand that until I had my own choice**…So, **the patient encounters before that were very frustrating of not really understanding why the patient was saying what they were saying or feeling like they were saying contradictory things** or feeling like patients couldn't make a decision, really understanding now where that comes from and honoring that and not pressuring patients**. And I think that I have become much less insistent or pushy…** in fact **it sort of happened to me**. My husband and I were like, 'I don't know, let's try to have another baby for a while.' And we did, and then didn't get pregnant for a while. And then we were like, "Okay. We're just going to not really give up." And then we did, and we didn't actively try to get pregnant, but didn't actively try not to get pregnant and then conceived my second child**. We really were in a place of ambivalence, and I would've never imagined that before**."

Consequences of residency structure for medical inequality

While professional and life experience (i.e., motherhood) thus seem to mitigate some of shortfalls of residency education, these factors don't typically apply to residents. OBGYN residents are a tend to be young, in their mid- to late- 20s, and childless. By definition, residents do not yet have much professional experience. Therefore, most residents do not have the qualities that I found to be associated with greater use of evidence-based counseling (i.e., professional and life experience) and are prone to strong pro-IUD stances, coercive counseling, and patient dismissal.

Constraints on residents' ability to implement EBM in contraceptive counseling have stark implications for medical inequality because residents nearly exclusively counsel marginalized un-

and under-insured populations in the outpatient setting. Every resident I interviewed described working with low-income patients, patients of color, undocumented patients, or other marginalized groups. The description that Irene, a white, first year resident, offers of the patient population she serves exemplifies a typical resident response:

> "So, at our resident clinic, which primarily serves underserved patients, as well as the gynecology clinic, which I alluded to before as the place where we funnel people, who we see in the ED who don't have insurance or Medicaid. So many of those patients are immigrants primarily Spanish speaking or from any country in the world. We see a lot of people from South American countries, but also from India and elsewhere in the Middle East. But I would say the majority of patients are Spanish speaking and then Black patients as well, and obviously white patients as well. And it also is broken down by insurance tier. So, there's patients that have private insurance that we don't see as often as patients who are uninsured or on Medicaid or Charity care."

When residents do encounter wealthier, privately insured patients in a hospital setting such as labor and delivery, they don't typically counsel them. Laura, an Asian second year resident, explains,

> "So, in terms of our contraceptive counseling at our private hospitals, with the private attendings, we actually don't do any contraceptive counseling because the private attendings are the ones who see them in their outpatient clinics. And they're the ones who do it there. We do also have our own resident clinic at these private hospitals. And most of those are with uninsured patients. So, it's with uninsured patients that live in the area [that we do the counseling]."

This is not a coincidence, but by design. While attending physicians often work in private practices with wealthier, higher-resourced patients, hospital clinics geared towards low-income patients,

such as Federally Qualified Health Centers (FQHCs), are often resident-run. These clinics offer residents the opportunity to gain outpatient experience and to have “continuity patients." While these clinics are able to offer low- or no-cost healthcare to patients, a downside of this model is that marginalized patient populations, such as those on Medicaid, without insurance, and Black and Latina populations, are more likely to be counseled by residents and to experience contraceptive coercion. These patient populations also have less cultural and educational resources to resist physician recommendations or advocate for themselves in clinical encounters. Thus, while EBM seeks to standardize care, due to the structure of residency programs and hospital clinic systems, race- and class-based inequalities are not minimized, but in fact reproduced.

Discussion

In this analysis, I identify several structural factors that limit OBGYN residents’ ability to practice EBM, including time, limited training in research methodologies and statistical analysis, limited formal didactic time, the marginalized status of family planning in the field, and professional hierarchy. Furthermore, I find that in the absence of a robust understanding of the medical evidence, residents rely on informal channels of knowledge acquisition, such as word-of-mouth and on-the-job observations. They also default to cultural norms and stereotypes, especially gendered, racialized, and classed beliefs. Specifically, their counseling reflects gendered beliefs that women are “hysterical” and their complaints as psychosomatic, norms about women’s responsibility to contracept, biases towards medical forms of contraception, and classed and racialized assumptions of motherhood fitness. While physicians see themselves as “MythBusters” in contraceptive counseling interactions (Stevens 2018), they are in fact unconsciously internalizing and reproducing myths themselves.

While individual-level factors such as professional and life experience, motherhood, and specializing in family planning mitigate EBM constraints and promote evidence-based counseling, these qualities rarely apply to medical residents as residents are overwhelmingly young, childless, and have limited professional experience. Because residents nearly exclusively counsel marginalized patients—that is un- and underinsured, Black, Brown, and low-income patients—in resident-run clinics, this means that those patient populations are not receiving the standard of contraceptive care, exacerbating medical inequality. My findings are line with a recent survey done by the Kaiser Family Foundation that finds that clinic patients are significantly less likely to report receiving patient-centered care compared to patients who go to doctor's offices (Frederiksen et al. 2022) and offer a potential mechanism underlying this pattern.

These findings advance our understanding of fundamental causality as they demonstrate that advances in particular medical technologies, such as EBM, will do little to address healthcare inequality if underlying structures remain unchanged. In this case, residency structures both impede residents' ability to engage in evidence-based contraceptive care and funnel marginalized patient populations into the care of residents.

I want to highlight one caveat to these results. The non-resident physicians that I am comparing residents to are exceptional in a few ways. They are all either family planning OBGYNs or have a particular interest in family planning; they are all members of the Society of Family Planning; and many work in academia and are active researchers in addition to clinicians. They are, therefore, more likely to have a deeper understanding of contraceptive research than the average OBGYN or other healthcare worker who provides contraceptive care across the country. There are undoubtedly regional, political, and other factors that impose constraints to EBM use among the full spectrum of post-residency OBGYNs and other contraceptive care providers.

Future research should explore these constraints and how professional experience interacts with other demographic-, individual-, and organizational-level factors to constrain or enable the use of EBM in clinical encounters.

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CHAPTER 3: Street-level Pastors:

How Health Care Providers Engage in Benevolent Coercion

In 2012, South Carolina introduced Medicaid guidance to provide immediate postpartum long-acting reversible contraceptives (IPLARCs) to Medicaid patients at no cost to them. This policy quickly spread and now exists in some form in the majority of U.S. states. Reducing short interval pregnancies has been put forth as a key *raison d'être* for Medicaid-covered IPLARC, and this practice has therefore been endorsed by public health officials and medical practitioners. However, IPLARCs have also been criticized for their coercive potential given the marginalized status of the targeted population and the timing of the procedure (i.e., immediately postpartum) (Brian, Grzanka, and Mann 2020; Mann et al. 2019).

Through a textual ethnography (Ahmed 2006) in which I iterate between medical literature and guidance on short interval pregnancies and interviews with health care providers, I explore the consequences of IPLARC policies. Theorizing IPLARCs as a biopolitical tool (Foucault 1990) and health care providers as "street level pastors"— "street level bureaucrats" (Lipsky 1983) who employ pastoral power (Parreñas 2021)—I analyze providers' implementation of IPLARC policies and the impact this has on the patients they serve. I find that providers engage in "benevolent coercion," in which they subtly pressure Medicaid patients to obtain IPLARCs with the framing that they are empowering and promoting health among these patients. Providers weaponize scientific evidence surrounding short interval pregnancies to exert this pressure, leaving patients with few other "responsible" options besides IPLARC. By contrast, IPLARCs are rarely offered to privately insured patients. In fact, these patients are often actively *discouraged* from obtaining IPLARCs due to risks of expulsion and perforation.

