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Policy Matters

United States Doula Programs and Their Outcomes: A Scoping Review to Inform State-Level Policies

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A B S T R A C T

Background: The field of maternal health has advanced significantly over the past decades. However, the United States continues to have poor outcomes in comparison with other industrialized nations. With emerging evidence on the promise of doula care, states are including doula care under their Medicaid programs.

Methods: We conducted a scoping review across four academic databases and gray literature published between January 1, 2012, and March 10, 2022, to describe the landscape of literature on U.S. doula programs and their outcomes in order to inform state policy makers considering laws or programs related to doula care.

Findings: Of 740 records identified, 100 met inclusion criteria. Outcomes fell into four areas: birthing people's outcomes, infant outcomes, systems of care and implementation, and cross-cutting issues. Data on outcomes related to doula care in the literature were predominantly clinical, even though doulas are not clinical providers. Although some studies have found associations between doula care and improved clinical outcomes for birthing people and infants, the evidence is limited due to small sample sizes, study methodology, or conflicting conclusions. Doula outcomes are underexplored in the literature, with mainly qualitative data describing low levels of diversity and equity within the doula workforce and ineffective payment models. When cost-effectiveness estimates have been calculated, they largely rely on savings realized from averted cesarean births, preterm births, and neonatal intensive care unit admissions.

Conclusions: As state Medicaid programs expand to include doula care, policymakers should be aware of the limitations in the evidence as they plan for successful implementation, such as the narrow focus on certain clinical outcomes to quantify cost savings and conflicting conclusions on the impact of doula care. An important consideration is the impact of the reimbursement rate on the adoption of doula care, which is why it is important to engage doulas in compensation determinations, as well as the development of improved metrics to untangle the components that contribute to maternal health outcomes in the United States.

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The field of maternal health has advanced significantly; however, the United States continues to have the poorest outcomes in comparison with other industrialized nations. The maternal mortality rate in the United States rose from 20.1 deaths per 100,000 live births in 2019 to 32.2 in 2021 (United States Government Accountability Office, 2022). U.S. rates of preterm birth and low birthweight are also among the highest in comparison with other industrialized nations (Chawanpaiboon et al., 2019).

Maternal mortality is not evenly distributed across the U.S. population. In 2021, non-Hispanic Black birthing people had more than twice the maternal mortality risk of their non-Hispanic white counterparts (Hoyert, 2022). Survey data show that Black birthing people were more likely to report unfair treatment by providers due to their race, decreased decision autonomy during labor, and feeling pressured into cesarean births (Sakala et al., 2018). People with Medicaid coverage echoed reports of disrespectful treatment because of their insurance status, decreased decision autonomy during labor, no postpartum visits, and less support after childbirth (Declercq & Zephyrin, 2020). Infant outcomes also reflect

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disparities: infants born to Black mothers are twice as likely to die in their first year and more likely to be premature, have low birthweight, and face risk factors associated with infant mortality in comparison to white newborns (Greenwood et al., 2020).

Doula care has been proposed as a strategy to address some of these disparities, as some studies report that doula clients (compared with those giving birth without doulas) experience decreased incidence of cesarean deliveries and preterm childbirth and better patient autonomy, self-efficacy, and overall patient experience (Biswas et al., 2021). Full-spectrum doulas provide prenatal, labor, and postpartum support to birthing people.[1] The care provided by doulas includes physical support during labor such as positions for the different stages of labor, massage, and breathing techniques; informational support in the form of peer education; and emotional support such as listening, offering encouragement, and helping the birthing person communicate their wishes (Planned Parenthood Federation of America, 2021). Traditionally, doula services have been available only to individuals who could pay out of pocket, with few exceptions; however, data on doula outcomes has prompted states to begin including doula care under their Medicaid programs as a reimbursable service. States with established reimbursement programs include Florida, Minnesota, New Jersey, and Oregon. New jurisdictions in the process of early implementation/planning for doula programs include California, the District of Columbia, Illinois, Indiana, Maryland, Nevada, Rhode Island, and Virginia (HealthConnect One, 2019; Maternal Health Learning & Innovation Center, 2021; Robles-Fradet, 2021; Sturtevant & Firth, 2019). Nonetheless, although doulas provide critical support to birthing people, they are not medical providers, hospital systems, or payers and thus cannot address the broad structural issues or systemic racism that contributes to poor outcomes.

