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Pregnancy, Birth and the COVID-19 Pandemic in the United States

Robbie Davis-Floyd oa, Kim Gutschow ob, and David A Schwartz oc

^aDepartment of Anthropology, University of Texas, Austin, TX, USA; ^bDepartments of Anthropology and Religion, Williams College, Williamstown, MA, USA; ^cMedical College of Georgia, Atlanta, GA, USA

ABSTRACT

How quickly and in what ways are US maternity care practices changing due to the COVID-19 pandemic? Our data indicate that partners and doulas are being excluded from birthing rooms leaving mothers unsupported, while providers face lack of protective equipment and unclear guidelines. We investigate rapidly shifting protocols for in- and out-of-hospital births and the decision making behind them. We ask, will COVID-19 cause women, families, and providers to look at birthing in a different light? And will this pandemic offer a testing ground for future policy changes to generate effective maternity care amidst pandemics and other types of disasters?

KEYWORDS

COVID-19; pregnancy; birth; maternity care; obstetricians; midwives; doulas; homebirth; freebirth

I'm hopeful that in the months to come, when we have ramped up testing, made PPE available, created more herd immunity, we can ask critical questions about how to build a better health system, one in which people have multiple safe and supportive options for where they want to give birth (Boston obstetrician)

In this rapid-response article, we will show that quick and dramatic changes have occurred in birth practices across the United States as a result of the pandemic of the novel coronavirus, SARS-CoV-2, and the life-threatening disease it produces, COVID-19. Long before the pandemic had reached the US, the medicalization of pregnancy had led to a broad acceptance of birthing as hospital-based, often treated as a dysfunctional mechanical process, its normal physiology ignored. But hospitals are now being perceived as sites of contagion more than ever before, and in this article, we show that COVID-19 is stimulating debates about the efficacy of maternity care, the safety of hospital versus out-of-hospital births, and the lack of integration of midwives in the US healthcare system. We conclude by asking whether COVID-19 will provide a testing ground for future policy changes to generate effective maternity care in the face of future pandemics and other disasters associated with the climate crisis.

The situation is certainly more complex than these questions can encompass. The effects of the COVID-19 pandemic have some analogies to the situation that developed in West Africa during the Ebola virus epidemic and disasters such as the 2004 tsunami in Indonesia and Hurricane Haiyan/Yolanda in the Philippines. In West Africa in both infected and uninfected pregnant women, these impacts included fear of the hospital delivery system and of contagion from visiting clinics and hospitals, the unknown infection status of pregnant women, hospitals becoming catchment centers for infectious disease, and hesitation to seek medical care for noninfectious obstetric complications (Strong and Schwartz 2016, 2019). As with other disasters or shocks to healthcare, the COVID-19 pandemic reveals the technocratic and fragmented landscape of maternity care in the US today and the growing interest in community or out-of-hospital (OOH) births at home or in free-standing birth centers.

CONTACT Robbie Davis-Floyd 🖾 davis-floyd@austin.utexas.edu 🗊 Department of Anthropology, University of Texas, WCP 4.102, 2201 Speedway Stop C3200, Austin TX 78712

Social media teaser: As hospital staff are increasingly overwhelmed with COVID-19 patients, might it be better if birth were moved out of the hospital?

This article has been republished with minor changes. These changes do not impact the academic content of the article.



Methods

Between March 27 and April 11, 2020, we queried via e-mail members of the listservs of the Council on Anthropology and Reproduction, REPRONETWORK, and multiple birth practitioners, including midwives, doulas, and obstetricians. We received 41 responses to the following questions:

- Are pregnant women expressing high degrees of anxiety and fear about COVID-19 and the possibility of contagion in hospitals or during prenatal visits?
- If pregnant women are becoming frightened of hospital-based care, is that fear starting to outweigh their fear of out-of-hospital birth?
- · Are you seeing an increase in home birth and birth in free-standing birth centers? In "freebirths" (unattended home births)?
- How have you changed your practices in-hospital or out in response to COVID-19?
- Are doulas and/or partners being excluded from the birthing room in your area?
- If so, how is that affecting laboring women/people?
- How has the process of home birth transfers to hospitals changed in your areas, if at all?
- Are your local hospitals becoming more supportive of out-of-hospital birth, or are they more adamant than ever that birth should take place in the hospital? If so, what forms does that opposition – or that support—take?

We begin our analysis of those "revealers" by discussing the midwifery profession in the US, then consider how the present pandemic highlights the need for a midwifery system that is integrated into the US maternity care system.

The fragmentation of midwifery in the United States

Most of our respondents were doulas and midwives, including certified nurse-midwives (CNMs), and certified professional midwives (CPMs). In the US, CNMs may attend births in- or out-ofhospital, though the vast majority primarily attend hospital births. CPMs attend only out-of-hospital births, either in homes or freestanding birth centers; these have also been termed "community births" to index their geographical locations in communities (Cheyney and Davis-Floyd 2019). In 2017, one out of 62 births (1.7%) in the US was in the community - a doubling from 2004 (MacDorman and Declercq 2019).

The distinctions among US midwifery certifications help explain the debate about home versus hospital births in relation to the COVID-19 pandemic. CNMs (and CMs²) are educated in advanceddegree university-based educational programs accredited by the Accreditation Commission for Midwifery Education (ACME); their certifications are issued by the American Midwifery Certification Board (AMCB). Both ACME and AMCB are government-recognized and are daughter organizations of the American College of Nurse-Midwives (ACNM). The 12, 218 CNMs currently in practice are legal, licensed, and regulated in all 50 states (ACNM 2019).

CPMs are legal, licensed, and regulated in 35 states, as the result of decades-long battles for legal recognition (Davis-Floyd and Johnson 2006). The approximately 3000 CPMs currently in practice are educated either through apprenticeship with one or more senior midwives or via a formal vocational education program, around half of which are accredited by the Midwifery Education Accreditation Council (MEAC) - or via a combination of these routes. CPMs are certified by the North American Registry of Midwives (NARM). Both MEAC and NARM are daughter organizations of the Midwives Alliance of North America (MANA) and are also nationally recognized. As more states pass legislation for CPMs, they are increasingly requiring education in government-recognized MEAC-accredited programs, and the apprenticeship route appears to be on the wane.