Ultimately, this creates bifurcated birthing experiences for marginalized and privileged women. While the latter are afforded the ability to focus on the mental and physical labor of pregnancy and delivering a child, and are encouraged to heal and bond with their baby in the immediate postpartum period, marginalized women are repeatedly pressured to obtain IPLARCs during prenatal appointments as well as during labor and delivery. Despite explicit goals of empowerment and health-promotion, IPLARCs thus become a biopolitical tool that perpetuates a legacy of restricting the reproductive freedom of Black, poor, and other marginalized bodies (Roberts 2014).

LITERATURE REVIEW

Poverty governance

In his seminal text, *The History of Sexuality*, Foucault argues that since the 17th century, states have undergone a profound transformation in the way they wield power over their subjects. While early states operated with sovereign power, which rests on violence exerted through "deduction," or taking things away, in modern states this form of power has been gradually supplanted with "biopower." In contrast to sovereign power, biopower exerts a positive influence on life. It aims to optimize and control citizens' lives through various technologies and regulations. In the era of biopower, the emphasis shifts from punishment to regulation and correction, and the locus of power rests in experts and administrators. Thus, over the past two hundred years, we have seen "an explosion of numerous and diverse techniques for achieving the subjugation of bodies and the control of populations" (Foucault 1990).

Poverty scholarship today finds that states utilize biopower to govern the poor (Parreñas 2021; Soss, Fording, and Schram 2011). The contemporary mode of poverty governance has been characterized as one of "neoliberal paternalism" (Soss et al. 2011), in which a decentralized state

governs the poor through a diffuse network of actors. These actors are charged with disciplining subjects to become productive, integrated citizens who adhere to normative modes of life. Drawing on Foucauldian theory, scholars have argued that the modern state manages the poor through both discipline and punishment (Foucault 1990; Soss et al. 2011; Wacquant 2009). Much of the research on punitive forms of governance tends to focus on men and highlight the ways in which institutions like prisons and other criminal justice apparatuses maintain class and racial inequalities (Brayne 2014; Goffman 2015; Wacquant 2009).

A complementary body of work finds that states also discipline subjects, particularly women, through *nonpunitive* forms of governance (Haney 2010; Parreñas 2021; Polsky 1991; Sweet 2019). For instance, Polsky (1991) has documented the rise of a "therapeutic state" in which the poor are coerced into therapeutic and rehabilitative programs under the assumption that they cannot govern their own lives. The therapeutic state is linked to normative constructions of self and family (Roberts 2002). Women are constructed as sexual and maternal deviants and targeted for intervention (Haney 1996; McKim 2008; Reich 2005). Haney (2010) has demonstrated how therapeutic governance creates a "myth of empowerment" in which subjects are trained to see their social vulnerabilities as personal pathologies. In many cases, resource provision is predicated on this shift in mental framing and narrative accounting (Brennan 2014; Radhakrishnan 2018; Reynolds 2019; Roychowdhury 2015; Sweet 2019). For instance, domestic violence victims must produce accounts of their abuse through the lens of "self-esteem" and demonstrate their reform and survivorhood in order to maintain custody of their children (Sweet 2019).

Parreñas (2021) argues that discipline-via-empowerment is facilitated through the simultaneous exercise of bio-power and pastoral power. The former aims to create docile and productive subjects (Foucault 1990) while the latter refers to the state's benevolent responsibility

towards its citizens. Pastoral power is both embedded in and legitimizes bio-power. That is, in Parreñas' words, "caring acts legitimize the repressive control of subjects" (Parreñas 2021:26). She illustrates this with the case of Philippine migrant domestic workers, arguing that in order to maintain migration flows, the Philippine government must simultaneously promote migration and protect migrants. Through the establishment of labor standards and education of migrant workers via compulsory seminars, the government ostensibly addresses migrant vulnerabilities. This legitimizes the state and allows it to continue to promote migration relationships that ultimately leave its citizens susceptible to abuse. Parreñas finds that as with other forms of nonpunitive governance, pastoral power is primarily directed at women and notes that a limitation of her study is the lack of intersectionality.

In this paper, I pick up where Parreñas left off by taking an intersectional approach to the study of pastoral power. I use the case of a contraceptive policy—Medicaid coverage of IPLARCs—which targets poor, Black and Brown women (Brian et al. 2020). Contraception, along with other forms of reproductive control, is a particularly powerful biopolitical tool as it enables both forms of biopower—the discipline of the body and the regulation of populations. It is this link between micro-power over bodies and interventions aimed at populations that makes reproductive technologies and programs so powerful. Sex thus became a "crucial target of a power organized around the management of life rather than the menace of death" (Foucault 1990:147). Through the control of sexual practices and individual bodies that states are able to control the growth and behavior of a population in ways that align with their interest. As Patricia Hill Collins asserts, in the United States these interests are those of affluent, white men (Collins 1990). This group controls the social institutions that legitimate truths and is therefore able to manipulate the

goals of such institutions to support their own special interests under the guise of promoting national interests.

Reproductive health scholars argue that the state engages in "reproductive governance" (Waggoner 2017) to foster "sexual citizenship" in order to promote national goals and ideals (Mann 2013). The normative model of sexual citizenship in the U.S. posits that women should attain educational goals, financial stability, and marriage before becoming parents (Geronimus 2003; Mann 2013). Accordingly, sexual healthism discourse juxtaposes the "healthy", "responsible," typically white and affluent sexual citizen, against the "unhealthy," "irresponsible," typically poor, Black sexual citizen (Geronimus 2003; Mann 2013; Mann and Grzanka 2018). Recent research finds that reproductive technologies, particularly long-acting contraceptives (LARCs), are employed by the state as biopolitical tools to discipline women who do not fit the ideal model of sexual citizenship under the guise of empowerment (Brian et al. 2020).

History of contraceptive coercion

State sanctioned control of women's reproductive lives has a long legacy. Contraception's history is riddled with coercive practices that have limited the reproductive freedom of women, especially for Black, Brown, indigenous poor women. As Dorothy Roberts argues in her powerful work Killing the Black Body:

> "The social order established by powerful white men was founded on two inseparable ingredients: the dehumanization of Africans on the basis of race, and the control of women's sexuality and reproduction. The American legal system is rooted in this monstrous combination of racial and gender domination" (Roberts 2014:23).

This order is reflected in contraceptive practices and policies. Roberts exposes insidious linkages between reproductive control and racism. Since the time of slavery, Black women's reproductive

lives have been subjected to violent control. Roberts documents how slaveholders sought to maximize their "return on investment" by increasing the fertility of female slaves, sometimes through traumatic practices such as forced "breeding," (i.e., rape). Restrictions on Black women's reproductive autonomy persisted after the Civil War with the birth of the eugenics movement. The fundamental tenet of eugenics is that social problems are caused by reproduction and therefore can be solved through the control of reproductive patterns at the population level. This philosophy is rooted in a scientific racism that sees Black people as biologically inferior.