There are also nuances to doula care that have yet to be fully explored. For example, there are two broad employment models for doula care: hospital and community-based doulas, but the outcomes for each separate approach are not disaggregated in the literature. Hospital doulas provide services in a hospital setting, and are run and managed by the hospital, whereas community-based doulas provide services within their own community and operate independently (Beets, 2014). Community-based doulas typically have lived experience in the communities they serve, and thus can serve as navigators and connect patients to resources within the community such as housing referrals, social services, and affordable food (Bey et al., 2019; Kett et al., 2022; March of Dimes, 2019b; Tewa Women United, 2020). However, some hospital-based programs employ doulas from the community they serve, which makes the distinction less clear. Further, there is no literature on whether the source of employment creates any conflicts of interest, tensions, or differential outcomes in the doula's role as patient advocate.

This review aims to provide a detailed landscape of the peer-reviewed academic literature and policy reports on doulas over the past 10 years from the United States in order to inform state-level doula policy decisions.

Methods

To understand the landscape of literature on U.S. doula programs and their outcomes in order to inform state policymakers, we conducted a scoping review of the academic and gray literature. In our initial landscape analysis, we found that the peer-reviewed literature on doulas was scant before the year 2000, after which it had a fast increase and then remained steady until the 2010s. Between the early 2010s and 2020s, there was a considerable annual increase in publications related to doula care, which led us to focus on records from academic journals and dissertation databases in the past 10 years (January 1, 2012, to March 10, 2022). We then conducted a manual gray literature search using Google Advanced (PDF limited outputs published by ".org" and ".edu" domains) (Simon Fraser University, 2023). Given the known challenges that exist in searching the gray literature with different tools, especially in emerging topics such as doula care, we sought support from our funders, who had policy-level content expertise to supplement our gray literature findings with additional records for review (Haddaway et al., 2015). Table 1 shows the terms and databases searched.

We used CADIMA[2] to streamline the screening and abstraction processes. After training sessions on inclusion/exclusion criteria, we completed single-reviewer screening. We held team meetings to discuss screening results and fine-tune our approach. Inclusion criteria were articles that discussed doula care as it related to birthing people, perinatal/postpartum periods, infant outcomes, state policies, and professional considerations. We were interested in outcomes for patients as well as for doulas in terms of training, support, and payment models. Last, we excluded non–U.S.-based records.

We logged preliminary categories during screening and then used them to construct our data abstraction form (Table 2).

Following data abstraction, we collaboratively grouped categories and summarized key findings for each topic area.

Results

We obtained 740 records after deduplication across the academic databases. The gray literature search yielded 28 records, and the funder shared 32 additional records, with eight being unique and relevant. After screening, 162 records were sought for full-text retrieval; seven of these had publication embargoes, leaving a total of 155 reports assessed for eligibility. For this article, we have decided to exclude articles that exclusively focused on why patients choose to have doulas and general patient reported experiences to better address doula-specific policies and experiences, leaving a total of 100 articles and reports that are listed in Table A.1 in the Appendix. Figure 1 shows a PRISMA chart of the process.

Using the questions on overarching topic of paper and outcomes from our data abstraction form (Table 2), our team engaged in collaborative categorization of abstracted records through iterative cycles of consensus-building sessions. We structure our findings in this paper across four key outcome areas: 1) Birthing people, 2) Infants, 3) Systems of Care and Implementation, and 4) Cross-Cutting Issues. Below, we summarize the key findings under each outcome area.

Birthing People

We found that outcomes related to birthing people fell into three main areas: clinical outcomes that occur during labor and

[1] We use the term "birthing people" whenever possible to refer to people who have the capacity to carry a pregnancy. Where the term "woman" is used, it is reflecting the language from the cited reference.

[2] CADIMA is a free web tool facilitating the conduct and assuring for the documentation of systematic reviews, systematic maps, and further literature reviews. www.cadima.info.

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Table 1
Database Selection and Search Terms

Database	Description	Search Terms
PubMed	National Library of Medicine's medical literature database.	English; 2012–2022[†] Doula*[tw] OR doulas[MeSH]
CINAHL Plus	Cumulative Index to Nursing and Allied Health Literature (CINAHL) Plus with Full Text is the core research tool for nursing and allied health literature.	English; 2012–2022[†] (MH "Doulas") OR AB doula* OR TI doula*
Web of Science	Includes the Book Citation Index, Science Citation, Social Science Citation, Arts & Humanities Citation Indexes, and Conference Proceedings Citation Indexes for Science, Social Science and Humanities, which include all cited references from indexed articles.	English; 2012–2022[†] TS=(doula*)
ProQuest Dissertations	Abstracts and previews of dissertations and theses from around the world.	English; 2012–2022[†], Doctoral Dissertations ti(doula*) OR ab(doula*) OR mainsubject(doula*)

[†] Searches executed on March 10, 2022

childbirth, general levels of patient experience, and mental health outcomes. Although we do not report fully on patient experience in this review, most articles that explored patient satisfaction reported high patient satisfaction with doula care (Gjerdingen et al., 2013; Hans et al., 2022; Kozhimannil, Vogelsang, et al., 2016; Lanning et al., 2019; McLemore et al., 2013; Munoz & Collins, 2015; Ricklan et al., 2021; Simon et al., 2016). Overall, labor, childbirth, and mental health outcomes among individuals receiving doula care have mixed evidence.

