

# Community-Based Doulas

## Evidence Review Findings: Effective / Roadmap Strategy

Community-based doulas are an effective strategy to increase attendance of health appointments; improve healthy birth outcomes such as preterm birth rate, low birthweight, and NICU admissions; foster nurturing and responsive parenting behaviors; and increase breastfeeding initiation. Community-based doulas are unique in their ability to empower and support birthing people, especially birthing people of color who are more likely to experience discrimination in traditional health care settings. The current evidence base does not provide clear guidance for state policy levers, but local level community-based doula programs have been rigorously studied and proven to be effective.

Community-based doulas provide families with support and knowledge throughout the entire perinatal period. These doulas specialize in culturally competent perinatal care that reflects the values and lived experiences of their clients. Community-based doulas are typically introduced to a birthing person<sup>i</sup> during pregnancy and will attend the birth of the child and provide support during the entire perinatal period, including postpartum visits. Support from community-based doulas can include connection to community resources, patient empowerment, and lactation education.






Local organizations offering community-based doula services are already in place, but there are many options for states to strengthen the community-based doula workforce and increase access to doula services. These options include equitable Medicaid reimbursement, workforce training scholarships and grants, certification and training opportunities, and inclusion of doula representatives on state commissions and maternal mortality and morbidity review committees. Although strong causal evidence supports the effectiveness of community-based doula interventions, the evidence base does not currently provide clear guidance on the most effective method to implement community-based doula interventions statewide.

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<sup>i</sup> Birthing person is a gender-inclusive term for people who are pregnant and or may become pregnant. This evidence review uses this term where possible, but follows the policy- and research-specific language when discussing individual studies, which most often use the language of women and mothers.

Decades of research in the field of child development have made clear the conditions necessary for young children and their families to thrive.<sup>1</sup> These conditions are represented by our eight policy goals, shown in Table 1. The goals positively impacted by community-based doulas are indicated with a filled circle, and the goals theoretically aligned (but without evidence of effectiveness from strong causal studies) are indicated with an unfilled circle.

Table 1: Impacts of Community-Based Doulas on Policy Goals

Positive Impact	Policy Goal	Overall Findings
	Access to Needed Services	Mostly positive impacts on health appointments and education classes
	Parents' Ability to Work	<i>(Policy goal outside the scope of this review)</i>
	Sufficient Household Resources	<i>(Policy goal outside the scope of this review)</i>
	Healthy and Equitable Births	Mixed results with positive impacts on birth outcomes and medical intervention during labor
	Parental Health and Emotional Wellbeing	Trending null impacts on postpartum depression
	Nurturing and Responsive Parent-child Relationships	Mostly positive impacts on parent-child interactions
	Nurturing and Responsive Child Care in Safe Settings	<i>(Policy goal outside the scope of this review)</i>
	Optimal Child Health and Development	Mostly positive impacts on breastfeeding initiation and infant feeding practices

## What Are Community-Based Doulas?

Doulas are nonmedical, unlicensed, trained professionals who provide emotional, physical, and informational support to birthing people. They work in tandem with doctors, nurses, and midwives to provide care throughout the perinatal period and act as a trusted source of information for birthing people. Doula comes from the Greek word meaning “mothering the mother” as doulas advocate for the wellbeing of the birthing person and their child.<sup>3</sup> Continuous labor support such as the kind provided by doulas is recommended by the Association of Women’s Health, Obstetric and Neonatal Nurses, and the American College of Obstetricians and Gynecologists as a method to improve birth outcomes.<sup>4,5</sup>

Community-based doulas can be from various professional backgrounds such as community health workers who have received additional perinatal health training including, but not limited to,

pregnancy, childbirth, labor support, lactation counseling, and newborn care.<sup>A</sup> Community-based doulas are also referred to as perinatal community health workers or maternity community health workers.<sup>2</sup> Other variations of doula care include lay doulas and birth doulas provided by a clinic or hospital. Lay doulas are friends or family members of the birthing person who have been chosen by the birthing person to take limited training classes and support them during labor.<sup>6</sup> Other types of birth doulas can be found in traditional hospital settings or birthing clinics in which the doula is present for labor and delivery and possibly some prenatal appointments, but may not follow up with patients postpartum.<sup>7</sup> Birth doulas will typically use a private-pay model and act as individual providers compared to community-based doulas who seek funding through community and state grants and often work as a larger collective or group.<sup>8</sup>

Doulas have been popular throughout history, but, along with midwives, were removed from popular use by the medicalization of birth and the rise of obstetricians. Midwives were originally enslaved individuals who provided necessary supports of the birth experience for all birthing people. Birth workers known as doulas played a large part in the Black community before the rise of hospital births. These providers continued to be popular in rural areas of the southern United States because of lack of access to hospitals.<sup>9</sup>

Eventually, the social construct of birth moved from a natural or community event and became a medical procedure. This transition occurred during the 1940's as increased value in the medical profession shifted labor and delivery from the social childbirth philosophy to a medical-illness model.<sup>10</sup> The medicalization of birth took labor and delivery away from birthing people in the community and their local doulas and into the hands of physicians.