Black, indigenous, and immigrant women were seen as hardy, "savage" women who reproduced easily and whose reproduction was thus in need of control (Briggs 2000). These women became subjects for early experimentation in contraception as well as targets of mass sterilization programs (May 2011; Roberts 2014). Tens of thousands of women were sterilized in the first half of the 20th century under eugenics laws. Though eugenics laws became illegal in the latter part of the century, the practice persisted. It was so common during the 60s and 70s for Black and poor women in the South to undergo unnecessary, nonconsensual hysterectomies that these were referred to as "Mississippi appendectomies" (Roberts 2014). A judge in a class action lawsuit brought forward by the Southern Poverty Law Center in the 70s found that 100-150 thousand women and teens were sterilized annually under federally funded programs. Half of these women were Black. Around the same time, one quarter of native American and one third of Puerto Rican women were left infertile after sterilization programs were implemented (Roberts 2014).

In addition to forced sterilization, marginalized women also suffered contraceptive coercion in relation to reversible options. For example, in the 1990s, Norplant, a contraceptive arm implant, was coercively promoted among young, poor, and minority women. In some cases, Norplant was court-mandated, and several lawmakers proposed making Norplant a requirement

for women on welfare (Roberts 2014). While Norplant insertion was easy and free thanks to state and federal funding, removal was expensive, and many providers weren't properly trained on how to do it. Providers often refused to remove the device because they valued pregnancy prevention over women's experiences with the devices. In some cases, women were so desperate that they cut the devices out with razor blades (Roberts 2014).

Modern reproductive practices are overall less violent and are no longer explicitly linked to racist goals, reflecting the broader transition from negative to positive power that Foucault describes. Instead, reproductive technologies today are framed as empowering individuals and promoting public health, messaging that is characteristic of the neoliberal state (Brian et al. 2020). For example, in 2012 Power to Decide, a nonprofit dedicated to reducing unintended and teen pregnancy, launched its first annual "Thanks, Birth Control Day" campaign which encourages individuals and organizations to share their gratitude for contraception on social media with the hashtag #ThxBirthControl. Figure 1 below shows examples of the images the organization produced as part of the campaign. The text and images extol the virtues of birth control for giving women freedom and control over their lives.

Figure 1: Examples of #ThxBirthControl Campaign Images



However, in practice modern contraceptive policies often limit the reproductive freedom of marginalized groups. For instance, in 2015 Arkansas lawmakers proposed $2,500 incentive for

Medicaid users to use intrauterine devices (IUDs) and many women, particularly Black and Latina women, experience pressure to choose these devices (Gomez et al. 2018). Women also report having trouble getting the device removed when they no longer wish to use it (Amico et al. 2016, 2017, 2020; Berndt and Bell 2021). Research on contraceptive providers reveals that they tend to prefer long-acting reversible contraceptives (LARCs), including implants and IUDs, joking that they try to "sell" them to patients (Amico et al. 2017). Furthermore, they respond negatively to removal requests and often try to delay or deny removal (Amico et al. 2017; Brandi and Fuentes 2020; Manzer and Bell 2022). While providers report valuing patient autonomy and choice, sexual healthism discourse and tiered counseling approaches lead them to frame LARCs as the only responsible choices, thus giving patients "agency without choice" (Mann and Grzanka 2018; Morison 2022). This is especially true for patients of color and low-income patients who are seen as most "at-risk" of unplanned pregnancies and thus in greater need of contraception (Manzer and Bell 2021).

Immediate postpartum LARC insertions

Recently, many states have promoted LARC use through the implementation of Medicaid policies to cover immediate postpartum LARC insertions. These policies began in 2012 when South Carolina introduced Medicaid guidance that provides payments to doctors and hospitals for immediate postpartum LARC insertions. Variations of this policy are now on the books in 43 states (Brian et al. 2020). Immediate postpartum LARC (IPLARC) coverage is seen as a way to reduce unintended and short interval pregnancies, as both have been linked to negative health outcomes (Brian et al. 2020). Proponents of IPLARC argue that targeting Medicaid patients is practical as these patients have disproportionally high rates of unintended and short-interval pregnancy and are least likely to follow-up at their 6-week postpartum appointments (a time when LARCs would

typically be inserted). IPLARC then is seen as an efficient, cost-effective public health intervention (Brian et al. 2020). However, while states employ neo-liberal narratives of sexual health that frames personal responsibility as inherently empowering, the effects of these narratives are punitive.

An analysis of IPLARC promotion finds that the targets of this promotion are cast as irresponsible and LARCs are used as "a disciplinary instrument that promotes the exercise of sexual control while effacing the structural factors that constrain autonomy" (Brian et al., 2020, p. 316). Brian et al. demonstrate how neoliberal narratives contrast the "healthy", "responsible" subject—women who delay childbearing until their thirties, allowing them focus on their education and careers, and participate in the capitalist economy—with the "irresponsible," "unhealthy" subject"—who is racialized, and classed (e.g., "welfare queens"). These narratives combined with the time-sensitive nature of IPLARC create a sense of urgency, particularly for patients who "cannot be trusted" to return for postpartum appointments or use other contraceptive methods such as the pill or condoms. Brian et al. conclude that IPLARC policies "leverage a logic of empowerment to compel sexual healthism" (Brian et al. 2020:323). Furthermore, IPLARC policies rarely consider women's subjective experiences with IPLARC or include provisions for LARC removal. A recent study of Medicaid patients in South Carolina found that patients often felt dissatisfied with IPLARC counseling because they felt that they weren't fully informed, were being pressured to use LARCs, and they objected to the timing of the counseling, which often occurred during labor (Mann et al. 2019). Additionally, 3 out of 10 patients who received postpartum LARCs, later desired removal, but encountered barriers.

While prior work makes a compelling case for viewing IPLARC policies as tools of reproductive governance that may have detrimental effects on marginalized populations (Brian et

al. 2020; Mann et al. 2019), less is known about providers' beliefs and practices surrounding IPLARC. Soss et al. assert that "the policies and pressures that shape poverty governance eventually funnel down to a tip where the individual case manager must interpret and implement the priorities of a system" (Soss et al. 2011:232). They view welfare case managers as occupying a role that blends that of the "street level bureaucrat" (Lipsky 1983) with a more therapeutic role. Their ultimate task is to transform clients into "the neoliberal paternalist vision of the worker-citizen" (Soss et al. 2011:232). Following this framework and Parreñas' elaboration of pastoral power (Parreñas 2021), I argue that health care providers may be conceived of as "street-level pastors" as they are ultimately the ones who decide whether, when, and how to counsel patients on IPLARC. This concept reflects the fact that unlike other street-level bureaucrats doling out resources, providers ultimately see themselves in a caring role and their focus is very much on the individual as opposed to the totality. At the same time, however, because pastoral power emerges from and is embedded in bio-power (Parreñas 2021), their goals and practices reflect state-level values and priorities. This fact is reflected in findings that while contraceptive providers purport to value egalitarian partnerships and patient centered care, they ultimately see their primary role as preventing unintended pregnancy by prescribing patients high-efficacy contraception like LARCs (Berndt and Bell 2021; Morison 2022).