Labor and Childbirth

Some studies have found associations between doula care and lower odds of induction and pain medication use (Adams & Thomas, 2018; Bohren et al., 2017; Devereaux & Sullivan, 2013; Feng, 2021; Hans et al., 2018; Kozhimannil, Johnson, et al., 2013; Mosley et al., 2021; Paterno et al., 2012; Sakala et al., 2018; Thurston et al., 2019; Van Zandt et al., 2016); however, other studies have found no differences in induction outcomes (Thurston et al., 2019; Van Zandt et al., 2016) and one meta-analysis reported no difference in epidural use (Biswas et al., 2021).

Doula care has also been associated with lower rates of instrumental childbirth (Bakst et al., 2020; Bohren et al., 2017; Everson et al., 2018; Sakala et al., 2018) and shortened duration of labor (Everson et al., 2018; The American College of Obstetricians and Gynecologists, 2019). The strongest evidence among labor outcomes is in the form of lower cesarean birth rates among birthing people who had doula care during labor and childbirth in comparison to people who did not (Bakst et al., 2020; Biswas et al., 2021; Everson et al., 2018; Gruber et al., 2013; Kozhimannil et al., 2014; Mosley et al., 2021; Paterno et al., 2012). The most recent Cochrane review found lower cesarean birth rates associated with continuous labor support (Bohren et al., 2017); this study was included in The American College of Obstetricians and Gynecologists' Consensus, which emphasized that there were no harms to the use of doulas, and that they were an underutilized resource (The American College of Obstetricians and Gynecologists, 2014). However, some studies did not find significantly different cesarean birth rates when they compared births that were and were not attended by doulas (Hans et al., 2018; Ricklan et al., 2021; Thomas et al., 2017; Van Zandt et al., 2016).

Mental Health

The effect of doulas on maternal mental health is also unclear. Some studies have shown that doula care is associated with lower rates of postpartum depression, helps with emotional support, and moderates risk for anxiety and posttraumatic stress (Center for Community Health and Evaluation, 2017; Mottl-Santiago et al., 2020; Rousseau et al., 2021; Strauss et al., 2014; Tewa Women United, 2020; Wilson et al., 2017). However, other studies have reported no statistical difference in rates of

Table 2
Data Abstraction Form

Category	Question
Overarching topic of paper	1. Multiple choice: - Patient experience - Clinical outcomes - Doula profession - Doula experience - Cost and insurance - Equity
Location	2. Enter state:
Type of paper	3. Multiple choice: - Report/Narrative - Systematic review - Randomized controlled trial - Observational - Longitudinal - Qualitative
Intervention	4. Multiple choice: - Abortion doula support - Perinatal doula support - Postpartum doula support - Doula interventions 5. Comparator: - Yes - No 6. Project name (if applicable)
Population	7. Age: 8. Race/Ethnicity: 9. Income: 10. Other characteristics:
Outcomes	11. C-sections 12. Low birthweight 13. Pain management 14. Pitocin 15. Patient experience 16. Breastfeeding initiation 17. Knowledge (patient) 18. Knowledge (doula) 19. Equity 20. Cost-effectiveness 21. Compensation 22. Collaboration with other health workers 23. Depression 24. Anxiety
Measures	25. Relative risk 26. Odds ratio 27. Proportion/Percentage