Additionally, as more people began to give birth in hospitals instead of at home, new technology and medicine was used excessively to show off new advances in the field. Although medical intervention improved situations for birthing people with high-risk births, low-risk births were subject to unnecessary and sometimes detrimental interventions.<sup>10</sup> Furthermore, the new technological advances decreased the need for constant bedside support for the birthing person and increased isolation. Community-based doulas seek to reverse this trend and mitigate unnecessary medical intervention.<sup>11</sup>

Community-based doula care grew from a response to systemic racism and discrimination experienced by people of color in healthcare systems and the disparities in birth outcomes for people of color.<sup>11</sup> The field of obstetrics and gynecology that exists today was built by the unfathomable medical violence and experimentation performed on Black individuals who were enslaved.<sup>11,13</sup> This history manifests in the biased treatment of Black people within the healthcare system today.

Black women in the United States are approximately three times more likely to die because of pregnancy than White women. The national maternal mortality rate in the United States in 2020 was 23.8 deaths per 100,000 live births, whereas the mortality rate for Black women was 55.3 deaths per 100,000 live births.<sup>14</sup> Black women are more than twice as likely to have a pregnancy-related death than White women and are at higher risk for severe maternal morbidity.<sup>15</sup>

Black families also have lower access to care and often face racism in healthcare settings. Black birthing people are more likely to report being misunderstood or disrespected by hospital staff during perinatal appointments and labor, and they are more likely to be recommended for cesarean deliveries, despite similar birthing scenarios as White birthing people.<sup>16</sup>

Disparities also exist for newborn and pregnancy outcomes such as preterm birth and low birthweight and breastfeeding rates. The national preterm birth rate is 10.1 percent, but it is 9.1 percent for White infants, 9.8 percent for Hispanic infants, and 14.1 percent for Black infants.<sup>17</sup> Similar disparities are seen in infant mortality rates. The national infant mortality rate is 5.4 deaths per 1,000 live births, but it is 4.4 deaths for White infants, 4.7 deaths for Hispanic infants, and 10.4 deaths for Black infants.<sup>17</sup>

The root cause behind these disparities are inequities caused by racist and oppressive systems.<sup>18</sup> Even when controlling for education and socioeconomic status, Black birthing people continuously have a higher risk of maternal and infant mortality.<sup>19</sup> Without an advocate, these individuals often suffer in silence and receive medical interventions that increase their risk of complications.<sup>11,19</sup>

Community-based doulas incorporate reproductive justice and birth justice frameworks and use strategies to address structural racism, intergenerational trauma, and implicit bias. A reproductive justice framework relies on three principles: all people have the right to not have a child, have a child, and raise a child in a safe environment.<sup>21</sup> A birth justice framework is grounded in the belief that an individual should be able to make pregnancy, birth, and child related decisions without interference from racism, discrimination, implicit bias, or coercion.<sup>22</sup>

Community-based doulas provide three broad services to parents: information, navigation, and advocacy. Information provided to birthing people includes risk factors and warning signs for developments and issues that affect maternal and infant health outcomes. Community-based doulas also teach birthing people about monitoring a fetus's movements in utero, sleeping patterns, and positions. They also model proper behaviors such as responding to an infant's cues and emotional needs.<sup>c</sup>

Community-based doulas help their patients navigate complex health care systems and social service providers. This aid can start as early as initial contact in the prenatal period and expand into the postpartum period to help parents provide thriving environments for their children.

Finally, community-based doulas act as advocates for their patients and affirm the patient's experience. For example, a community-based doula can create a birth plan with their patient and ensure it is followed and respected by medical staff. Birth plans map out clear guidelines for hospital staff regarding labor and delivery, such as the use or nonuse of medical interventions, including epidurals and cesarean deliveries. Birth plans can decrease stress on the birthing person, improving the birth experience and outcomes. Community-based doulas can also recognize and affirm the pain or concern patients feel as they go through the perinatal period and ensure those concerns are taken seriously by medical staff.<sup>11</sup>

Quality of birth experience with doula care has been analyzed and found doula support to be associated with higher levels of respectful care, especially for birthing people of color and birthing people with lower incomes.<sup>12</sup> Support from community-based doulas starts during pregnancy and continues during postpartum.<sup>3</sup> The length of postpartum care varies anywhere from 6 weeks to 6 months or 1 year.

Some community-based doula programs include home visits in their services and home visiting programs may also integrate community-based doulas into their existing models to better support birthing people. Home visiting on its own is used as a strategy to provide support and education to expecting and new parents and prevent socioeconomic disparities in parental knowledge.<sup>B</sup> Home visiting is typically a voluntary program for families who face additional barriers to positive health and developmental outcomes. Support is offered by a trained professional, such as a nurse or social worker, who provide information on child health and development, parenting, and community resources.<sup>20</sup> Relationships are built between providers and families through consistent home visits. Home visiting programs without doula intervention often lack the focus on birth outcomes and birth support that community-based doulas provide.

Community-based doula programs are unique from other birth doula programs because of their culturally appropriate approach to care and focus on at-risk groups.<sup>23</sup> In addition to training and certification regarding healthy births, the doulas may also receive training on race, racism, and discrimination in the health care system and community. They rely heavily on shared lived experiences with their patients to make connections and emotionally support birthing people.<sup>2</sup>

### ***Who Is Affected by Community-Based Doulas?***

Community-based doulas can have an impact on all birthing people, but, theoretically, they will have a larger impact on birthing people who are more likely to experience discrimination and racism in a traditional healthcare setting or who are more at risk for negative birth outcomes. For community-based doulas to have a maximized impact on birthing people, the services of the doula must be made more affordable and accessible to the populations they are trying to support.<sup>2</sup>

Doulas are a part of a revival of birthing communities and a desire for nonmedicalized birth. Community-based doulas have been a vital part of the traditional birthing experience before the rise of obstetricians. Typically, doula care is not covered by health insurance, which increases the out-of-pocket cost of obstetric care. Therefore, only families with higher incomes were able to afford doula support. These families and birthing people were most commonly higher educated, White families.<sup>8</sup>

The latest data on doula usage in the general public from a 2010–2011 data report estimates that only 6 percent of birthing people received care from any type of doula.<sup>24</sup> This percentage could include community-based doulas or other doulas such as lay doulas or a doula provided by a hospital system at the time of birth. Although data on the percentage of birthing people who would prefer a doula do not exist, these findings suggest that only a small portion of the general population is receiving doula care.