ACNM and ACOG (the American College of Obstetricians and Gynecologists) recognize as professional midwives all CPMs who graduate from MEAC-accredited programs and are licensed

in the states where they practice. However, they code all CPMs who learn via apprenticeship or in non-MEAC-accredited programs as "traditional birth attendants" (TBAs). The fragmentation of these designations and the unwillingness to license midwives uniformly across all states have constituted major factors preventing the full integration of CPMs into the US maternity care system. Further, CPMs are not allowed to practice in hospitals, resulting in what Davis-Floyd (2018) has called "the trouble with transport:" that is, when CPMs transport a laboring woman from home or birth center to hospital, they and their clients are often received with distrust and suspicion. In the time of COVID-19, transport from community settings may become more problematic if hospital providers are less willing to accept transfers because of the possibility of contamination, while women beginning labor in a birth center or at home may be less willing to be transported for the same reason, as we explore below. Further, problems with capacity at many hospitals could undercut the safety of home birth if women with serious complications are not able to transport to hospitals. Nevertheless, as we show below, home birth remains an increasingly viable option.

Changes in state regulations: greater support for midwives

There has been a long and complicated history replete with tension and rivalry between CPMS and CNMs (Davis-Floyd and Johnson 2006), most especially in New York (May and Davis-Floyd 2006). As a result, CPMs today are still neither legal nor licensed in New York State, which Governor Andrew Cuomo has likened to "a canary in the coal mine" in terms of how COVID-19 will impact health care across the US. In March 2020, the governor issued 13 Executive Orders (202.1-202.13) to address the emerging COVID-19 crisis. These orders included many measures aimed at task shifting within the New York health care system, and suspended existing regulations so as to allow physicians, nurses, physicians assistants licensed in other states, and even medical students or graduates of foreign medical schools to practice in New York until April 26, 2020—a deadline he later extended.

The eleventh of these orders, Executive Order 202.11 (State of New York Executive Chamber 2020), allowed midwives licensed elsewhere in the US or Canada to practice in New York State by suspending:

Sections 6951, 6952, 6953, and 6955 of the Education Law, to the extent necessary ... to allow midwives licensed and in current good standing in any state in the United States or in any province or territory of Canada, to practice in New York State without civil or criminal penalty related to lack of licensure.

According to Ida Darragh, Executive Director of the NARM Board:

(S)everal states, including New York, have had CPM licensure bills in process this year. But the emergencies have pretty much shut down normal bill progress in every state. So, the NY midwives decided to ask the Governor to issue an Executive Order to legalize CPMs because of the huge need for maternity care providers and the increased interest of families in staying out of the hospitals. Following their example, several other states have made the same request of their Governors. So far, NY is the only state that has respondedNARM has provided advice and support during their bill crafting and all the issues in NY, but it is the midwives themselves who came up with the appeal to the Governor. We would love to see this happen in Illinois, Mass, and Georgia as well!

It remains to be seen whether this revelation that CPMs can be useful in times of trouble will translate to wider legitimation and legalization in the 15 holdout states that have thus far failed to provide them with licensure. CPMS have long been shown to have excellent outcomes when their home births are compared to low risk hospital births (Cheyney et al. 2014; Johnson and Daviss 2005), and midwives in other states are pushing their governors to issue similar legislation. An obstetrician from Massachusetts noted that "MA in particular has been very flexible with regulations in recent days to increase workforce capacity and one thing they might do is encourage health systems to hire midwives on staff (particularly since workforce overall is expected to thin)."

Governor Cuomo of New York had already shown considerable leadership in addressing the alarmingly high rates of maternal mortality in the state in the past two years. He created an



interdisciplinary Taskforce on Maternal Mortality and Disparate Racial Outcomes in April 2018, and in early 2019 he committed to immediately implementing the top recommendations of this Taskforce with 8 USD million (New York State Taskforce 2019). These recommendations included creating a Maternal Mortality Review Board and an implicit racial bias training program for hospitals, investing in community health worker programs, and generating a data warehouse on perinatal outcomes in New York State.

The Taskforce composition, with few midwives and no CPMs, reflected the balance of power, authority, and stress on litigation within the US maternity care system.³ This weighting was evident in its recommendations, which considered neither the integration of CPMs into the state's maternity care system nor the growing demand for birth centers and home birth midwives. However, the fifth recommendation - - to "provide equitable reimbursement to midwives" - -implies that midwives were not being reimbursed equitably.

Regulations helping CNMs, who have been engaged in struggles for greater autonomy of practice and the ability to transfer care from home to hospital as needed, have also been forthcoming. For example, in the context of COVID-19, the Department of Health and Human Services (DHHS) waived the existing requirement that a woman admitted to a hospital by a CNM must be under the care of a doctor - a huge step toward much-needed autonomy for these midwives.

The community versus hospital birth debate

In response to our survey, a Boston obstetrician explained the critical nature of the COVID 19 crisis as follows on March 27, 2020:

I'm writing after a tough day on my labor floor where the gravity of what we're facing deepens almost daily. Everything I'm about to write is terrifying, but that is the point ... Most people carrying and transmitting the virus are asymptomatic. SARS-cov-2 is unlike anything we've ever seen before - it hangs in the air for minutes after an infected person walks away and can live on surfaces for days. The across-the-board case fatality rate is on target to make it the number one cause of death among Americans this year. Not everyone who is severely affected fits the profile in the news - multiple COVID+ pregnant people in NYC have already required the ICU and we're anticipating the same in Boston. This is why everyone who doesn't have access to stringent screening, same-day testing, and PPE [personal protective equipment] is being asked to shelter in place I already am seeing my colleagues become gravely ill.

In response to a question about the possible increased safety of community birth, in relation to a comment that two Seattle midwives had rented two hotel rooms near a hospital and turned them into an impromptu birth center to help keep women out of the hospital, this obstetrician stated:

Unless you are part of a very well-coordinated and very well-resourced birthing system, birthing outside the hospital is a terrible idea for birthing people right now ... Childbirth creates multiple sources of exposure (air, fluids, surfaces) and requires frequent and repetitive physical contact with health workers in a concentrated period ... For now, PLEASE do not tell people that they are better off in rented hotel rooms-if you see colleagues doing this, make them stop.

When we asked why home birth would not make more sense, given the contagious nature of hospitals he had just identified, he responded:

I know it seems sensible that home is safer. At this moment that is only the case if those midwives are reliably self-screening and tracking all of their new exposures on 14-day time scales, have access to same-day testing, the proper disposable PPE, and smooth hospital transfer. I wish we had a system where home birth and birth center midwives were well integrated-however this is dangerous moment to put the burden of safety on midwives who do not have this benefit.