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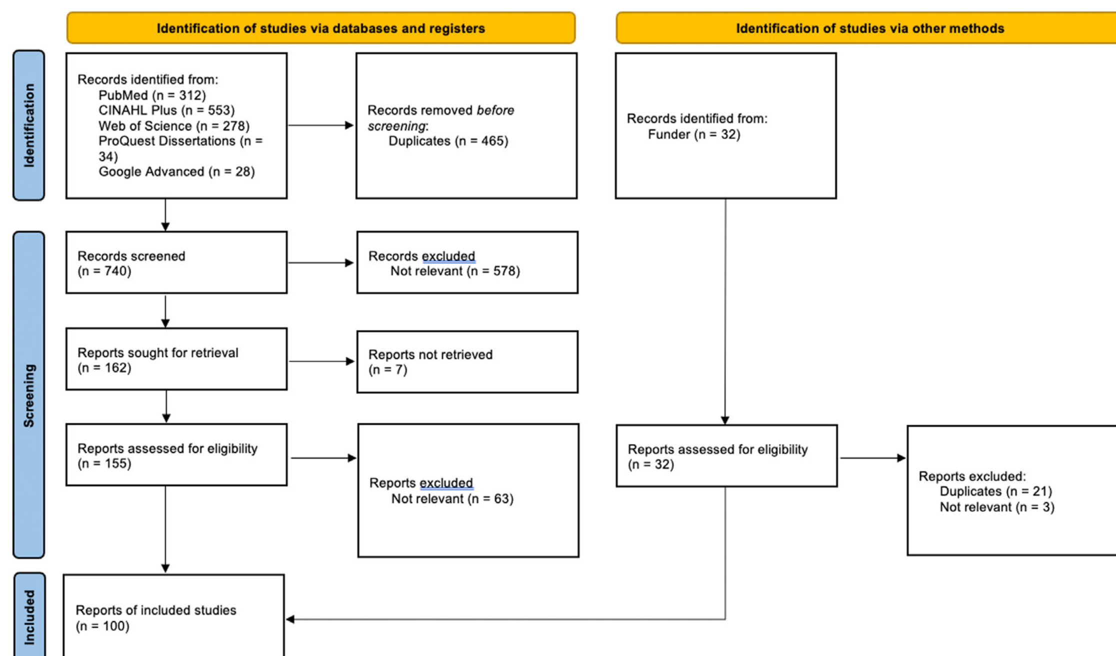

Figure 1. Prisma chart.

postpartum depression or found that there was no difference in symptoms at 3 months postpartum (Hans et al., 2018; Mammenga & Hansen, 2021). In terms of general wellness and psychosocial needs, patients reported personal empowerment, better emotional health, less need for clinic support resources, and improved coping skills after birth as a result of continuous doula care (Bohren et al., 2017; Chor et al., 2015; Wilson et al., 2017).

Infants

We divided infant outcomes into newborn outcomes and breastfeeding. Newborn outcomes included rates of low birthweight, preterm births, APGAR scores, and neonatal intensive care unit (NICU) admissions. The evidence is limited for all of these because of either small sample sizes or studies that report conflicting associations.

Newborn Outcomes

Studies have found that doula care is associated with lower rates of low birthweight newborns across settings and populations, in community-based settings and among low-income women, racially/ethnically diverse populations of women, and adolescents (Biswas et al., 2021; Carlson, 2021; Center for Community Health and Evaluation, 2017; Gruber et al., 2013; Mosley et al., 2021; Ricklan et al., 2021; Thomas et al., 2017; Van Zandt et al., 2016). Although some studies have reported no significant differences in low birthweight births, some of these had smaller sample sizes (Everson et al., 2018; Hans et al., 2018; Mosley et al., 2021; Thurston et al., 2019; Van Zandt et al., 2016).

In addition to birthweight, doula care has been associated with a lower incidence of preterm births (Kozhimannil, Hardeman, et al., 2016; Mosley et al., 2021; Thomas et al., 2017). However, one systematic review of observational studies found no statistically significant difference in preterm birth rates (Biswas et al., 2021). Several other studies, including a nursing student doula program (Van Zandt et al., 2016) and a randomized controlled trial (RCT) of doula home-visiting services (Hans et al., 2018), found no association between doula care and preterm birth.

One systematic review found that women who received doula support during labor were less likely to have a newborn with a low APGAR score (Bohren et al., 2017), and another smaller review found no statistical differences in scores (Biswas et al., 2021). Overall, there is limited evidence regarding differences in NICU admission rates (Everson et al., 2018; Hans et al., 2018).

Studies that explore outcomes beyond the neonatal period are scarce; however, one RCT reported improved parent-infant interactions that faded over time, and another found greater likelihood of positive parental behaviors such as safe sleep practices and use of car seats (Hans et al., 2013, 2018).

Some small and mid-sized studies have found that women who received doula support had higher odds of exclusive breastfeeding intentions or initiation (Edwards et al., 2013; Gruber et al., 2013; Kozhimannil, Attanasio, et al., 2013; Mosley et al., 2021; Thurston et al., 2019; Van Zandt et al., 2016). Although there seems to be some evidence on higher initiation rates in doula-supported mothers, there is less clarity as to whether doula care is associated with longer breastfeeding duration (Acquaye & Spatz, 2021; Hans et al., 2018). On the other hand, a systematic review reported no differences in breastfeeding initiation or duration in mothers who received doula support (Bohren et al., 2017) and one large meta-analysis found that the odds of breastfeeding initiation were actually lower in the doula group (Biswas et al., 2021). One small qualitative study with doulas providing support during cesarean deliveries found that doulas considered early breastfeeding support a key part of their role (Richards & Lanning, 2019). One case study attributed

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one patient's breastfeeding success to the support provided by two postpartum doulas who made a total of 33 home visits (Cattelona et al., 2015).