Community-based doulas seek to assist all families, especially those who have been traditionally underserved by the healthcare system or face disparities in birth outcomes. Therefore, people of color and people with low incomes are most likely to benefit from the expansion of community-based doulas. Additionally, queer people and members of the LGBTQ+ community have found valuable support from community-based doulas who offer specialized care and connections that patients often do not receive from mainstream obstetric care.<sup>21</sup> Members of the LGBTQ+ community experience barriers to adequate care as a result of physician misunderstanding of transgender and queer reproductive care, discriminatory care, and microaggressions. These biases can lead to mistreatment during care or avoidance of care overall by LGBTQ+ birthing people. Community-based doulas can help disrupt traditional gender assumptions in reproductive care and make transgender and queer birthing people feel comfortable during pregnancy, delivery, and postpartum.

One major group of birthing people that could be affected by community-based doulas are those with Medicaid coverage. Medicaid covers roughly 42 percent of all births in the United States<sup>25</sup> and over 60 percent of births amongst Black and American Indian/American Native people.<sup>8</sup> Using Medicaid to expand community-based doula services beyond individuals with higher incomes could significantly affect birthing people with low incomes and birthing people of color.

Finally, community-based doulas will have a greater effect for birthing people who experience cesarean deliveries at higher rates and have lower rates of breastfeeding. Birthing people of color and birthing people with lower incomes often have little support or are ignored when they decide not to have cesarean deliveries or want to breastfeed.<sup>27</sup> For example, Black birthing people have the highest rates of cesarean deliveries compared to other racial and ethnic groups. Of all live births among Black birthing people in 2020, 36 percent were cesarean deliveries whereas the national average for cesarean deliveries is only 31.9 percent.<sup>28</sup>

Additionally, roughly one-third of birthing people with Medicaid coverage received cesarean deliveries.<sup>25</sup> Compared to uninsured birthing people, birthing people with Medicaid coverage are more likely to have cesarean deliveries and infants born with low birthweight. Birthing people with higher rates of cesarean deliveries are expected to be greatly affected by community-based doula programs. Community-based doulas strive to support birthing people in their decisions to elect or not elect to have cesarean deliveries and support those who wish to breastfeed.

### ***What Are the Funding Options for Community-Based Doulas?***

Doula services can be paid for privately by the birthing person, but community-based doula programs rely on various funding methods to pay their employees and make services more affordable for the community. Typical out-of-pocket payments for doulas in 2016 ranged from \$25-\$38 for one visit and \$494-\$922 for attendance at labor and delivery.<sup>29</sup> Currently, costs for doula services throughout a pregnancy can be as much as \$2,000.<sup>22</sup> These payments are sometimes paid in full by families or by organizations that rely heavily on philanthropy to make care more affordable for families.

Most community-based doula programs are operated by non-profit programs that rely on private grants and philanthropy for sustainability, but also rely on limited government funding. For

example, a 2020 report analyzing responses from approximately 100 doula programs nationwide found that 70 percent of doula organization funds are from private philanthropy, whereas only 25 percent of funds are from government grant.<sup>30</sup>

States can fund community-based doulas by providing equitable Medicaid reimbursement for services and grants or scholarships to community-based doulas for training and certification. Determining equitable reimbursement requires states to recognize the long hours community-based doulas spend with their patients and the true cost of the care they provide. One evaluation of a community-based doula program found doulas spend an average of 76 hours with each patient from the initial prenatal visit throughout postpartum. This time does not include preparation by the doula before each visit.<sup>54</sup> Other reports estimate community-based doula time spent with patients to be approximately 45 hours per patient compared to the 5.75 hours spent with a patient by traditional health care providers.<sup>22</sup> No standardized method to determine a standard reimbursement rate has been identified.

One funding option for states is the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program which allocates grants to states for evidence-based home visiting programs. These restrictions may limit the usefulness of these grants for community-based doula programs, but states like Illinois have had success in using “continued innovation” funds for “promising approaches that do not yet qualify as evidence-based models.”<sup>30</sup> Illinois funds five doula home visiting programs across the state and funded a doula randomized control trial in Chicago.<sup>30</sup>

Title V Maternal and Child Health (MCH) block grants can also be authorized for community-based doula programs because of their home visiting aspects. Indiana has used this approach to launch the Indiana Safety PIN (Protecting Indiana’s Newborns) Program that supports local organizations working toward decreasing infant mortality, such as community-based doula programs.<sup>42</sup>

States have tried to use other federal funding methods with broad qualifications to fund community-based doula programs. One pilot program in Washington worked with HealthConnect One to combine Temporary Assistance for Needy Families (TANF) programs and the organization’s community-based doula program. The broad eligibility criteria for TANF programs and state discretionary power allowed Washington leaders to allocate these federal funding dollars to expand access to community-based doulas.<sup>30</sup>