Cristen Pascucci, founder of Birth Monopoly, replied "I'm hearing from L&D nurses in California, Pennsylvania, and Ohio that they don't have PPE or testing and in some cases are being told NOT to wear masks or call in sick, so would you say or advise anything different ... where it seems like the hospital *could* be the highest risk for encountering the virus?" The obstetrician replied:



If the hospital isn't implementing proper PPE, doesn't have same day testing, isn't putting distancing measures in place, isn't screening all staff during all shifts and surveilling/tracking all hospital exposures ... then yes, they are not being safe and [they] lose the advantage over a community birth – also assuming that in these strange times the ability to transfer isn't compromised ... coordinating emergency transfers [from homes or birth centers] was never our strong suit to begin with ... The safety of a home birth isn't dependent on home versus hospital, or a midwife versus an O.B. [obstetrician]. It's really about how those systems come together and coordinate. And it's a really hard time for that to happen.

I understand the reasons why everyone on the list is aghast at what is happening [on maternity wards] right now – minimal labor support, in some cases exacerbated mistreatment and racism, all things we have long fought to address. It's also exasperating to know that a more integrated system would have reduced much of the suffering we see. And I fully support all efforts to point that out and advocate for progress. What I don't support is individual practitioners going rogue and undocking their clients from the health system without fully understanding how the pandemic works and what the consequences could be.

In reply to this comment, CNM Amy Romano stated that she did not think coordinating with hospitals to offer a non-hospital location for low-risk birth was "undocking from the system or going rogue. Remember that community birth is part of the system." Romano was referencing a maternity system where CPMs must have at least one hospital willing to accept transfers in case of complications, and where CNMs with hospital privileges are able to attend births in the community. Romano continued to argue for a "coordinated response to move low-risk births temporarily out of hospitals," while agreeing with the obstetrician that "transport could be a real issue in the current situation, but the quality and reliability of emergency transport is a serious problem even in the best of times, and of course most transports are non-urgent."

Here Romano refers to two large prospective studies (Cheyney et al. 2014; Johnson and Daviss 2005) that showed excellent maternal and neonatal outcomes for planned, midwife-attended home births in the US, with cesarean rates (3.7% and 5.2%) that were far lower than the nationwide cesarean rate of 32% at the time (and in the present), and a perinatal mortality rate of 1.7/1000. While Johnson and Daviss (2005) addressed only CPMs, Cheyney et al. (2014) focused on primarily on CPMs yet included a small percentage of CNMs. The latter study showed that outcomes for home births were similar to those of broad, population-based studies of home births in the Netherlands and the UK, where home birth is far better integrated into maternity care than in the US (Cheyney and Davis-Floyd 2019; DeVries 2004; DeVries et al. 2001; Jordan 1993). Approximately 10% of the planned home births required intrapartum transport; over 40% of these transports were for failure to progress, 15% for desired pain relief, and 5% for maternal exhaustion (Cheyney et al. 2014). These figures show that home birth midwives transfer preventatively; transfers in emergency situations are extremely rare. In addition, Anderson et al. (2021) have shown that if only 10% more US births were community births, an annual cost savings of 9.1 USD billion would be achieved.

Pre-COVID-19, home birth rates were already slowly rising (MacDorman and Declercq 2019) and they may be rising further due to COVID-19. We suggest that both community midwives and hospital practitioners work on making the also-increasing number of transports viable and smooth. They can be aided in that endeavor by following a set of "Best Practice Guidelines: Transfer from Planned Home Birth to Hospital" created in 2013 by the US Home Birth Consensus Summit, comprised of obstetricians, family medicine physicians, midwives, consumers, women's health advocates, and nurses (Home Birth Consensus Summit 2013). Doula Diana Snyder also asked for cooperation, noting that:

Every provider in every setting is working hard to adapt and keep patients, themselves, their colleagues and the birth setting (home, hospital, birth center or other) safe with the information and resources available. We all need to give each other the benefit of the doubt and some grace during this time. Although hospital providers may not be familiar or have visibility into it, out-of-hospital providers have their own supply chains. They have their own rapidly developing precautions and in-labor transfer criteria. They are talking to each other and staying abreast of new information on how the virus spreads and lives. Just because they don't have isolation rooms, or affiliation with hospitals, doesn't mean they are not practicing in a disciplined way, or that they should be treated as civilians rather than healthcare providers. I also note that ACOG's COVID19 guidance recommends collaboration with CPMs at this time.

Snyder pointed out the dangers that hospitals pose in terms of COVID 19 testing and isolation, noting that even when same-day testing is available, the results may not come back for hours, during which, preisolation, the positive patient's room has been contaminated, along with the hallways they and their caregivers have traveled through: "Not saying these aren't great or necessary measures, just that they are not bulletproof." Snyder adds that "regular screening of patients and providers is simply no protection due to asymptomatic infection and transmission being very real. It seems wholly symbolic. And ... in many facilities only those with symptoms are being tested! Having access to tests is great, but only goes so far in terms of advantages with these major holes, and the other drawbacks of increased traffic and exposure may very well cancel out any advantage over OOH birth remaining."

The lack of preparedness of the US hospital system makes community birth a more appealing option for many. However, as Snyder notes,

homebirth requires a higher level of mental prep and personal responsibility at all times but especially now. Those I know already planning a homebirth understand they are not guaranteed protection either, despite their and their midwife's strict precautions, because of their midwife's exposure to other families, asymptomatic transmission and infection, limited evidence on the virus, heightened risk associated with transport, and the shortage of PPE. I think it's important to be honest about the limits of what we can control and where gaps and risk exist regardless of what setting we are discussing.

Midwife and family practice physician Sarita Bennett, along with others in our e-mail survey, also stressed the importance of individual responsibility for clients who are transferring from hospitalbased care to community-based care: "Our first screening tool for accepting transfers is exactly the one we use all the time: are you willing to take full responsibility for yourself? And if the answer is no, our answer is no to the transfer."