Systems of Care and Implementation

The third category of outcomes we found was related to how doulas are incorporated within the traditional health system and how doulas and patients navigate this. Under this category, four main areas emerged: birthing people's knowledge of doula services, the scope of doula work and their collaboration with other health team members, doula workforce development, and doula models of payment.

Knowledge of Doulas

The Listening to Mothers survey reported on 2,400 women who gave birth in the United States from mid-2011 to mid-2012; the authors found that although only 6% of women received support from a doula during labor, three-quarters of women had heard about doulas (Declercq et al., 2014). Disaggregated data on maternal knowledge of doula care is scarce, but a few studies point to racial disparities in knowledge. One study found that white women have more knowledge about doulas than Black women (Hans et al., 2018), and another study found that Black women and uninsured/publicly insured women have the least knowledge of and access to doula care (Kozhimannil et al., 2014).

Scope of Doula Work and Collaboration

For doulas to contribute to improving maternal health, they must be able to collaborate with maternity care providers (Mottl-Santiago, 2020; Strauss et al., 2015). However, this is not always possible, despite the interest of many maternity care workers and midwives (Lucas & Wright, 2019; McMahon & Morris, 2018; Mottl-Santiago, 2020; Roth et al., 2014). One reason stems from specific hospital policies that impede the work of doulas, as was the case during the COVID-19 pandemic, or requirements for certification documentation (Davis-Floyd et al., 2020; Gonzalez & Gelman, 2021; Strauss et al., 2015). Coordination of care also may be hampered because of the health providers' perceptions of doula work. One study on maternity care practitioners' perceptions of doulas found that perceptions and experiences varied. Providers recognized the positive supportive role doulas play, but also found conflicts were common around clinical decisions where they considered doulas were not seeing "the bigger picture." However, the consensus was a desire for respect, improving trust, and decreasing areas of conflict (Neel et al., 2019). Another study echoed these findings and reported that hospital staff were generally uncertain about the value of doulas and identified the need for improving relationships (Steward, 2021).

The scope of work for doulas can also reach beyond collaboration with clinicians. For example, for some doulas, work can extend to filling gaps that exist in the social services system, such as connecting clients with resources in addition to providing culturally sensitive care (Fraker, 2020). In terms of maternal education, one RCT that examined the impact of community doulas in a home-visiting program found that pregnant people visited by doulas were more likely to attend a childbirth education class than those who did not receive such visits (Sperlich et al., 2019). Other studies have found that doulas and patients see broad potential for engagement in maternal health advocacy, which to date has been limited (Attanasio et al., 2021; Salinas et al., 2022).

Workforce Development

There are also limited data published on development of the doula workforce. A mixed-methods analysis found a need for standardized training and quality assurance, and that training/certification for doulas was perceived as a way to ensure accountability (Mottl-Santiago, 2020). One report on Medicaid coverage for doula care noted that when credentialing is tied into policies for reimbursement, it can create barriers to receiving compensation directly from federal funds. In these cases, a State Plan Amendment would allow doula work to be billed under the umbrella of a licensed professional, but the need for doulas to learn about and implement billing practices would create more work for them (Chen, 2018). Despite the push for certification, certifying organizations have different requirements, and the specific content covered and evaluated varies from organization to organization (Acquaye & Spatz, 2021; Hall, 2021; Howard & Low, 2020).

Diversity of the doula workforce is another issue. A review paper on doula care in New York City described the workforce as small and less diverse than the population it serves (Strauss et al., 2014, 2015). A qualitative study on doula training found that women of color were motivated to become doulas because they wanted to help women from their own communities or similar cultural/racial/ethnic backgrounds by providing culturally competent support (Hardeman & Kozhimannil, 2016). However, findings from a listening session with community-based doulas reported that Black doulas felt training did not prepare them to serve other Black women (Black Wellness & Prosperity Center, 2021). Although other studies have not reported findings exclusively for doulas of color, commonly cited challenges include burnout, the stress of the "on-call lifestyle," and the burden of generating enough income, which may disproportionately impact doulas of color and create barriers to entry (Naiman-Sessions et al., 2017; Strauss et al., 2015).