The US Health Resources and Services Administration’s Healthy Start Initiative allocated \$4.5 million for hiring, training, certifying, and compensating community-based doulas in areas with higher risk of maternal mortality and morbidity and negative infant health incomes.<sup>31</sup> Furthermore, the Biden-Harris Administration introduced the White House Blueprint for Addressing the Maternal Health Crisis for Fiscal Year 2023. The budget for fiscal year 2023 allocated \$470 million for maternal health needs, including diversifying the perinatal workforce. Diversification can include doulas and community health workers.<sup>8</sup>

Another option to help patients pay for care if they cannot afford private doula services is to apply for individual grants. For example, the Black Birth Equity Fund started by Baby Dove provides grant funding for black birthing people to pay for doula services.<sup>33</sup> The Black Birth Equity Fund is just one

example of how private philanthropy funding can increase access to doulas for populations served by community-based doulas.

## Why Should Community-Based Doulas Be Expected to Impact the Prenatal-to-3 Period?

Community-based doulas aim to positively affect birthing people's experiences during labor and delivery by providing continuous pregnancy, labor, and postpartum support. This support is intended to increase birth satisfaction among birthing people and the emotional and physical wellbeing of parents in the postpartum period. The support birthing people receive during the prenatal period focuses on social determinants of health, emotional wellbeing, and access to resources that are predicted to decrease stress. This is expected to decrease stress-related pregnancy complications and result in better birth outcomes like lower rates of preterm birth and NICU admissions.<sup>34</sup> Birthing people provided with continuous support during labor and delivery may be less likely to experience medical interventions, such as cesarean deliveries and labor induction during labor and delivery and therefore decrease the risk of adverse birth outcomes from medical interventions.<sup>35</sup>

Birthing people can be vulnerable to environmental influences such as medical intervention, unfamiliar personnel, and lack of privacy during labor and these environmental influences may affect a birthing person's confidence and feelings of competence. These feelings of inadequacy can transition into parenthood and affect levels of breastfeeding, postpartum depression, and parent-child interactions.<sup>35</sup>

Community-based doulas act as a buffer to decrease the influence of stressors during pregnancy, birth, and early parenthood. Additionally, support from doulas can decrease the stress of birthing people and improve outcomes of a vaginal birth. Stress and anxiety during labor can lead to abnormal fetal heart rate, decreased uterine contractility, long labor, and low Apgar scores. Emotional support and advocacy from community-based doulas can decrease stress and anxiety during labor, decreasing the risk of adverse outcomes.<sup>A,35</sup>

Nurturing and responsive parent-child relationships affect the health and mental capabilities of children long after the prenatal-to-3 period.<sup>36</sup> The home visiting provided by community-based doulas postpartum is expected to help build nurturing and responsive parent-child relationships because parents have a trusted resource of information to educate them on their child's needs. Doulas go beyond the scope of care given by physicians by addressing the social determinants of health and connecting their patients to community resources. Social determinants of health can be health literacy or social support issues that can be the root cause of health disparities and negative outcomes.<sup>37</sup> Community-based doula support can lessen the negative effects of social determinants of health and increase the quality of birth outcomes for patients.

## What Impact Do Community-Based Doulas Have, and for Whom?

The review of evidence below is limited in scope to rigorous randomized controlled trials (RCTs) of local community-based doula programs. To date, there are no RCTs of statewide community-based services; therefore, this review draws from local community-based doula interventions.



Community-based doulas in the identified RCTs explicitly provided specialized care for communities and groups who face discrimination and racism in traditional health care settings. Studies involving lay doulas or birth doulas working only in hospital settings were not included in the review.

Three unique trial samples are referenced in six studies analyzed in this review. The first sample (Studies A, B, and F) consists of over 300 young women with low incomes from two large urban communities and two smaller urban communities in Illinois.<sup>A,B,F</sup> These women were recruited between 2011 and 2015 and were mostly self-identified as African American (45%) and Latina (38%). The community-based doula intervention included an existing home visiting program that was enhanced by doula care. The doula in this case was a community health worker trained in perinatal care. Care was provided to new parents until 6 weeks postpartum.

The second sample (Studies C and D) was recruited by the Chicago Doula Project over 3 years.<sup>C,D</sup> Over 200 young African American women with predominately lower or working class incomes received doula care at a community health center or teaching hospital from recruitment at pregnancy to 12 weeks postpartum.

The final sample (Study E) was taken from the Baby Love program operating in Rochester, New York.<sup>E</sup> Over 450 participants were recruited from a community with majority of people with low incomes from 2015–2018 to receive regular home visits from a community health worker who received perinatal care training. Care was provided to new parents from pregnancy to 1 year postpartum. Participants were mostly Medicaid recipients and were from neighborhoods with high levels of poverty.

A limitation of existing RCTs on community-based doulas is geographic scope; the communities included are not reflective of a larger nationwide or statewide population, and no statewide program has been implemented yet. Additionally, small sample sizes limit the ability to identify small, but statistically significant effects. Other outcomes of maternal and child health, such as maternal or infant mortality, cannot be analyzed in small populations due to the low prevalence of these measures in the general population. The population size limitations can lead to more null results than expected.