In this paper, I examine provider perspectives surrounding IPLARC, specifically postpartum IUDs, and identify how they can create coercive experiences for marginalized patients. I find that providers engage in "benevolent coercion," weaponizing scientific evidence—particularly surrounding short interval pregnancies—to justify coercive techniques that create bifurcated birthing experiences for marginalized and privileged women. This finding aligns with prior research that finds that providers justify coercive practices through rhetorical strategies that

frame themselves as "protectors, empowerers, and promotors of responsible choices" and by drawing on scientific evidence to rationalize their biases (Morison 2022; Manzer and Bell 2021).

While this prior work demonstrates that providers use science to justify bias, the details of this process remain vague. Given the central role of scientific evidence in providers' contraceptive counseling, I iterate between medical literature and provider interviews to analyze how providers weaponize scientific evidence to perpetuate coercive practices. I employ a textual ethnography (Ahmed 2006; Brian et al. 2020) tracing clinical guidance and research papers on short interval pregnancies, which I find are the oft cited rationale for IPLARC. I find that this literature exhibits a tendency to blame structural inequities on women's childbearing practices and that this tendency in turn shapes providers' understanding of the scientific evidence and counseling approaches.

DATA AND METHODS

For this paper, I conduct what Sara Ahmed calls and "ethnography of texts" (Ahmed 2006). Ahmed argues texts may be considered as actions which "do things," but also as unfinished forms of action as "what they 'do' depends on how they are 'taken up'" (Ahmed 2006:105). Thus, to understand the function of texts, it is important to closely analyze the documents themselves, but also talk to practitioners who employ these documents to support their actions. Here, I iterate between interviews with physicians who counsel women on IPLARC and clinical literature and guidance on short-interval pregnancies. While unintended pregnancy prevention undergirds LARC promotion more generally, the risks associated with short-interval pregnancies are an oft cited rationale for IPLARCs, in particular (ACOG 2016).

To collect documents on short-interval pregnancies, I trace citations and debates in the medical literature. I begin with tools most often used by physicians, such as Up-To-Date guidance, practice bulletins, and consensuses from medical organizations like the American College of

Obstetricians and Gynecologists (ACOG). I then collect the literature referenced in these guidelines and summaries, which often include meta-analyses and literature reviews.

Interview data comes from in-depth interviews with physicians from around the country. Physicians were recruited via professional organizations such as the Society of Family Planning, personal connections, and snowball sampling. I conducted a total of thirty-five in-depth interviews with physicians. Interviews took place via phone or zoom and ranged from sixty to ninety-minutes in length. All interviews were audio-recorded and professionally transcribed. This protocol received IRB approval from my institution.

To identify the conceptual themes that I discuss in my findings, I used a flexible coding approach (Deterding and Waters 2021). Using the qualitative coding software MaxQDA, I assigned index codes to sections of each document (i.e., interview transcript) to tag the section with descriptive codes. These codes reflect thematic sections of my interview guide. I then conducted additional analysis on those coded sections to apply more fine-grained analytic codes. Analytic codes are comprised of a combination of inductive, emergent themes and themes that I identified in my review of the literature (Deterding and Waters 2021). Using MaxQDA's code comparison functions, I consolidated codes that had overlapping features and eliminated codes that applied to few cases.

Sample

As illustrated in Table 1 below, most of the providers I interviewed are OBGYN residents (n = 26). Six are academic OBGYNs (attendings), two are private practice or staff OBGYNs, and one is a private practice family medicine physician. Respondents are overwhelmingly women (82%), white (71%), and highly educated—over half have parents with a graduate degree. The mean age of respondents is 33. About two-thirds of respondents were from institutions in the

Northeast. The remainder were split between the West (14.29%), Midwest (11.43%), Southeast (8.57%), and Southwest (2.86%).

Table 1: Provider Demographics

Total N = 35		
Gender	**%**	**N**
Male	17.14	6
Female	82.86	29
Race	**%**	**N**
White	71.43	25
Black	8.57	3
Hispanic	2.86	1
Asian	11.43	4
Other	5.71	2
Age	***M***	***Mdn***
	33.45	30
Parental Education	**%**	**N**
High School	2.86	1
Some College	5.71	2
College	31.43	11
Graduate Degree	57.14	20
Region	**%**	**N**
Northeast	62.86	22
West	14.29	5
Midwest	11.43	4
Southeast	8.57	3
Southwest	2.86	1

Patient populations

All the resident physicians I interviewed described serving primarily underprivileged patient populations—that is, patients on Medicaid or with no insurance who tended to be lower-income and racial minorities. Attending and private practice physicians described serving a mix of privileged, privately insured patients, and as well as patients with public or no insurance.

FINDINGS

IPLARC & Short Interval Pregnancies

Before moving to my interview findings, I want to begin with the results of my review and analysis of the medical literature on short interval pregnancies. Again, I focus on short-interval pregnancy because it is commonly used to support IPLARC policies. For instance, the American College of Obstetrics and Gynecologists (ACOG)'s committee opinion on IPLARC (ACOG 2016), explains their support for the practice saying, "short-interval pregnancies are most often unintended and are an independent risk factor for preterm delivery and adverse neonatal outcomes." Here they define short-interval pregnancies as those occurring within a year of delivery. Some literature uses a longer definition, extending the window to 18 months, while other research defines them as pregnancies occurring less than six months after delivery (ACOG 2016; Ahrens et al. 2019; Hutcheon et al. 2019). They highlight that young, low-income, minority, and unmarried woman are especially likely to benefit from IPLARC as they are at higher risk of unintended pregnancies and have lower postpartum follow-up rates (ACOG 2016).

Best estimates reveal that over half of all pregnancies in the US fall outside of recommended intervals (either too short or too long) (Gemmill and Lindberg 2013). 35% of pregnancies are conceived within 18 months of a prior birth. Teens, married women, women who initiate childbearing after age 30, and women who report unintended pregnancies are all

significantly more likely to experience short-interval pregnancies (Gemmill and Lindberg 2013). Figure 2 below shows a table of their results.

Figure 2: Pregnancy Intervals by Demographic Characteristics (Gemmill and Lindberg 2013)

Percent of Pregnancies* Conceived Within 18 Months of a Previous Birth and Unadjusted Odds Ratios and 95% Confidence Intervals for Short Interpregnancy Intervals by Selected Characteristics, 2006–2010.

Characteristic	Pregnancies Conceived Within 18 Months of a Previous Birth (%)	Unadjusted OR (95% CI)
All	35.0	
Pregnancy intention		
Intended	25.6	—
Mistimed	59.7	4.30† (3.00, 6.18)
Unwanted	38.6	1.82‡ (1.24, 2.70)
Age at conception of most recent pregnancy, y		
15–19	67.1	—
20–29	37.2	0.29† (0.17, 0.48)
30–44	26.8	0.18† (0.10, 0.31)
Age at first birth, y		
15–19	36.8	0.61§ (0.39, 0.92)
20–29	31.1	0.47† (0.31, 0.71)
30–44	49.0	—
Prior births		
1	34.5	—
2	33.5	0.96 (0.72, 1.28)
3 or more	38.9	1.21 (0.86, 1.71)
Race or ethnicity		
Non-Hispanic white	36.5	1.31 (0.97, 1.77)
Hispanic	30.5	—
Non-Hispanic black	39.6	1.49§ (1.02, 2.18)
Non-Hispanic other	29.7	0.96 (0.59, 1.56)
Union status at time of conception		
Not married or cohabiting	32.3	—
Married	36.0	1.18 (0.84, 1.65)
Cohabiting	33.5	1.06 (0.71, 1.58)
Education		
Less than high school	38.9	1.03 (0.69, 1.53)
High school graduate or equivalency certificate	32.9	0.79 (0.55, 1.14)
Some college	29.8	0.69 (0.44, 1.06)
College graduate or above	38.3	—
Medicaid funded delivery		
Yes	38.0	1.29§ (1.01, 1.65)
No	32.3	—

OR, odds ratio; CI, confidence interval.