Doula Payment Models

One of the biggest challenges to doula care is ineffective payment models (Bey et al., 2019; Fraker, 2020; Kathawa et al., 2022; Marshall et al., 2022; McLemore & Warner Hand, 2017; Rawls, 2019; Stanley et al., 2015; Van Eijk et al., 2022). Currently, there are several approaches to doula compensation: 1) flat rate service charge; 2) fee-for-service models; 3) monthly stipend models; 4) grants that pay doulas; and 5) set salary structure models that incorporate doulas as staff (Beets, 2014; Chen et al., 2022; Gomez et al., 2021; Van Eijk et al., 2022). However, some of these payment models can be unstable and difficult to sustain over time (Fraker, 2020; Lisenbee, 2021; Moffat, 2014; Rawls, 2019; Stanley et al., 2015), and they do not take into consideration the unpredictable work hours of a doula (March of Dimes, 2019b). One doula project reported that on average, doulas provided birthing people 38 hours of care, but that this could go above 60 hours in some cases depending on the length of labor and travel to homes in rural areas (Tewa Women United, 2020). Although more states are including reimbursement of doula care into their Medicaid systems, rates and included services vary widely (Catlin et al., 2017; Mehra et al., 2019; Strauss et al., 2016). In 2022, California budgeted for $1,095, which includes an initial and eight follow-up visits, plus labor and childbirth (California Department of Health Care Services, 2022). Nevada provides a rate of $450 total for a maximum of six visits and presence during labor and childbirth, but recent advocacy efforts have led to a new bill introduced to increase reimbursement rates to at least $1,200 (National Health Law Program, 2023).

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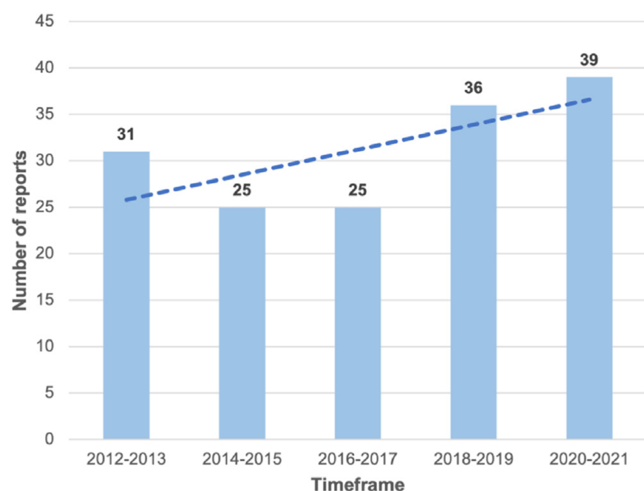

Figure 2. Trend in reviewed literature on doula care published in the past 10 years.

Cross-Cutting Issues

The last category that emerged from the reviewed literature is cross-cutting issues that span birthing people, infants, and systems of care. These include equity, racism, and bias, as well as cost-effectiveness.

Equity, Racism, and Bias

Doula care has been proposed as a strategy to reduce the impact of racism and bias on birthing people of color by providing individually tailored, culturally appropriate, and client-centered care. Some researchers have suggested that doulas may be able to prevent some of the adverse experiences that result from institutionalized racism and to help Black patients better navigate the system (Gorenflo et al., 2022; Horton & Hall, 2020; Kathawa et al., 2022; Sayyad, 2022). In one qualitative study, Black women explained that they felt more at ease when working with their Black doulas, compared with the discomfort they experienced in birthing classes run by white women (Deichen Hansen et al., 2021). Further, several studies have highlighted the importance of not just cultural concordance, but also other similarities in life experiences, immigration status, and culture (Ireland et al., 2019; Kang, 2014; Karbeah et al., 2019; LaMancuso et al., 2016; Mendel et al., 2021; Wint et al., 2019).

Patients are not the only ones experiencing inequities. Doulas also face a multitude of barriers to entering the workforce, including the cost of training, feeling like “the help,” navigating the “whiteness” of the space, and the current payment structures (Bey et al., 2019; Black Wellness & Prosperity Center, 2021; Kathawa et al., 2022; McLemore & Warner Hand, 2017; Salinas et al., 2022). For example, doula training/certification costs exclude low-income people, who because of structural racism are more likely to be women of color (Kozhimannil & Hardeman, 2016; March of Dimes, 2019a).

Cost-Effectiveness

The rationale for the cost-effectiveness of doula care largely relates to cost savings realized from lower rates of preterm births, cesarean deliveries, and NICU admissions (Greiner et al., 2018; Kozhimannil & Hardeman, 2016; Pilliod et al., 2013; Tewa Women United, 2020). Lowering the rates of cesarean deliveries alone has the potential to save Medicaid hundreds of millions annually (Strauss et al., 2016). One study found that if the cesarean birth rate for Medicaid births was reduced to match that of a hospital-based doula program, half of the states would have reduced annual costs (Kozhimannil, Hardeman, et al., 2013). Another study by the same authors estimated that Medicaid births supported by doulas would save one region nearly $60 million annually (depending on the reimbursement rate) and reduce preterm births by more than 3,200 per year (Kozhimannil, Hardeman, et al., 2016). A study in New York City estimated that if doula care reduced the cesarean birth rate by 28%, the costs savings would be nearly $600 per Medicaid birth ($43 million overall) (Strauss et al., 2015). In Wisconsin, estimated cost savings from birth doulas attending every low-risk birth topped $28 million (Chapple et al., 2013). A report on doula care in New Mexico estimated savings of more than $1.8 million for every 1,000 singleton births due to reductions in NICU admissions, low birthweight, cesarean births, and preterm births (Tewa Women United, 2020).