The research discussed here meets our standards of evidence for being methodologically strong and allowing for causal inference, unless otherwise noted. Each strong causal study reviewed has been assigned a letter, and a complete list of causal studies can be found at the end of this review, along with more details about our standards of evidence and review method. The findings from each strong causal study reviewed align with one of our eight policy goals from Table 1. The Evidence of Effectiveness table displays the findings associated with community-based doulas (beneficial, null,<sup>ii</sup> or detrimental) for each of the strong studies (A through F) in the causal studies reference list. For each indicator, a study is categorized based on findings for the overall study population; subgroup findings are discussed in the narrative. The Evidence of Effectiveness table

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<sup>ii</sup> An impact is considered statistically significant if  $p < 0.05$ . Results with  $p$ -values above this threshold are considered null or nonsignificant.

also includes our conclusions about the overall impact on each studied policy goal. The assessment of the overall impact for each studied policy goal weighs the timing of publication and relative strength of each study, as well as the size and direction of all measured indicators.

Of the six causal studies included in this review, none examined how outcomes differed by race or ethnicity (beyond simply presenting summary statistics or controlling for race/ethnicity). The samples were primarily birthing people who self-identified as African American, Hispanic, or Latina. Therefore, benefits of these programs are not expected to be detrimental to birthing people of color or worsen disparities. Where available, this review presents the analyses' causal findings for subgroups. A rigorous evaluation of a policy's effectiveness should consider whether the policy has equitable impacts and should assess the extent to which a policy reduces or exacerbates pre-existing disparities in economic and social wellbeing.

Table 2: Evidence of Effectiveness for Community-Based Doulas by Policy Goal

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal
Access to Needed Services	Pediatric appointments	E	A		Mostly Positive
	Postpartum care use	E			
	Childbirth education classes	A			
Healthy and Equitable Births	Preterm birth	E	A		Mixed
	Epidural analgesia	A			
	Length of hospital stay		A		
	Low birthweight	E	A		
	NICU admissions	E	A		
	Cesarean delivery		A		
Parental Health and Emotional Wellbeing	Postpartum depression		A		Trending Null*

Table 2: Evidence of Effectiveness for Community-Based Doulas by Policy Goal (continued)

Policy Goal	Indicator	Beneficial Impacts	Null Impacts	Detrimental Impacts	Overall Impact on Goal
Nurturing and Responsive Parent-child Relationships	Positive parenting behaviors	B, C	F		Mostly Positive
	Parent-child interactions	C, F	C, F		
	Discipline practices	F	F		
	Emotional responsivity	C			
	Parent-child dysfunctional interaction	C			
	Safe sleep	A			
Optimal Child Health and Development	Child social-emotional competence		F		Mostly Positive
	Breastfeeding initiation	A, D			
	Breastfeeding duration		D		
	Infant food introduction	D			

\*Trending indicates that the evidence is from fewer than two strong causal studies or multiple studies that include only one location, author, or data set.

Notes: If a study is placed in multiple impact categories (beneficial, null, detrimental) for an indicator, results were inconsistent within the study (e.g., across time points or various ways of measuring similar indicators).

### Access to Needed Services

RCTs of two community-based doula programs found mostly positive results on attendance at medical appointments and education classes for parents and children.<sup>A,E</sup> Both studies observed the effects of pediatric appointment attendance after a community-based doula intervention. Participants of the Baby Love program were 10 percentage points more likely to have their infant attend 4 or more well-child visits within the first 6 months than families who did not participate in the program and received traditional perinatal care (44% compared to 34%).<sup>E</sup>

Another study of families in Illinois did not find significant differences in the likelihood of infants attending pediatric appointments at 3 weeks or 3 months between participants and non-participants.<sup>A</sup> Attendance rates for both groups were above 98 percent at both time intervals, making it difficult to detect significant differences because there was little room for improvement.

Participant families received home visits from a community health worker trained in perinatal care, whereas non-participant families experienced a less involved case management program with two visits and connections to needed services.<sup>A</sup>

The analysis of the Baby Love program also observed the relationship between program participation and maternal attendance of postpartum visits. Participants in the program were 10 percentage points more likely than non-participants to have a postpartum visit within 60 days of delivery (48% compared to 38%).<sup>E</sup> In a different study, birthing people in a home visiting community-based doula program were 40.5 percentage points more likely to attend a childbirth education class than birthing people who received only case management (50.0% compared to 9.5%).<sup>A</sup> Childbirth education classes can increase comfort and confidence for birthing people during labor and delivery.

### ***Healthy and Equitable Births***

Two RCTs using three unique sample populations found mixed results for the ability of community-based doula programs to affect multiple healthy and equitable birth outcomes. Birth outcomes such as preterm birth, low birthweight, and NICU admissions were positively affected in one of the studies,<sup>E</sup> but medical interventions during labor, such as cesarean deliveries, were mostly null.<sup>A</sup>

### **Birth Outcomes**

Two studies analyzed the effects of preterm birth, low birthweight, and NICU admissions for participants in three different community-based doula programs and found mixed results.<sup>A,E</sup> Participants of the home visiting program Baby Love experienced preterm birth rates that were 8 percentage points lower than the rate for non-participants (12% compared to 20%).<sup>E</sup> Participants in the Baby Love program also experienced decreased occurrences of low birthweight by 8 percentage points (14% compared to 22%).<sup>E</sup> Positive results were also observed for NICU admissions. Baby Love program families were 5 percentage points less likely than non-participant families to experience NICU admissions (16% compared to 21%).<sup>E</sup>

The second study observing birth outcomes did not find any significant association between community-based doula program participation and preterm birth, low birthweight, or NICU admissions.<sup>A</sup> More research is needed to better understand the mixed results from these studies.