— indicates reference category.

*Among pregnancies conceived within 5 years of the interview date and ending in a live birth.

†Significant difference at $P<.001$.

‡Significant difference at $P<.01$.

§Significant difference at $P<.05$.

A review of the medical literature reveals two broad reasons for advising women against short interval pregnancies: 1) adverse maternal outcomes and 2) adverse perinatal outcomes.

Recommendations against short-interval pregnancies are largely based on a 2005 WHO report and two systematic reviews on the associations between birth spacing and perinatal and maternal outcomes (Conde-Agudelo, Rosas-Bermúdez, and Kafury-Goeta 2006, 2007). However, recently scholars have called into question the relevance of these reports and reviews for US women as most studies linking birth spacing to adverse outcomes were done in low-resourced settings. Furthermore, it is unclear if the link between pregnancy spacing and maternal and perinatal outcomes is *casual* or reflective of another underlying mechanism, such as poverty (Ahrens et al. 2019; Hutcheon et al. 2019).

Updated reviews found weak and mixed evidence regarding the effects of birth spacing on perinatal and maternal outcomes (Ahrens et al. 2019; Hutcheon et al. 2019). Hutcheon et al.'s review of pregnancy spacing and maternal outcomes in high-resource settings (2019) found only 7 studies that met their inclusion criteria. They note that this is exceptionally low compared to the number of studies on perinatal outcomes. Furthermore, they assert that most maternal health outcomes were evaluated in single studies and the strength of evidence supporting associations was low. Ultimately, they conclude that short interpregnancy intervals may be associated with increased risks of subsequent obesity, gestational diabetes, precipitous labor (rapid labor), and placental abruption. Additionally, among women with a previous caesarean delivery, an interpregnancy interval of less than 6 months was associated with increased risks of uterine rupture, blood transfusions, and other delivery complications. Interestingly, they also find that short interpregnancy intervals are associated with *decreased* risks of preeclampsia and labor dystocia (abnormally slow labor).

Ahrens et al.' review of birth spacing and perinatal outcomes in high-resource settings (2019) likewise conclude that estimates for adverse perinatal outcomes are lower than previously

thought when poor-quality studies and studies from under-resourced settings are excluded from analyses. They find the most consistent evidence of adverse outcomes only for very short pregnancy intervals (less than six months). Lower quality studies tended to report higher estimates for interpregnancy intervals than high quality studies, and in all studies estimates were attenuated after covariate adjustment. Ultimately, they conclude that interpregnancy intervals less than six months are associated with increased risks for preterm birth, small-for-gestational age, and infant death, although they acknowledge that it remains unclear whether these associations are causal, citing the "limited study designs and data sources used, inconsistency of findings and comparison groups, similar confounder adjustments and limited generalisability of the highest quality studies" (Ahrens et al. 2019:44).

While short interval pregnancies are thus common among diverse groups of women—women with high and low levels of educated, Black and white women, and women who initiate childbearing at early and late ages (Gemmill and Lindberg 2013)—and the evidence of maternal and fetal effects is mixed (Hutcheon et al. 2019; Ahrens et al. 2019), major medical organizations nevertheless advise against them due to the severe nature of the potential risks. The American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal Fetal Medicine, issue a strong recommendation that women be counseled to avoid pregnancy for 6 months after giving birth and a weak recommendation that they be counseled on risks and benefits of repeat pregnancy sooner than 18 months, explaining that most data suggests a modest increase in risk of adverse outcomes for pregnancies occurring sooner than 18 months and a more significant risk in those occurring less than 6 months after a prior birth (Louis, Bryant, and Ramos, 2019). They acknowledge that more recent studies have "called into question the methodologies common to much of the literature" (Louis et al. 2019:e55) and that it remains unclear whether the correlations

between pregnancy spacing and adverse outcomes are in fact causal. However, they remain enthusiastic about endorsing short interpregnancy intervals because they are "potentially modifiable risk factor[s]"(Louis et al. 2019:e55). Furthermore, they emphasize racial and economic disparities in their justification of pregnancy spacing guidelines, saying,

> "Women of lower socioeconomic status and women of color appear to be at risk of the shortest interpregnancy intervals, which highlights the interpregnancy interval as a potential opportunity to address inequities in adverse outcomes." (Louis et al. 2019:e55).

However, the sources they cite don't support this claim. They cite three studies here. The first is a retrospective cohort study conducted in Missouri to assess outcomes of women initiating childbearing after age 30 compared to those who have children in their 20s (Nabukera et al. 2009). Nabukera et al. conclude that though Black women are less likely to initiate childbearing after age 30, when they do their risk of adverse perinatal outcomes was greater than their white counterparts. However, they find "no significant racial differences…in interpregnancy interval distribution pattern after controlling for maternal age at first pregnancy" likewise there were "no significant interactions between maternal age at first pregnancy, race and short interpregnancy interval" (Nabukera et al. 2009:abstract). The second study they cite is a hospital-based cohort study in Boston used to assess the effect of interpregnancy interval on small-for-gestational age (SGA) births for Black women (James et al. 1999). While they find that Black women are more likely to have short interpregnancy intervals than White woman and they are at higher risk of SGA births, these factors *don't* appear to be casually related, as Black women were more likely to have SGA births *at every interpregnancy interval.* Ultimately, they conclude that, "Although black women were more likely than white women to have SGA births and short interpregnancy intervals, ***differences in interpregnancy intervals between the races did not explain the disparity in term***

SGA births" (James et al. 1999: abstract, emphasis mine). The final study examines the relationship between county-level inequality and pregnancy spacing in Washington State (Gold et al. 2004). The found a statistically significant association between county-level inequality and hazard of subsequent pregnancy and birth for women whose index pregnancy occurred at age 26 or later, but not for women aged 25 or younger at the index pregnancy (Gold et al. 2004). Thus, this study finds that for women aged 26 and older, pregnancy spacing is related to county-level income inequality. However, it does not investigate maternal or perinatal outcomes, nor does it make claims about the relationship between individual socioeconomic status and birth spacing.