The home-hospital divide

Cumulatively, these responses highlight sharp differences in opinion between obstetricians and midwives about the safety of community vs. hospital birth. The Boston obstetrician's insistence on the greater safety of hospitals for birth is refuted by the comments from midwives and doulas, and ultimately the obstetrician agreed that when hospitals cannot provide the necessary protective equipment, they lose any extra safety they might have had. But this obstetrician's openmindedness is unusual; in general, the crisis is causing obstetricians to move more deeply into the "technocratic model of birth" (Davis-Floyd 2001, 2003), which sees the mechanical and dysfunctional birthing body as constantly in need of technological surveillance and intervention.

In practice, the technocratic model itself can be iatrogenic: its routine interventions have long been shown to cause harm and contribute to poor maternal and neonatal outcomes (see eg. Sadler et al. 2016). The overuse of technology, which a global review on maternal health refers to as "too much too soon" (TMTS) care (Miller et al. 2016), includes non-evidence-based interventions such as routine 24 week ultrasounds, amniotomies, continuous electronic fetal monitoring (EFM), or routine fetal pulse oxymetry, as well as overuse of critical interventions such as cesareans, episiotomies, and Pitocin augmentation. A related review of global midwifery care suggests that midwives could help reduce the overuse of interventions and provide lower cost care with better outcomes, while addressing the problem of insufficient care or "too little too late" (TLTL) (Miller et al. 2016). Cheyney and Davis-Floyd (2019) have called for RART care (the "right amount at the right time") to replace the misguided and unfortunate TMTS and TLTL types of care.

In times of crisis, it is common to revert back to original or most deeply held belief systems. In obstetric practices, we are seeing this sort of cognitive reversion, as medical practitioners deny the logic of community birth during this pandemic, "circling the wagons" in favor of intensifying technocratic treatment. One Austin obstetrician commented: "I always thought homebirthers were nuts. Now with this pandemic, I am losing patients to homebirth midwives and birth centers, despite



the fact that I tell them that those are completely irresponsible and badly informed choices. Today more than ever, the hospital is the safest place for birth."

We respectfully disagree, as do many across the US who have worked to integrate community births into the US maternity care system. Jessica Willoughby, who runs a birth center in Florida, reports: "We have a very supportive university-based midwifery practice and most of my transfers have come from there. And the patients are telling me the providers are telling them things like, 'Excellent, you are a great candidate for OOH [out-of-hospital] birth.' I've had other moms tell me the same thing from other practices as well."

The support person debate: to allow or not?

It took decades of effort for birth activists and humanistic practitioners to get fathers/partners, and later doulas, routinely allowed in labor and delivery rooms. Now, in what California home birth obstetrician Stuart Fischbein calls a "reflex reaction," these efforts are being undone. Partners and doulas are being completely excluded in some hospitals, while in others the birther must choose either partner or doula but not both. In New York state, the organization Change.org rapidly circulated a petition to prevent this exclusion and received over 600,000 responses. Only a day after issuing Executive Order 202.11 allowing midwives licensed in another US state or Canadian territory to practice in New York, Governor Cuomo issued Executive Order 202.12 that noted (State of New York Executive Chamber 2020):

Any article 28 facility [public hospitals and nursing homes] licensed by the state, shall, as a condition of licensure permit the attendance of one support person who does not have a fever at the time of labor/delivery to be present for a patient who is giving birth.

Anita Chary, an anthropologist and Emergency Medicine physician, argues that the measures about excluding support people are intended to keep providers and other patients safe from contagion, even as she recognizes that these measures are disruptive to bonding and maternal well-being:

Hospital policies about limiting visitors are truly designed to protect the public from a highly contagious virus. They are not at all designed to cut people off from important social supports, especially during such incredible biopsychosocial processes like childbirth. They are not designed to be cruel. They are designed to flatten the curve. It is such a difficult decision to limit visitors, including on L&D floors and emergency units. But, at a time that we health care workers don't have sufficient protective equipment, and during which many of us are getting sick from working in the hospital, we truly want to keep our patients and their family members from getting coronavirus. And, as community transmission is high, we want to keep visitors from bringing it into the hospital.

The assumption here, echoed in earlier comments, is that the main vector of contagion is from patient/support person to provider, rather than from provider to pregnant person and their labor support. According to our limited understanding of the epidemiology and biology of COVID-19 (Mukherjee 2020), hospitals are not only key sites of contagion but also perhaps places where viral shedding is more severe than within the asymptomatic public such as birth partners. Stevie Merino, a California doula, notes that the measures limiting support people for labor and birth will have negative impacts on maternal well-being and mental health:

Birthing people have to choose between their partner/other parent/family member/support person/or doula. This is creating much stress and anxiety. I have already had clients ... who made the decision to have me there as their doula rather than the other parent for advocacy and support. The long-term implications of these measures and experiences on people's mental health and increase in post-partum mood disorders is going to be overwhelming. For many postpartum units, no visitors are allowed, which means the doula or whoever else is their one "visitor" has to leave after the birth ... If baby is taken to the NICU, many hospitals ... are not allowing any visitors including the birthing person. The implications on health of babies and parents are depressing to think about, truly.

Many respondents reported that, even as providers, they had to beg or plead for testing – a situation that demonstrates the unpreparedness of the US maternity care system for a pandemic and reveals its flaws. While Columbia University's Irving Medical Center in Manhattan, a private maternity facility, tests all women they admit in labor regardless of their symptoms, providers at public facilities across the city are struggling to have themselves or their clients in labor tested (Bobrow 2020). The unequal access to safe and high-quality maternity care within the US has only been exacerbated by the COVID-19 virus.

Long before COVID-19, Black women were dying of pregnancy-related causes at three times the rate of White women (Eichelberger et al. 2016), while infant mortality was 2.3 times higher for Black infants as for White infants (Davis 2019). In New York city, systemic racial bias has long produced worse maternity and health outcomes overall for women of color and other minoritized groups (Bridges 2011). While data are still being collected in the early months of COVID-19 in the US, there is significant evidence that Black people in general are already dying at disproportionate rates and that racial bias is preventing access to timely care and effective screening, while magnifying existing health inequities (Eligon et al. 2020). In Chicago by early April 2020, statistics suggested that Black people made up 72 percent of all virus-related fatalities and over half of those who tested positive in the city, while making up only one-third of its population (Eligon et al. 2020). The systematic evidence for racism and racialization within US maternity care has been documented and theorized using reproductive justice and other theoretical frameworks (Davis 2019; Rapp 2019; Valdez and Deomampo 2019). Further, programs that support doula care for women of color have been shown to improve women's agency and empowerment within a predominantly white world of institutional maternity care in the US (Bakal and McLemore 2021).