### **Medical Interventions During Labor**

One goal of community-based doulas is to decrease stress during labor and the need for medical interventions such as epidurals, cesarean deliveries, and labor induction. One study analyzed these outcomes and found mostly null results. One study of a community-based doula program found lower rates of epidural use among patients in community-based doula care. Those receiving care had a usage rate of 71.8 percent compared to non-participants who had an 83.2 percent usage rate.<sup>A</sup> The intervention group received full home visitation from a community-based doula compared to the participants in the control group who received limited case management. The same study found no significant effects on the length of hospital stay or rates of cesarean delivery.<sup>A</sup> More research is needed to understand the mostly null trend in results.

### ***Parental Health and Emotional Wellbeing***

Only one study observed the effect of a community-based doula program on rates of postpartum depression. No significant differences were found between the intervention and control groups at both 3 weeks and 3 months postpartum.<sup>A</sup> More research is needed to understand the effect of community-based doula programs on postpartum depression and other parental health and emotional wellbeing outcomes.

### ***Nurturing and Responsive Parent-Child Relationships***

Positive parent-child relationships are a major focus of community-based doula programs, because the relationships built between parent and child with the help of doula support shape future parenting behaviors and infant mental health.<sup>C</sup> Four RCTs analyzed the effect of community-based doula programs on the quality of parent-child relationships and parent behaviors and found mostly positive results.<sup>A,B,C,F</sup> Three of the studies observed one sample population of young women in Illinois and reported results at varying follow-up periods.<sup>A,B,F</sup> The majority of positive results were in parent emotional responsiveness to children, parent-child dysfunctional interaction, and safe sleep practices.

### **Parent-Child Interactions**

Parent-child interactions are measured through multiple outcomes. One study observing the effect of the Chicago Doula Program at two site locations for over 200 participants analyzed parent-child interactions at 4 months, 12 months, and 24 months.<sup>C</sup> Mothers in the intervention group showed more guidance and encouragement toward their infants at 4 months than mothers who received traditional prenatal care without a community-based doula (medium effect size of 0.32). This study also measured differences in positive child involvement with the mother and mother sensitive responsiveness at all three time periods and did not find significant results.

Another RCT of over 300 young women from Illinois found similar results on parent-child interactions. Mothers who received home visiting based community-based doula care showed less intrusiveness toward their infant at 3 weeks than the control group who only received a limited case management program (50% compared to 57%).<sup>F</sup> The results of this outcome measure were null at later time periods when the community-based doula was no longer providing care. The same Illinois doula program evaluation examined parental sensitivity, careful handling, warmth, and lack of hostility, but results were null at all observation periods.<sup>F</sup>

Other measurements of parent-child interactions include emotional responsiveness and parent-child dysfunctional interactions. The RCT of the Chicago Doula Program found intervention mothers at 4 months were more likely to respond promptly when infants were upset (medium effect size of 0.35), and infants were less likely to display uncomfortably long periods of distress compared to the control group (small effect size of 0.24).<sup>C</sup> Additionally, mothers in the intervention group reported lower Parenting Stress Inventory dysfunctional parent-child interaction scores than the control group at 12 months (small effect size of 0.23).<sup>C</sup> Both emotional responsiveness and parent-child dysfunctional interaction results were null at other observation periods.



## Parenting Behaviors

Mostly positive results were found in multiple studies for outcomes related to parenting behaviors. An RCT of the Chicago Doula Project found mothers participating in the program were less likely to endorse high-risk parenting attitudes as measured by the Adult-Adolescent Parenting Inventory (AAPI) than mothers who were not participating in the program at child age 4 months (small effect size of 0.24).<sup>C</sup>

Additionally, one study of an RCT of over 300 young women in Illinois found the intervention group was more likely to engage their infants in stimulating activities, such as reading to them, playing peekaboo, and playing with toys than the control group at child age 3 months (small effect size of 0.2), however these results were null at child age 13 months.<sup>B</sup>

Another study using the same RCT sample found no significant association between participation in the community-based doula intervention on insensitive parenting attitudes using the AAPI measurements.<sup>F</sup> In a moderation analysis of risk-taking mothers, young mothers with a history of risk-taking had larger positive effect sizes in multiple parenting-related outcomes from the community-based doula program than all mothers who participated in the program.

Finally, an initial analysis of the previously mentioned sample found that at child age 3 weeks during the community-based doula program, the intervention group were more likely to properly put their infant on its back to sleep compared to the control group (70% compared to 60.6%).<sup>A</sup> After the community-based doula program ended, the findings were no longer significant.

## Discipline Practices

Mixed results on parental discipline practices were found in one causal study that completed observations of parenting behaviors at two time intervals: child age 13 and 30 months.<sup>F</sup> Mothers receiving doula care were 10.8 percentage points more likely than the control group to use inductive discipline strategies (e.g. explanations) at child age 13 months and 13.8 percentage points more likely to use inductive discipline strategies at child age 30 months (22.8% compared to 12.0% and 45.1% compared to 31.3%, respectively).

Additionally, at child age 13 months, mothers in the intervention group were 10.2 percentage points less likely to use psychological aggression toward their child than mothers in the control group (79.5% compared to 89.7%).<sup>F</sup> The study found no significant results for use of harsh or lax discipline strategies at either observation period.