Throughout the medical literature, I find that short interval pregnancy avoidance is disproportionately emphasized for marginalized groups even when the data paints a more nuanced picture. For instance, in Gemmill and Lindberg's paper on the prevalence of short interval pregnancies in the United States (Gemmill and Lindberg 2013), they conclude that short interpregnancy intervals are a "correlated and troublesome outcome" for teen mothers and call for "additional interventions…to address the suboptimal birth spacing in this population" (Gemmill and Lindberg 2013:5). Yet, when reflecting on their finding that the same association is present for women who initiate childbearing after age 30, their conclusion looks strikingly different. For this group, they conclude that short interval pregnancies "appear to be a choice" and call for further research "to reevaluate the evidence base for negative health consequences of short interpregnancy intervals among the substantial share of intended births to more advantaged women" (Gemmill and Lindberg, 2013:5). Privileged women are thus apparently given a "pass" to have short interpregnancy intervals because they are *choosing* this spacing. However, the literature consistently finds that many women, especially those from marginalized groups, have fluid

pregnancy intentions, making the categories of "intended" and "unintended" pregnancy less relevant to these populations (Edin and Kefalas 2011; Higgins 2017).

Reflecting the framing of the medical literature on short interpregnancy intervals, guidance around IPLARC also tends to focus on marginalized groups. Even though the risk of short interval pregnancy crosses race and class boundaries (Gemmill and Lindberg 2013) and women on Medicaid are actually *more* likely to have LARCs than the general population (Finer, Jerman, and Kavanaugh 2012), entities such as the Centers for Medicare and Medicaid Services and state Medicaid offices continue to push for increased use of LARCs among Medicaid recipients, citing LARCs cost-efficiency, high efficacy and continuation rates, and potential to "support not only the health of women and their children, but also reduce the number of unintended pregnancies" (Wachino 2016). Unintended pregnancies among Medicaid recipients are framed as financial burdens to states and use to justify Medicaid reimbursement of IPLARCs (Wachino 2016).

Taken together, the medical literature and policy guidance surrounding short interpregnancy intervals and IPLARCs reveals a pastoral narrative surrounding IPLARCs promotion. While these documents purport goals of empowerment, well-being, and equality among women, this benevolent framing belies their more punitive, biopolitical motivations. A closer reading of these texts demonstrates and underlying goal of curbing pregnancies and births among women who are considered a financial burden on the state.

FINDINGS

Benevolent coercion

I find that the logics and values represented in the medical literature and guidelines around IPLARC are reflected in providers' accounts. Nearly all respondents expressed unqualified enthusiasm about IPLARC. The IUD in particular was many providers' "go-to" contraceptive

choice, and they emphasized that they like to offer it to postpartum patients. Providers framed postpartum IUDs as a beneficial intervention to that empowers women, as found in other studies (Brian et. al; Berndt and Bell 2021). As Meredith, a multiracial OBGYN resident in the Northeast explained,

> "It's a pretty common thing for us to offer to our postpartum moms just because it's pretty easy to place at the time of delivery. Since the cervix is already open slightly higher risk that it will fall out because the cervix already open, but it's a good option to try to, you know, place it right after the delivery because **it avoids the need for uncomfortable exam** in the clinic afterwards to place it once the cervix is closed,"

Meredith emphasizes the convenience for patients and expresses a consideration for patients' subjective experiences with pain. This benevolent framing of postpartum IUDs was typical among providers. For instance, Irene, a white OBGYN resident in the Northeast, expressed that she likes to bring up postpartum contraception "so that [patients] have a break" since they just had a baby. While some providers acknowledged the risks of postpartum IUDs, which include higher rates of expulsion and perforation, they minimized these in comparison to the benefits. Teresa, a white OBGYN resident in the Northeast, highlights the convenience and diminished pain of postpartum IUD insertions due to cervical dilation,

> "So, I mean, a post-placental IUD is great because the cervix is already open. So, unlike an IUD that gets placed in the office…in someone who just delivered a seven-pound baby, the cervix was very open, and so you really could just take the IUD and put it inside the uterus very easily. **And after delivering, they don't even feel it**. Even if they don't have an epidural, it's nothing compared to delivering a baby. So, I think that is a great option for that reason."

However, she acknowledged that this same quality increases the risks associated with IUD placement,

> "**The downside is with its higher rates of expulsion with that, so I think it's like 10% of IUDs get expulsed after that, in the first two days**. **So compared to like, I think 1% that are placed in the office.** So, it's a pretty significant increase. And if they have infections, infection is pretty common. Not everyone, but we do see a lot of infection in pregnancy, after you break your water, if you're laboring for a long time. And so, if you have any infection, you can't place an IUD. So those are kind of the two downsides."

Teresa's assessment of the risk of expulsion is in line with the lower-bound of estimates cited in clinical guidance. For instance, in ACOG's committee opinion on IPLARC, they note that postpartum IUD expulsion rates are higher than insertions at other times. While estimates vary by study, they may occur in 10-27% of cases (ACOG 2016). This is compared to a 1%-4.5% range of expulsion rates for interval (i.e., not postpartum) IUD insertions (Chen et al. 2010). Ultimately, though, Teresa's benevolent framing downplays the significant risks of expulsion and infection. While she acknowledges these risks, she glosses over them explaining that in her opinon, the benefits of postpartum IUDs outweigh the risks. Furthermore, she sees the postpartum period as a great time to "capture" patients who don't otherwise come in for preventative care:

> "I think it's easier to get people to find something to start postpartum, because they just had a baby, and they don't want to get pregnant again right away. And then yeah, they're just capturing a lot more women. You capture a lot of women that haven't been to a gynecologist, and they got pregnant, and they have to deliver their baby, so we see them there. So, if you don't catch them while they're in the hospital delivering their baby, we

don't have a great rate of people coming to even their postpartum visit at six weeks. So, if you don't catch them there, you lose a lot of people."

Thus, while Teresa initially uses a benevolent framing of IPLARC, highlighting the convenience and diminished pain of postpartum IUD insertions, her description of using the postpartum period to "capture" patients reveals underlying tension between patient and provider goals. Labor and delivery then becomes an opportune time for providers to impose their goals on patients who may not otherwise interact with the healthcare system.

Despite providers' rhetorical emphasis on IPLARCs' benefits to women, they express frustration when patients choose not to obtain IPLARC, reflecting previous work that finds women have "agency without choice" when it comes to IUDs. Many providers told me that their biggest challenge in contraceptive counseling is patient resistance to medical contraception. As Karen, a white OBGYN resident in the West says,

> "I would say the **biggest challenge tends to be patients who I guess are just not that interested in contraception,** don't think they need contraception, **especially postpartum** typically tends to be when we encounter that. They say they're not going to have sex because they're too busy or they say they're always going to use condoms and they won't stop doing it. Not that condoms aren't a good form of birth control, but definitely aren't the most reliable. And so, I think it's just trying to work with those patients and **especially when it's a patient who is on their third short interval pregnancy** and you're like, 'How are the condoms working for you?' So, I think that's the biggest challenge is trying to encourage people to use contraception."

Karen prioritizes contraceptive use over patient desires, particularly in the postpartum period. Furthermore, she frames condoms and abstinence as unacceptable forms of contraception as she

doesn't trust patients to adhere to these methods. She rationalizes her position based on patients' obstetrical history (i.e., having multiple short interval pregnancies).