Questionnaire responses

In this section we present summaries and analyses of the responses we received to our online questionnaire, in the order in which we asked the questions.

Fear of contagion in hospitals and during prenatal care

We asked, are pregnant women expressing anxiety and fear about COVID-19 and about the possibility of contagion in hospitals or during prenatal visits? If they do fear hospitals, is that fear starting to outweigh their fear of out-of-hospital birth? The answer to these questions was an overwhelming "YES." Reflecting these responses, midwife Sarita Bennet reported that there were "so many pregnant people calling all of us home birth/birth center midwives as the pandemic grows and that flurry increases with an area's increasing number of confirmed cases." All community midwife respondents noted that their current clients were very glad that they had already planned a birth at home or in a freestanding birth center.

For hospital birthers, doula Stevie Merino elaborated on a fear that resulted from the changing face of prenatal care, noting that

Many prenatal appointments have been cancelled (or shifted completely to brief virtual appointments with nurse) depending on their estimated due date or unless they are high risk, to limit exposure/risk in hospital/ clinics. For 20-week anatomy screenings only the pregnant person has been allowed to attend and not partner or support person--to most people this has actually created more anxiety and fear about contracting and overall questioning the safety of the hospital for their birth.

In contrast, Lauren Hicks, an L&D nurse from San Antonio, Texas, stressed a fear-mitigating factor for women laboring in her hospital - that their anxiety decreased by seeing nurses and doctors following strict PPE guidelines to protect themselves and the patient.



An increase in community births: motivating factors

We asked, "Are you seeing an increase in home birth and birth in freestanding birth centers?" The cumulative answer to this question was also a resounding YES, including for women who were very late in their pregnancies. The differences lie in the motivating factors. North Carolina CNM Ami Goldstein said that most families were making such decisions "out of fear of the hospital rather than a desire for home birth." Yet a different motivating factor for a particular group of women – those who had switched to home birth from hospital-based nurse-midwifery practices – was supplied by midwife Jessica Willoughby, who attends both home births and birth center births. She suggested that these women were switching to out-of-hospital births with cognitive ease:

These moms had already been planning unmedicated labors, they have all had doulas – maybe these seeds of OOH birth have been planted by their doula or maybe the new rules of only one support person and their previous plan to have their doulas with them were too much of an ideal to lose. But I haven't seen fear of disease be the motivator for these women ... it's more the fear of losing their doula support. They all have been excellent candidates for OOH birth and had already put in the work [to achieve] a natural childbirth by taking childbirth education and hiring doulas. They may have considered an OOH birth before and this was the final push to make them decide to go with it. One mom told me that she told her doula, "If I have a fourth baby, I would have it at home." To which her doula responded, "Then why not have *this* baby at home?" She came into [home birth] care at 39 weeks.

Reporter Emily Bobrow (2020) described that by the end of March 2020, several New York City birthing centers had been swamped with inquiries, with a birth center in Brooklyn getting as many as 150 calls in two days, mostly from women in their third trimesters. Another home birth CNM reported that she received more requests in a day than she usually receives in a year. Yet not all women were able to make this kind of choice, as described by doula Stevie Merino, who said, "Many people who are in their third trimester are scrambling to get exceptions from their insurance (which some have successfully been able to get covered) or to find a midwife/birth center in their area. Unfortunately, there are very few birth centers and only one or two who accept Medi-Cal so home birth midwives and birth centers are experiencing an increase in inquiries but not necessarily follow-through."

Some qualified their "yes" responses in various ways. Sarita said that this increase "leaves us with trying to put a bandaid on a broken system instead of fixing it. And is stressing our already too small workforce." Ami Goldstein noted that the freestanding birth centers were not just taking everyone who applied, but rather were "screening folks carefully." Jessica brought up racial inequities in access: "All of my late transfer requests due to the pandemic have been of white women with commercial insurance." Amy Romano reported on another private hospital, which she said was "diverting some of their low-risk hospital births to the freestanding birth center there, and the [birth center] has done a substantial amount of planning and transformed their service model to create the capacity." Yet she worried about home birth transfers where there were not yet effective linkages, because: "Outcomes are likely to be worse, but that's likely to be the case in all settings until this crisis has passed. The PPE and staffing issues for all settings are real, and we need to address that. One of the challenges for birth centers and home birth midwives currently is that that they are not being given preference for PPE, and their normal supply chains have dried up." Yet other community midwife respondents reported that their supply chains were intact. Further, in contrast to the above responses, doula Diana Snyder noted that her hospital clients were not interested in switching to home birth, even though she will not be allowed to be with them at the hospital and despite the fact that they "certainly have no illusions about the hospital being clean or safe."

Freebirth in the time of COVID-19

One midwife commented that she had anecdotally "heard of a not-insignificant number of women planning late in pregnancy to have unattended home births because of COVID, and in part because of the shortage of qualified home birth midwives." Stevie Merino, an organizer/trainer for a Doula of



Color training in Long Beach, California, provided two other reasons for choosing freebirth: the costs of out-of-hospital birth and/or being too close to their due dates to be taken on by midwives. She had declined requests to attend freebirths as she has no medical training and was concerned about the motivations of people who suddenly decide to freebirth:

I've found that [in the past] most people who intentionally make the decision to freebirth [were] very attuned to their body/health/ ... very much making their decision from a space of empowerment and preparation, which is not what I'm seeing in these cases. Most of the inquiries I've received have clearly been from a space of fear and panic, which unfortunately is generally not the most conducive to a positive birth experience.

Our stance is that while we absolutely support people's autonomy, right to birth where/how they want and trust their bodies, and the shift to reclaim/decolonize birth - we also recognize the increased legal risk for us, as trained professionals and people of color, if things do not go as planned (and sometimes even when they do). I do however know doulas that work with those who seek to have intentional freebirths, and generally I'll refer.