## Optimal Child Health and Development

Community-based doula programs create mostly positive outcomes for optimal child health and development, with consistent benefits in breastfeeding initiation and limited evidence indicating improvements in infant feeding practices.<sup>A,D</sup>

## Child Development

Only one study analyzed the effect of community-based doula interventions on child social-emotional competence. An Illinois study receiving home visiting based community-based doula

care or less involved case management without doula intervention analyzed Brief Infant-Toddler Social and Emotional Assessment (BITSEA) scores and Infant-Toddler Social and Emotional Assessment (ITSEA) scores and found mostly null results.<sup>F</sup> At the child age 13 month follow-up period, children from the intervention group had higher mastery motivation ITSEA scores than children in the control group, but these differences were not significant at child age 30 months. There were no significant differences in emotional regulation, internalizing behaviors, externalizing behaviors, total problem behaviors, and social relatedness scores at child age 13 or 30 months.

### Health and Nutrition

During postpartum visits, community-based doulas teach parents about positive infant feeding practices. Two studies found that community-based doula intervention increased rates of breastfeeding initiation.<sup>A,D</sup> One RCT found that rates of breastfeeding initiation for participants in the intervention group were 7 percentage points higher than rates in the control group (81% compared to 74%).<sup>A</sup>

Additionally, an RCT of the Chicago Doula Project that found 63.9 percent of the community-based doula intervention group initiated breastfeeding compared to 49.6 percent of the control group.<sup>D</sup> Differences between the intervention and control groups in breastfeeding duration after initiation were null. These results indicate that the intervention is more effective earlier in the postpartum period.

Community-based doulas also teach parents about complementary foods to feed their infants. For example, one study found that only 5.6 percent of parents in the doula intervention group fed cereal or solid food to their infant under 6 weeks of age compared to 17.9 percent of parents in the control group.<sup>D</sup> Feeding cereal and solid foods to infants under 6 weeks of age is a popular cultural practice, but does not provide adequate nutrition to the infant. Community-based doulas helped inform parents of evidence-based best feeding practices instead of relying on cultural norms that may not provide ideal nutritional benefits for infants.

### Is There Evidence That Community-Based Doulas Reduce Disparities?

To date, no rigorous evidence exists to draw a conclusion on the effectiveness of community-based doulas to reduce racial disparities in birth outcomes for families in the prenatal-to-3 period. None of the strong causal studies have analyses on the differential impacts of doula services by race and ethnicity, despite pregnant people of color being disproportionately affected by adverse birth and health outcomes.

The samples of the studies are comprised mostly of birthing people of color, who are more likely to benefit from these programs, but the studies do not run statistical tests on the differences in outcomes based on race and ethnicity or income level. Therefore, we can conclude birthing people of color benefit from community-based doula programs, but we do not know whether they benefit at the same or different levels as White birthing people. Because of the nature and populations served by community-based doulas, programs likely decrease disparities in birth outcomes for infants and birthing people.<sup>3,11,37</sup> More research is needed on how the statewide implementation of doula services may increase equitable outcomes for birthing people.

## Has the Return on Investment for Community-Based Doulas Been Studied?

Community-based doulas theoretically can reduce long term health care costs associated with negative birth outcomes. Community-based doulas are predicted to decrease the need for costly procedures such as preterm births, NICU admissions, and medical interventions caused by difficult birth experiences. Cesarean deliveries and NICU visits are extremely costly; the cost of a cesarean birth being 50 percent more than a vaginal delivery.<sup>22,43</sup> The Institute of Medicine estimates each preterm birth to cost \$51,600 per infant.<sup>43</sup> Doula programs should decrease costs because patients covered by Medicaid will have fewer expensive NICU admissions and preterm births and rely on lower cost, preventative care provided by community-based doulas. More research is needed to confirm causal effects of community-based doulas on cesarean section rates.

Limited research has been completed to show the cost-effectiveness of doula support during birth. One study of community-based doulas covered by a Medicaid managed care organization in Minnesota discovered that potential cost savings of doula care averaged \$986 per patient, and total predicted savings were estimated at \$58.4 million.<sup>24</sup> Another study used a decision analysis model on a theoretical nationwide population and concluded the cost-savings of using any doula support during a first birth could be \$884 per birth, with results remaining cost-effective up to \$1,360 reimbursement per doula.<sup>40</sup>

An Oregon study using similar methods found a total cost savings of \$91 million caused by fewer cesarean deliveries, maternal deaths, uterine ruptures, and hysterectomies.<sup>44</sup> The study concluded that doula-attended births had an estimated cost-effectiveness of \$1,452 per birth. Finally, simulated cost analyses comparing data from Medicaid births without doula support nationwide and Medicaid births with doula support in Minnesota found that states could save at least \$2 million a year with a \$200 doula reimbursement rate, with savings still existing even if reimbursement rates were raised to \$300.<sup>45</sup> A more comprehensive analysis of the return on investment is forthcoming.

## What Do We Know, and What Do We Not Know?

Strong causal evidence of community-based doula programs has demonstrated that doula support increases attendance at medical appointments and education classes, encourages responsive parenting behaviors, and enhances child health and developmental outcomes such as breastfeeding initiation rates and safe sleep practices. Additionally, there is evidence that participation in community-based doula programs improves some important birth outcomes, including preterm birth, low birthweight, and NICU visits. Only local intervention programs have been rigorously studied, and there is not clear evidence-based guidance for the best way to implement or fund a statewide program.