Discussion

Our scoping review covering published literature between January 1, 2012, and March 10, 2022, found a steady increase in publications about doula care in the United States over this period. We show this trend in Figure 2. Although our search only included the first 10 weeks of 2022, six relevant articles were published during that time, which is consistent with the direction and slope of the trendline. Despite the increase in publications over the past decade, our review uncovered gaps in the literature.

First, we found that the data were predominantly related to clinical outcomes, more specifically, labor, birth, and infant outcomes. Common measures reported by studies included labor induction, pain medication, spontaneous vaginal childbirth, instrumental deliveries, cesarean deliveries, low birthweight newborns, premature childbirth, and breastfeeding. However, given that doulas are not clinical providers, measuring their impact solely through medicalized indicators fails to capture the full effect of doula care, such as potential reductions in obstetric racism and increases in patient satisfaction, mental health, and well-being. Further, although significant differences in labor, birth, and infant outcomes have been documented, there is little clarity in terms of mechanisms of action and causality. Researchers cannot state for certain how doula care would lead to these outcomes, which is further evidenced by the fact that many studies reached conflicting conclusions about the impact of doula care. Subcomponents of doula care should be separated, including racial concordance, community-based approaches, and diverse populations, and nonclinical outcome measures should be used to fully determine the extent of the effect.

Second, there are fewer measures of outcomes exclusive to the birthing person compared with perinatal outcomes. Only two studies explored the level of knowledge and awareness of doula services among women, and the other outcomes reported were limited to mental health and patient experience (Declercq et al., 2014; Hans et al., 2018). For patient experience, most studies were small qualitative studies in which mothers expressed high satisfaction, rather than trials with intervention and control groups. Given that patient experience is a multidimensional construct, it would be too reductive to claim that doula care can address all aspects of experience and satisfaction within highly complex medical systems. Although some preliminary quantitative measures for patient experience and racism in obstetric care have been developed, these have not yet

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been used consistently across studies and with larger samples (Afshar et al., 2018; White VanGompel et al., 2022). Further, although there is great value in current qualitative approaches to assess some of the more subjective measures stemming from doula care, such as self-efficacy, confidence, and empowerment, there is an opportunity to quantify them and link them to cost savings that may be more tangible data for policy and decision-makers to act on. For example, data that reflected cost savings of about $600 per birth due to reductions in cesarean deliveries informed the reimbursement rate for the doula pilot program in New York (New York State Department of Health, 2019; Strauss et al., 2015). However, this rate is unidimensional as it only quantifies cost savings from cesarean deliveries. Aggregating all other costs, including clinical measures (preterm deliveries and low birthweight newborns), in addition to cost quantification for self-efficacy, confidence, empowerment, and mental health, would likely yield higher doula reimbursement rates.

Third, studies that focused on systems of care and implementation were even more scarce than those examining maternal outcomes. The main dimensions assessed were collaboration within maternity care teams, payment models, and workforce development. Regarding collaboration across maternity teams, a few studies demonstrated that although some providers look forward to collaborating with doulas, many are still skeptical of their value (Lucas & Wright, 2019; McMahon & Morris, 2018; Mottl-Santiago, 2020; Neel et al., 2019; Roth et al., 2014; Steward, 2021). The few existing studies of payment models agree that adequate compensation underpins the sustainability of doula care. Last, some studies document the disparities in entering and staying in the doula workforce; however, few studies explored strategies for increasing diversity and equity within the field or evaluating these outcomes in the longer term (Bey et al., 2019; Black Wellness & Prosperity Center, 2021; Kathawa et al., 2022; March of Dimes, 2019a; McLemore & Warner Hand, 2017; Salinas et al., 2022).