Changes in practice in response to COVID-19

The answers above were also directly relevant to this question, which asked, "How have you changed your practices in-hospital and out of hospital in response to COVID-19, including in relation to hospital protocols?" Most responses came from community midwives and doulas. The major changes they reported included more wearing of masks and gloves; sanitizing their workspace and equipment; fewer in-person visits; lots of virtual prenatal and postpartum visits often conducted on Zoom; clients keeping their own health care records and checking their own vitals. Betty-Anne Daviss described what midwives in Ontario, Canada were doing to limit their exposure and their clients' exposure:

At our practice, we are wearing masks even at prenatal visits, hair tied, changing shoes, limiting the number of visits and limiting each visit to minutes instead of the usual 1/2 to hour for each visit, doing more by phone; asking mothers to lie low the last few weeks of pregnancy with no or limited visitors, not to have more than their husbands at the births ... switching any last instruments to plastic trays ... wearing garments over something that can act like scrubs, taking the outer off as we leave the client's house ... washing all of it as soon as we get home and washing washing hands.

Florida midwife Willoughby described the changes at her St Petersburg birth center as follows:

We clean the birth center more and wipe everything down after every visit. We are limiting the in-person visits to the schedule recommended by SMFM [the Society for Maternal-Fetal Medicine] ... We are doing phone visits. We are asking only one support person to come to visits and that they leave kids at home if possible ... We don't require doulas but we also aren't limiting them. I think that the doulas are helping give information to the families about their choices in OOH birth Hilarious to me that now ACOG wants to connect with OOH providers in the community if they meet some guidelines (always a catch). Now [after persecuting midwives like me], you want me during a pandemic!

Lauren Hicks' response was representative of those from hospital-based personnel:

So many things have changed so quickly ... The main change for me as a L&D nurse has been to wear PPE to protect myself and my patients. For example, I wear a N-95 mask, goggles, and a OR hat for the whole 12 hours shift. I also change into scrubs when I arrive at the hospital. Before I leave, I change back into my regular clothes and change my shoes. Also, I try to decrease the number of times I go into my patient's rooms in order to decrease exposure to them and to myself.

We have not had many COVID-19 positive patients on our unit yet, but if we have one that comes in in active labor, the protocol is to separate the infant and mother immediately-there will be no skin-to-skin or breastfeedingAdditionally, most of the obstetricians have expressed that if a patient comes in in active labor and is COVID-19 positive, they will want to deliver by cesarean section so the birth can be more controlled and less people will potentially be exposed ... Most obstetricians have been sending their postpartum patients home from the hospital after one day in an attempt to decrease exposure.

This response begs the question: Will COVID-19 prompt a further rise in cesareans and other interventions such as medically unnecessary labor inductions?

Labor support

As noted above, women often changed birth plans because doulas and partners were excluded from the birthing room. We asked how this exclusion of partners and doulas was affecting laboring women/ people? Most respondents reported that only one support person is allowed with the laboring person, and home birth midwife Bayla Berkowitz linked this to the decisions of some people to switch to home births, where they can have both a doula and their partner. Ami noted that "the majority of people hiring doulas are well off, educated so this is affecting a specific portion of the population." Jessica added, "I think the doulas are helping give information to the families about their choices in OOH birth." Some respondents reported that some doulas were supporting their clients virtually during labor. Many noted the tremendous stress and anxiety pregnant women face when making this decision, and reflected on its long-term consequences, which can include post-partum depression (PPD) from being completely left alone after birth, as many hospitals are making the support person leave immediately after delivery, even if the new mother has had a cesarean and badly needs postpartum support.

The exclusion of doulas/partners also negatively impacts hospital staff, who have reported to us that they miss the help provided and feel badly that they are unable to give one-on-one support to women in labor and postpartum.

Support for community birth

We were interested in whether local hospitals were becoming more supportive of out-of-hospital birth or are whether they are insisting that birth should take place in the hospital. If so, what forms of opposition were taken? Stevie Merino provided a representative response:

The clients I have who have expressed their desire to move to birthing centers or midwifery care have all been [discouraged] by their doctors about the "risk" of birthing outside of hospital, and one even mentioned that when they have to be transferred from the birth center to hospital for an emergency, they will have to be taken in an ambulance increasing their risk of COVID-19 to them and baby so should just birth in hospital to be safe! Hopefully this is not the tone of all doctors/hospitals, but I'm not optimistic that the medical model attitude has changed much in this month.

Early warnings: disregarded

The "medical model attitude" could and should have changed much sooner. In 2006, in the aftermath of Hurricane Katrina, the White Ribbon Alliance for Safe Motherhood recognized the critical importance of "home birth skills" in times of disaster, "when hospitals may be unavailable, inaccessible, or overwhelmed with casualties" (quoted in NAPW 2020). Had this statement been acted upon sometime in the past 14 years, the US might be better prepared for the current maternity care challenges. In another early warning, Elizabeth Mitchell Armstrong (2010) similarly recognized the value of home birth and the need for home birth skills in light of the 2003 SARS and H1N1 outbreaks in Toronto, which resulted in the closing of some hospital maternity wards and also in a quick uptake in home births. Instead, we find that hospitals are overwhelmed while home birth midwives and freestanding birth centers are being flooded by requests for transfer from hospital-based care, and some families are choosing unattended freebirth. The current coronavirus pandemic calls on us to "to rethink how and where birth takes place - in particular whether it really makes sense for all babies to be born in high-technology, interventionintensive hospital settings" (Armstrong 2010:3). We argue that it does not.

In April, the National Advocates for Pregnant Women issued a powerful statement (NAPW 2020):

The lack of integration of midwives into our healthcare system; lack of continuity among the providers caring for pregnant people prenatally, during birth and during the postpartum period; inadequate use of low-tech



methods during delivery; and lack of capacity to meet the needs of healthy people during childbirth outside of hospitals, are all problems that could have been addressed before the pandemic.

When is the maternal healthcare community going to learn to focus more on facilitating the normal physiology of birth outside of hospitals by supporting community midwives and fully integrating them into the US maternity care system?

The larger picture

The Foundation for the Advancement of Midwifery (FAM) issued a statement on March 23, 2020, on out-of-hospital births and pandemic planning (FAM 2020). It made the following recommendations, with which we heartily agree:

- During a pandemic, when hospitals are overwhelmed with sick people, healthy pregnant people increasingly seek to give birth out-of-hospital.
- Barriers to out of hospital birth should be eliminated during a pandemic to meet the demand and relieve pressure on hospitals.
 - o Decriminalize the practice of midwifery in all states and territories.
 - o Provide all practicing midwives with information, equipment, and resources regarding pandemic risks and response to promote the safety of the workforce and public.
 - o Remove barriers to practice autonomously and attend out-of-hospital births.
 - o Recognize and treat midwives as care providers, with access to the resources, exemptions, provisional licensure, and special orders for pandemic response.
- Reimburse for midwifery care at 100% of the rate of physicians for the same service, whether from insurance or Medicaid.
- Remove barriers to open new freestanding birth centers to increase capacity.
- · Fast-track student midwives with provisional licenses when they are close to completing their
- Preserve hospital personnel and beds for pandemic response by encouraging hospitals and hospital-based providers to refer low-risk births to out-of-hospital maternity care.
- Require hospitals to meet best practice transfer protocols to ensure a safe and efficient interface with out of hospital birth providers when a laboring patient is in need of a higher level of care [see footnote 4].