Adeola, a Black OBGYN resident in the Midwest, similarly refers to pregnancy spacing to justify her frustration with patients' contraceptive decision-making in the postpartum period:

> "it's kind of **frustrating**…**counseling is a lot of labor** and it's not necessarily that I must convince someone of something—**it's not like when I was selling shoes** and I needed to you know get the sale and try to add on some stuff to it's not the same—but you're doing a lot of that work and so sometimes **you feel like you failed** [if the patient doesn't end up with IPLARC]. Pregnancy is a beautiful thing. And it can be a great thing for many people, but there is a lot more **benefit to spacing your pregnancy is allowing the body to heal and you know, be in a state to support a healthy pregnancy**, and that is where contraception comes in."

Though she is careful to distinguish contraceptive counseling from salesmanship and emphasizes patient healing to rationalize her disappointment, her references to the labor of contraceptive counseling and her sense of failure when patients don't end up with high-efficacy birth control suggests an ulterior motive of pregnancy prevention over and above patient preferences.

Weaponizing scientific evidence

As found in Manzer and Bell (2021), providers in my study often used scientific evidence to justify bias. In particular, providers cited risks associated with short-interval pregnancies and the disproportionate risk of these pregnancies among marginalized populations as rationale for promoting IPLARC among these patients. However, providers' understanding of medical science and recommendations surrounding short interval pregnancy was often inaccurate and they tended to use a "backwards logic." That is, they would invoke data to justify what appeared to be pre-

existing goals. The science of pregnancy spacing would often be conflated with middle class norms surrounding family planning (Geronimus 2003; Mann 2013). Furthermore, while ACOG and the Society for Maternal and Fetal medicine recommend a shared decision-making approach, advising practitioners to discuss all contraceptive options including "barrier methods, lactational amenorrhea, and natural family planning" (Louis et al. 2019, p. 56) and urging them to recognize that there are "two experts in the conversation"—the health care provider and the patient (Louis et al. 2019, p. 56). I find that in practice, physicians take a less nuanced approach to postpartum contraceptive counseling than is recommended in these guidelines. That is, they frame interpregnancy intervals of less than a year (rather than <6 months as the guidelines stipulate) as unequivocally unsafe and frequently only counsel patients on LARCs or pills, discouraging patients from using barrier methods, lactational amenorrhea and natural family planning. For example, Teresa explains,

> "For postpartum, there's strong recommendations that women don't get pregnant again for at least a year, to give the body time to heal. Short interval pregnancy, so getting pregnant again less than a year, is a riskier pregnancy. And so, I think you have more motivation, and you have something more to motivate the patient well, to start a birth control. And so, it's more of, "Okay, we recommend you don't get pregnant for least a year. How do we help you make that happen?" Whereas for GYN, you're starting at a point where you're like, 'Do you want to get pregnant? Do you not? why not? Or why? What are your thoughts about it?' So, you don't have that same starting point."

Her statement that there is a strong recommendation that women don't get pregnant for at least a year is not in line with official recommendations. Furthermore, her framing of short interval pregnancy as something "to motivate the patient with" and her explicit comparison to outpatient

counseling where this motivation is lacking, reveals an underlying goal of compulsory contraception (Brian et al. 2020; Mann 2013). It is unclear whether the provider's impetus is to minimize adverse maternal and perinatal health outcomes in future pregnancies or if she seeks limit patient fertility for other reasons, such as norms of family formation or stigma around the motherhood of marginalized women. In any case, the risk of short interval pregnancy "raises the stakes" so to speak and makes this goal easier to attain. Morgan, a white OBGYN resident in the Northeast, reveals a similar ethos, saying,

> "My goal is always to get them to use something, even if it's not the best forms of birth control that we have, **I always want them to try and leave with something, especially if they're postpartum, because we don't want a short inter pregnancy interval**. So, I think that the goal is trying to get them to see that there are tons of benefits and very few risks to contraception no matter what they choose."

She clarifies elsewhere in the interview that when she says, "use something," she is referring specifically to medical forms of contraception. Again, this approach is at odds with a shared decision-making model in which the provider's role is to facilitate patients' contraceptive wishes, rather than paternalistically steer them to any particular option. Karen also explicitly discourages postpartum patients from using barrier or fertility-based methods such as condoms, lactational amenorrhea, or natural family planning, circumscribing acceptable options to include only medical forms of contraception.

> "So, in a situation of being postpartum, I do try to talk about how important it is to wait at least a year in between pregnancies to allow her body to recover and allow the best possible outcome for the baby. And so, I say **even if you're breastfeeding, even if you don't get your period back, you definitely still can get pregnant.** And so, it's important that we try

to find a method that will keep you from getting pregnant at least until it's a safe window to do to. So, I present that as the reason. **And then I again try to encourage patients to use something other than condoms,** especially if there's a good reason for them not to get pregnant, like having just had a pregnancy or medical complications that would keep them from ... for which pregnancy would be not so great for their health."

Given that women who've recently given birth cannot have estrogen and many patients and providers dislike progesterone-only pills due to stringent timing requirements, IPLARCs become some of the only options deemed acceptable by this provider—even though this is not in line with official recommendations which support women's right to choose among the full range contraceptive options (Louis et al. 2019). While Karen emphasizes "how important" it is to avoid short interval pregnancies, her descriptions of the actual risks of these pregnancies was comparably mild. When I asked her what risks are associated with short interval pregnancies, she responded:

"So, it tends to be, I mean, there's things like…anemia is the main one. It's not incredibly high risk…but especially a patient had a C-section or something like that, you would want to give that scar some more time to heal before putting more stress on it."

She asserts that the risks of short interval pregnancies (which she defines as those occurring less than a year after delivery) are stress to a c-section scar and a mild risk for anemia. However, medical literature suggests that caesarean wounds take six months to heal, not a year, as Karent states (Hutcheon et al., 2019, p. 56). Furthermore, anemia—which she calls "the main one"—has not been definitively linked to short interval pregnancies. A 2007 review of global literature on birth spacing concludes that the association between pregnancy intervals and anemia is unclear (Conde-Agudelo et al. 2007) and Hutcheon et al.'s updated review of birth spacing and maternal outcomes in the U.S. doesn't even mention anemia as an adverse outcome (Hutcheon et al. 2019).

This makes sense given that anemia is less of a concern in a high-resource nation like the U.S. where access to nutrition and dietary supplements like prenatal vitamins is better.

Karen's understanding of the medical risks of short interval pregnancies is weak and the risks she does believe to be associated she acknowledges as mild (i.e., anemia) or as only applicable to a subset of women (i.e., those with c-section deliveries). Despite this, she *strongly* advises *all* her patients against short interval pregnancies. As with most of my respondents, the patient population she serves tend to be publicly insured, racial minorities (in her case, mainly Hispanic women). Though she sees privately insured patients in labor and delivery as well, she doesn't typically counsel them on contraception, saying "we just left that at their six-week postpartum visit for those patients" as they tended to prefer to be counseled by their primary obstetrician and "felt badgered" when physicians attempted to contraceptive counseling during labor and delivery.