Underlying these three outcome areas are the cross-cutting issues, including those related to equity, racism, and bias. In comparison with other birthing groups, Black people experience higher rates of maternal mortality and morbidity, postpartum depression, infant mortality, low birth weight, preterm birth, unfair treatment by providers, and feeling pressured into cesarean deliveries (Greenwood et al., 2020; Sakala et al., 2018). These outcomes stem from a multivalent phenomenon called obstetric racism, which recognizes the obstetric violence overlapped with medical racism that Black birthing people are subjected to within the health system (Lett et al., 2023). Obstetric racism as a framework helps us understand and operationalize the impact of past and current oppression as the underlying driver of health disparities among Black birthing people (Davis, 2019). Although there is a broad literature on equity and racism for maternal health outcomes generally, there are fewer studies on how doula care may have an impact on equity outcomes outside of differences in clinical outcomes. This presents an opportunity for further exploration into different types of doula programs, especially with the development of instruments such as the PREM-OB (Patient Reported Experience Measure of Obstetric Racism). The PREM-OB is a validated measure that seeks to quantify patient safety based on the report of clinical practices that are harmful and/or hurtful among Black birthing people (White VanGompel et al., 2022).

Case study examples from the literature suggest that the scope of work of community-based doulas is broader and better suited to addressing structural racism and inequities through culturally sensitive care, connections to local resources, and engagement in advocacy (Black Wellness & Prosperity Center, 2021; March of Dimes, 2019b; Tewa Women United, 2020). A study published after the window of our scoping review used the PREM-OB to assess the impact of doulas and other community support persons such as midwives and family members on acts of obstetric racism and found that the presence of doulas and other non-partner/spouse community support persons was associated with fewer obstetric violence events (Lett et al., 2023).

Although associations with reduced obstetric racism and improved perinatal outcomes can be observed in the presence of doula care, the broader systemic racism that exists in health care needs to be addressed. Without addressing this, adding doulas to the equation is an unrealistic solution to the underlying and compounded issues faced by Black birthing people and other minoritized individuals (Van Eijk et al., 2022). Racism is also present on the workforce side, with access to doulas remaining highly inequitable because of cost constraints. This highlights the importance of exploring policies to increased equitable access to doula care across populations (Kozhimannil et al., 2014; Strauss et al., 2015).

This review's limitations include the single-reviewer approach and the broad scope rather than a smaller, more targeted review. However, this review provides an analysis of the larger landscape of published literature on doula care as a starting point for further exploration and analysis.

Implications for Practice and Policy

The increasing number of states adding reimbursement for doula care in their Medicaid programs demonstrates the growing acceptance of doula care in maternal health. However, policymakers should be aware of the limitations in the evidence as they plan for successful implementation, such as the narrow focus on certain clinical outcomes to quantify cost savings and conflicting conclusions on the impact of doula care. One thing states must account for is the impact of reimbursement rates on the adoption of doula care. For example, in Oregon low reimbursement meant that doulas could not earn a living wage, thus few doulas offered their services through the Medicaid system and only a small fraction of beneficiaries received doula support through Medicaid. This led health authorities to increase the rate in 2017 from $75 to $350 and then again in 2022 to $1,500 (Chen, 2022).

Given the literature review findings, we consider the following areas as research priorities for those developing and implementing doula programs: 1) cultural competency and equity: understanding how doula programs have operationalized equitable approaches and incorporate cultural competency/humility; 2) experiences of birthing people receiving doula care: understanding satisfaction, agency, and well-being; 3) doula experiences: understanding the power dynamics, equity implications of different compensation models and levels, and the capacity to provide doula care in the context of Medicaid; and 4) Medicaid doula benefit implementation: understanding how doula care can be integrated sustainably within the health care system.

Policymakers should also engage stakeholder groups in the development of these research strategies, as different stakeholders have varied interests and perspectives. State health departments and health plans tend to prioritize cost-effectiveness and focus on easily trackable clinical outcomes such as maternal mortality, severe maternal morbidity, premature labor, infant mortality, and cesarean deliveries. On the other hand, doulas, birth workers, patients, and maternal health advocates, while invested in large-scale

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outcomes, place more emphasis on "intermediate" outcomes such as the individual experiences that shape the health outcomes that health departments and plans measure.

Last, there is a broad opportunity to assess differential outcomes for hospital and community-based doulas. Thus far, research on doulas has typically focused on one approach or the other and has not compared outcomes by doulas' positionality in their communities, lived experiences, connections to resources, or employers.

Conclusions and Next Steps

Doula care as part of an integrated and holistic approach to childbirth is not a new concept; however, with the rise of poor birth and maternal outcomes it has started to receive more attention from patients, researchers, and policymakers. To ensure that doula care maximizes its impact and sustainability we see three next steps: 1) policymakers should prioritize input from the doula community, including fair compensation when considering Medicaid reimbursement; 2) doula program implementers should strengthen research partnerships to develop comprehensive evaluation measures to assess the impacts of doula care on different dimensions of maternal health; and 3) researchers should explore the differences in outcomes between hospital and community-based doulas and the impact of factors such as racial/cultural concordance, positionality, lived experience, and connection to local resources.

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Supplementary Data

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