In the larger picture, we place the COVID-19 pandemic in the context of other disasters such as earthquakes and volcanic eruptions, and including the increasing superstorms resulting from the Climate Crisis - all of which present massive challenges to maternity caregivers. A study of maternity care that worked well in immediate disaster aftermaths and beyond in the Philippines and Indonesia (Davis-Floyd et al. 2021) revealed the lack of need for technological surveillance and intervention and the much more pressing need for skilled, low-tech, high-touch midwifery care with basic equipment and obstetric backup when possible.

It is our hope that the fractured US maternity care system will rapidly become more integrated, including community midwives as fully recognized participants in that system, and intensively supporting home birth and freestanding birth centers, de-racializing and equitizing access to them by covering them under government insurance. Midwifery and doula care should be available to all and covered by Medicaid or insurance. CPMs and CMs should be legal, licensed, and regulated in all 50 states, and given access to hospital privileges, while also allowed to practice with greater autonomy, without control by obstetricians but with their collaboration. The midwifery model of care, with its emphasis on caring, compassion, and hands-on skills, should prevail over the technocratic model of care, and TMTS/TLTL birth management should be replaced with RART care. Instead of circling their wagons and defending a model that causes iatrogenic harm, we hope that



obstetricians will become more aware and accepting of the high value and cost-savings of midwifery care and community births. Only then will an integrated maternity system be ready for the massive challenges that future pandemics and the Climate Crisis may bring.

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Notes

- 1. We take this term "revealers" from Ivry et al. (2019).
- 2. The CM (Certified Midwife) certification was created by members of the ACNM in 1994. The CM receives the same higher education as the CNM, with the exception of nursing training. CMs are legal, licensed, and regulated in only 5 states, as most schools of midwifery are located within nursing programs and do not wish to produce "direct-entry" midwives who are not first trained as nurses, as CNMs are. (See May and Davis-Floyd 2006 for a history of the creation of the CM.)
- 3. Out of 34 members on this Taskforce, there were only 2 CNMs, no CPMs, along with 17 MDs, 5 JDs, and a few MBAs and MPPs (New York State Taskforce on Maternal Mortality and Disparate Racial Outcomes 2019).
- 4. These guidelines can be found at www.homebirthsummit.org/wp-content/uploads/2014/03/ $Home Birth Summit_Best Practice Transfer Guidelines.pdf.$

Notes on contributors

Robbie Davis-Floyd is Senior Research Fellow in the Department of Anthropology, University of Texas, Austin. She specializes in the study of transformational models of childbirth, midwifery, obstetrics, and reproduction, and is editor of the Routledge book series Social Science Perspectives on Childbirth and Reproduction. ORCID ID: 0000-0003-1963-

Kim Gutschow is a Lecturer in the Departments of Anthropology and Religion at Williams College, who has researched and published on maternal and newborn health in India and the US as well as on reproduction, social power, and gender in Buddhist India. Her first book, Being a Buddhist Nun (2004) won the Sharon Stephens Prize for best ethnography and she is completing an edited volume called Sustainable Birth in Disruptive Times (2020). ORCID ID: 0000-0001-8568-2052. E-Mail: kim.gutschow@williams.edu

David A Schwartz MD, MS Hyg, FCAP is a Clinical Professor at the Medical College of Georgia in Augusta with specialization in global maternal and infant health, emerging infections, and medical anthropology. He has studied the effects of HIV, Zika virus, Ebola virus, and COVID-19 on maternal and fetal outcomes and anthropological aspects of pregnancy, and is the editor of the Springer book series Global Maternal and Child Health. ORCID: 0000-0002-7486-8545. E-Mail: davidalanschwartz@gmail.com

ORCID

Robbie Davis-Floyd (D) http://orcid.org/0000-0003-1963-6423 Kim Gutschow http://orcid.org/0000-0001-8568-2052 David A Schwartz http://orcid.org/0000-0002-7486-8545

References

American College of Nurse-Midwives (ACNM)

2019 Essential facts about midwives. https://www.midwife.org/acnm/files/cclibraryfiles/filename/000000007531/ essentialfactsaboutmidwives-updated.pdf.



Anderson, D. B.A., K.C. Daviss, and Johnson

What if Another 10% of Deliveries Occurred at Home or in a Birth Center? The Economics and Politics of Out-of-Hospital Births in the United States. In Birthing Models on the Human Rights Frontier. B. A. Daviss and R. Davis-Floyd, eds. New York and London: Routledge, chapter 11.

Armstrong, E. M.

2010 Home birth matters for all women. Journal of Perinatal Education 19(1):8-11. doi:10.1624/ 105812410X482329. accessed April 7, 2020.

Bakal, B, and M. McLemore

Re/Envisioning Birth Work; Community-Based Doula Training for Low-Income and Previously Incarcerated Women in USA. In Sustainable Birth in Disruptive Times. K. Gutschow, and R. Davis-Floyd eds. New York: Springer Nature.

Bobrow, E

2020 A chaotic week for pregnant women in New York City. The New Yorker, April 1.

Bridges, K.

2011 Reproducing Race: An Ethnography of Pregnancy as a Site of Racialization. Berkeley: University of California Press.

Cheyney, M., and R. Davis-Flovd

2019 Birth as culturally marked and shaped. In Birth in Eight Cultures R. Davis-Floyd and M. Cheyney, eds., Pp. 1-16. Long Grove, IL: Waveland Press.

Cheyney, M., M. Bovbjerg, C. Everson, W. Gordon, D. Hannibal, and S. Vedam

2014 Outcomes of care for 16,924 planned home births in the United States: The midwives alliance of North America statistics project, 2004 to 2009. Journal of Midwifery and Women's Health 59(1):17-27. doi:10.1111/jmwh.12172.

Davis, D-A.