Tale of two birthing experiences

Karen's description of postpartum contraceptive counseling reflects a broader pattern of bifurcated labor and delivery experiences between marginalized and privileged patient populations that I uncovered in my interviews. Despite the fact that short interval pregnancies are common among *both* populations (Gemmill and Lindberg 2013), I find that providers nearly solely target marginalized populations for IPLARC counseling. This reflects medical literature and guidelines which also focus their concern on these populations (ACOG 2016; Gemmill and Lindberg 2013). All the examples of IPLARC coercion I describe in the previous two sections were directed at marginalized patients—that is Black, Hispanic, Medicaid, and uninsured patients—as that is the population my interviewees, the majority of whom are medical residents, typically serve. For these

patients, IPLARC counseling is typical during, not only the prenatal and postpartum period, but also during *active labor*.

By contrast, my interviews revealed that contraceptive counseling during labor and delivery is rare for affluent, white patients. Delia, a white OBGYN resident in the Northeast, offered an anecdote of a time when a privileged patient delivering at a private hospital specifically requested a post-placental IUD. Even though Delia routinely provided these for patients at the public hospital in the same hospital system, when she attempted to obtain one for her patient, she was told by nursing and her supervising team that the private hospital didn't offer them,

> "I thought that was strange, so I called down to the pharmacy and it turns out we had them. It's just nobody knew about it… [the nursing staff] the residents, the attendings. Everybody kept telling me it's not possible."

Similarly, Jason, a white OBGYN resident in the Northeast, noted that when his wife was pregnant, he suggested she get a post-placental IUD as he was used to prescribing these to his patients. However, when she consulted with her own OBGYN, she was advised against it:

> "She talked about this with her doctor who is at some fancy, private clinic in town, and her doctor's like, 'Oh, no, don't do that.' She was like, 'The patient population that [your husband] works with, that really benefits them, but for you, you'll come back, and it'll be fine. So just get it after the baby's born.'"

It was a common line of thinking that affluent, white patients would return for follow up appointments and thus are not candidates for IPLARCs. Anika, a South Asian attending OBGYN in the West, explained it to me this way:

> "Most of our private patients are pretty good about follow up. **And my general feeling is that it's easier to put the IUD in when they come back to their postpartum visit**. And

> I know my patients are pretty good for it. But it's those patients who either have other strong medical contraindications, they come from far away and may not follow up at [hospital] for their postpartum of care or you're not sure if they're going to follow up at all, those are the ones who we will often offer."

Providers often used vague, coded language such as this. Anika notes that it is "easier" to put IUDs in at follow up visits for private patients but doesn't explain why. Earlier, I noted that providers highlighted the "convenience" and "ease" of postpartum IUD insertions because the cervix is already dilated—but when providers refer to affluent patients, suddenly it becomes "easier" do the insertions at follow-up visits. Perhaps when Anika says "easier" she is referring to the expulsion and perforation risks associated with IPLARCs. As Delia told me, these risks deterred providers from getting IPLARCs after their own pregnancies:

> "We've had a lot of women in our program get pregnant and none of them wanted a post placental IUD. They all preferred to get an IUD at their six-week appointment because of the risk of perforation."

Thus, while risks of expulsion and perforation deter providers from prescribing IPLARC to affluent patients and from using IPLARC themselves, the same risks are not considered for Black, Brown, and poor public hospital patients. Providers do not explicitly reference patients' race or financial status, but simply refer to them as "high-risk" populations and use this as justification for promoting IPLARCs.

This creates "a tale of two birthing experiences." In the first, predominantly white, affluent, private hospital patients are afforded the opportunity to concentrate on the mental and physical stress of labor and encouraged to focus on healing and bonding with their baby in the immediate postpartum period. If they request contraception, their needs are met, otherwise providers typically

wait until follow-up appointments to discuss patients' birth control options. These patients are less at risk of experiencing IUD expulsion or perforation, which can in turn lead to complications such as unintended pregnancy, as expulsed or migrated IUDs no longer provide contraceptive effects, or surgical intervention (in the case of perforation). In the second, predominantly Black and Brown, poor public hospital patients are asked about their contraceptive plans at every prenatal appointment and several times during labor and delivery, including during active labor. Patients are pressured to choose contraception, especially IPLARCs. This often creates tension and stress during an extremely vulnerable and momentous life event, and increases the likelihood that patients opt for contraceptive options without full knowledge or desire for them.

For example, Adeola, a Black OBGYN resident in the Midwest, described a scenario where a patient and her husband became very agitated and began yelling and crying at her for what they perceived as overly persistent counseling on IPLARC:

> "**I had a patient and kind of break down and freak out on me** because, during my rounds I was like 'hey do you want, have you decided if you want to try anything?' And it wasn't a matter of forcing someone to choose, it was just 'let me know if you're choosing contraception, so that I can support you in that send the prescription to place the Nexplanon on before you leave the hospital if that's what you want.' That kind of thing. To understand like, what do I need to do to help you? Not that you have to choose something, and you don't have to choose it today, you can just tell me you're undecided. But in that regard the fact that this person was asked about that every day in postpartum… there's lots of stress associated with that too**… They felt kind of backed into a corner and so that was a very unfortunate circumstance**, you know, in my experience…**She's she started yelling at**

me yelling and crying and then her husband was like 'why don't you guys leave her alone!' and I was like, 'but she can say no...'"

Rather than see this as an instance of her overstepping her medical authority or engaging in coercive counseling—a practice which earlier in the interview she expressed being wary of—she seemed baffled by this encounter, and still ultimately saw her role as caring and supportive.

DISCUSSION

In this paper, I use the case of IPLARCs to deepen our understanding of how the state engages in pastoral power to discipline individuals and shape populations (Foucault 1990; Parreñas 2021). Synthesizing Brian et al.'s analysis of IPLARC state-level Medicaid guidance, and recent work on state management of the poor, I view IPLARC as a form of poverty governance (Brian et al. 2020; Soss et al. 2011). I extend this work by conceptualizing providers as "street-level pastors"—actors akin to street level bureaucrats (Lipsky 1983) but who employ pastoral power. While providers primarily see themselves as responsible for the health and wellbeing of individual patients, they are ultimately—knowingly or unknowingly—agents of the state tasked with the implementation of IPLARC policies.

Iterating between medical literature and policy guidance surrounding IPLARCs and in-depth interviews with providers, I find that providers engage in a bifurcated strategy of IPLARC counseling. That is, I find that they "benevolently coerce" marginalized patient populations into obtaining IPLARCs framing them as convenient, healthy, and responsible choices. They weaponize scientific evidence, particularly surrounding short interval pregnancies, to characterize IPLARC as a necessary intervention, leaving patients with "agency without choice" (Mann and Grzanka 2018). By contrast, IPLARCs are not promoted and often actively *discouraged* in the counseling of privileged patient populations. Providers warn privileged patients of the increased

risks of perforation and expulsion for postpartum IUDs and advise them to wait until their six-week postpartum follow-up appointment to choose contraception. Privileged patients are trusted to both attend these appointments and abstain from sexual intercourse in the intervening period.

These disparate approaches to IPLARC counseling suggest that IPLARC practices are less about promoting health and more about targeting and disciplining "irresponsible" sexual citizens (Brian et al. 2020). This bifurcated approach to counseling creates a "tale of two births" in which privileged patients are granted the opportunity to focus their attention and energy on the process of labor and delivery as well as bonding with their baby in the postpartum period. By contrast, marginalized patients are harassed and pressured to receive IPLARC at multiple points during both active labor and the immediate postpartum period.

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