2019 Reproductive Injustice: Racism, Pregnancy, and Premature Birth. New York: New York University Press. Davis-Floyd, R.

The technocratic, humanistic, and holistic paradigms of childbirth. International Journal of Gynecology & 2001 Obstetrics 75(S1):5-23. doi:10.1016/S0020-7292(01)00510-0.

Davis-Floyd, R.

2003 Birth as an American Rite of Passage. Berkeley: University of California Press.

Davis-Floyd, R.

2018 Homebirth Emergencies in the US and Mexico: The Trouble with Transport. In Ways of Knowing about Birth: Mothers, Midwives, Medicine, and Birth Activism. R. Davis-Floyd and Colleagues, eds. Pp. 283-322. Long Grove, IL: Waveland Press.

Davis-Floyd, R., V. Penwell, R. Lim, and T. Ivry

Sustainable Birth Care in Disaster Zones: Low-Tech, Skilled Touch. In Birth in Disruptive Times: Sustainable Solutions. K. Gutschow, and R. Davis-Floyd, eds. New York: Springer Nature.

Davis-Floyd, R., and C.B. Johnson

2006 Mainstreaming Midwives: The Politics of Change. New York: Routledge.

DeVries, R.

2004 A Pleasing Birth: Midwives and Maternity Care in the Netherlands. Philadelphia: Temple University Press. DeVries, R., E. van Teijlingen, and S., C. Benoit, eds

2001 Birth by Design: Pregnancy, Maternity Care and Midwifery in North America and Europe. New York: Routledge.

Eichelberger, K.Y., K. Doll, G.E. Ekpo, and M.L. Zerden

Black lives matter: Claiming a space for evidence-based outrage in obstetrics and gynecology. American Journal of Public Health 106(10):1771-72. doi:10.2105/AJPH.2016.303313.

Eligon, J., A.D.S. Burch, D. Searcey, and R.A. Oppel Jr.

2020 . Black Americans face alarming rates of coronavirus infection in some states. The New York Times. https:// www.nytimes.com/2020/04/07/us/coronavirus-race.html.

FAM (Foundation for the Advancement of Midwifery)

FAM statement on out-of-hospital birth and pandemic planning. March, 23. https://formidwifery.org/, Accessed April, 1.

Homebirth Consensus Summit

Best practice guidelines: Transfer from planned homebirth to hospital. www.homebirthsummit.org/wpcontent/uploads/2014/03/HomeBirthSummit_BestPracticeTransferGuidelines.pdf.

Ivry, T., R. Takaki-Einy, and J. Murotsuki

2019 What disasters can reveal about techno-medical birth: Japanese women's stories of childbirth during the 11 March, 2011 earthquake. Health, Risk & Society 21(3-4):164-84. doi:10.1080/13698575.2019.1643827.



Johnson, K.C., and B-A. Daviss

2005 Outcomes of planned homebirths with certified professional midwives: Large prospective study in North America. British Medical Journal 330(7505):1416. Liese, K. and R. Davis-Floyd. doi:10.1136/bmj.330.7505.1416. Jordan. B.

1993 Birth in Four Cultures: A Cross-Cultural Investigation of Childbirth in Yucatan, Holland, Sweden, and the United States, 4th Edition, Revised and Updated by R. Davis-Floyd. Long Grove IL: Waveland Press.

MacDorman, M., and E. Declerco

2019 Trends and state variations in out-of-hospital births in the United States, 2004-2017. Birth 46(2):279-88. doi:10.1111/birt.12411.

May, M., and R. Davis-Floyd

2006 Idealism and pragmatism in the creation of the certified midwife: The development of midwifery in New York and the New York Midwifery Practice Act of 1992. In Mainstreaming Midwives: The Politics of Change R. Davis-Floyd and C.B. Johnson, eds., Pp. 81–162. New York: Routledge.

Miller, S., E. Abalos, M. Chamillard, A. Ciapponi, D. Colaci, D. Comandé et al.

2016 Beyond too little, too late and too much, too soon: A pathway towards evidence-based, respectful maternity care worldwide. Lancet 388:2176–92. doi:10.1016/S0140-6736(16)31472-6.

Mukherjee, S

2020 How does the coronavirus behave inside a patient? The New Yorker, March 26. https://www.newyorker.com/magazine/2020/04/06/how-does-the-coronavirus-behave-inside-a-patient

National Advocates for Pregnant Women (NAPW)

What we can learn from hospital restrictions on birth support during the coronavirus pandemic. http://advocatesforpregnantwomen.org/blog/2020/03/what_we_can_learn_from_hospita.php.

New York State Taskforce on Maternal Mortality and Disparate Racial Outcomes

2019 Recommendations to the governor to reduce maternal mortality and racial disparities. https://www.gnyha.org/news/governor-releases-recommendations-from-the-new-york-state-taskforce-on-maternal-mortality-and-disparate-racial-outcomes.

Rapp, R.

2019 Race and Reproduction: An Enduring Conversation. Medical Anthropology 38(8):725–32. doi:10.1080/01459740.2019.1671838.

Sadler, M., M.J.D.S. Santos, D. Ruiz-Berdún, G.L. Rojas, E. Skoko, P. Gillen, and J.A. Clausen

2016 Moving beyond disrespect and abuse: Addressing the structural dimensions of obstetric violence. Reproductive Health Matters 24(47):47–55. doi:10.1016/j.rhm.2016.04.00.

State of New York Executive Chamber

2020 Executive orders no. 202.11 & executive order no. 202.12. https://www.governor.ny.gov/news/no-20211-continuing-temporary-suspension-and-modification-laws-relating-disaster-emergency.

Strong, A., and D.A. Schwartz

2019 Effects of the West African Ebola epidemic on health care of pregnant women - Stigmatization with and without infection. *In* Pregnant in the Time of Ebola: Women and Their Children in the 2013-2015 West African Epidemic D.A. Schwartz, J.A. Anoko, and S. Abramowitz, eds., Pp. 11–30. New York: Springer.

Strong, A., and D.A. Schwartz

2016 Sociocultural aspects of risk to pregnant women during the 2013-2015 multinational Ebola virus outbreak. Health Care for Women International 37(8):922-42. doi:10.1080/07399332.2016.1167896.

Valdez, N., and D. Deomampo

2019 Centering race and racism in reproduction. Medical Anthropology 38(7):551–59. doi:10.1080/01459740.2019.1643855.