### **Limitations of Current Evidence**

The causal evidence listed in this review is limited in generalizability by geography, study sample size, and gender. Only three unique RCT populations within the six strong causal studies are identified. Two of the RCTs occurred in the same geographic area,<sup>A,B,C,D,F</sup> the other RCT occurred in one city (Rochester, New York<sup>E</sup>). More research is needed to analyze the effect of community-based doula interventions on a larger scale and to allow generalization to statewide or nationwide populations.

All studies within this review focus primarily on the effect of community-based doula interventions on mothers and their children. Programs that provide community-based doula care, such as Evidence Based Birth, collect client feedback from all parents that indicate the benefits of knowledge gained by the partner of the birthing person.<sup>46</sup> The home visiting nature of community-based doulas could also affect father-infant or caregiver-infant relationships because doulas work to create a nurturing home environment. Further quantitative research is needed to determine the effect of community-doula care on fathers and other caregivers.

Furthermore, future research of community-based doulas can include more focus on parental health, birth outcomes, and medical interventions. Birth outcome results such as preterm birth, low birthweight, and NICU admissions were mixed despite theories that suggests those outcomes would benefit.<sup>A,E</sup> Other outcomes predicted to be positively impacted by community-based doula care, but were null in this review, include postpartum depression and the occurrence of medical interventions such as cesarean delivery, labor induction, and epidural use. Preliminary results of a non-rigorous evaluation by the Burke Foundation of the Children's Home Society of New Jersey's AMAR (Apoyando Madres/Armando Redes) Community-Based Doula Program, found fewer preterm births, fewer low birthweight infants, and fewer low-risk cesarean deliveries for birthing people in the program.<sup>47</sup>

Doulas can properly screen parents postpartum for mental health struggles or mood disorders and assist parents in accessing appropriate care, theoretically decreasing the occurrence of postpartum depression and other maternal mental health conditions.<sup>2,37</sup> Additionally, the need for medical interventions would be expected to decrease because of reduced stress in labor.<sup>A,E</sup> Despite this theoretical connection, only one study analyzed outcomes related to parental mental health and emotional wellbeing. Disparities continue to exist in maternal mental health and outcomes related to parental mental health and emotional wellbeing should be studied further.

Finally, maternal mortality, maternal morbidity, and infant mortality outcomes should also be included in future analyses, because disparities are deepening in these outcomes.<sup>19,48</sup> Currently, there are no strong causal studies analyzing these three outcomes. A low prevalence of these outcomes in the general population means the sample needed in an RCT would have to be very large to detect differences in mortality and morbidity rates. These outcomes will have to be analyzed at the population level, once statewide programs are introduced.

Finally, the limited evidence on community-based doulas does not include analyses of subgroups, therefore, limiting the conclusions drawn about the reduction of racial and ethnic disparities. The need for community-based doulas was a response to the deepening disparities in birth outcomes for Black birthing people and children. The racial and ethnic breakdown of samples analyzed in the causal studies are representative of the populations targeted for community-based doula interventions, but without subgroup analyses, we cannot assess reductions in disparities. Therefore, more research of subgroup comparisons is needed to fully understand the ability of community-based doulas to decrease disparities.

Furthermore, research can be expanded to other groups who may benefit from empowerment and community-based doula support, such as refugees, indigenous people, immigrants, uninsured

people, and LGBTQ+ individuals.<sup>2,21,37</sup> Qualitative research of a local community-based doula program for Karen refugee birthing people in New York found positive trends in patient experience.<sup>49</sup> Larger literature reviews suggest similar trends in community-based doula programs for indigenous birthing people who may also be isolated in remote locations and receive care without respect for their cultural practices.<sup>50</sup>

## Are Community-Based Doulas an Effective Policy for Improving Prenatal-to-3 Outcomes?

Community-based doula programs have been proven through strong causal studies to be an effective strategy to increase attendance of childbirth education classes, increase attendance of medical appointments for infants and birthing people, improve parental knowledge of responsive and nurturing parenting behaviors, increase breastfeeding initiation and safe sleep practices, and improve some important birth outcomes such as preterm birth, low birthweight, and NICU admission rates. Existing evidence is limited in generalizability, and rigorous causal research has not identified the best methods for statewide implementation or state support of community-based doulas.

## How Do Community-Based Doulas Vary Across the States?

Although the current evidence base does not provide clear guidance for specific policy levers that would improve community-based doula care, there are many actions states can take to increase the availability of community-based doula care and support the community-based doula workforce. Policy options fall into categories of Medicaid reimbursement, expanding access to community-based doula care, and community-based doula workforce support. Legislation pertaining to regulations and requirements for community health workers or doulas can affect community-based doulas as defined in this review.

In total, 13 states including the District of Columbia have created Medicaid benefits to reimburse doulas, including community-based doulas. Medicaid reimbursement can be achieved through direct reimbursement or Medicaid Managed Care. Reimbursement rates for total cost of care including prenatal, labor and delivery, and postpartum care range from \$350 for one patient in Nevada to \$1,950.71 in the District of Columbia.<sup>51</sup> Additionally, Rhode Island is the only state to require doula care coverage for both Medicaid and private insurance.<sup>52</sup>

The total state reimbursement rate is calculated using the number of prenatal and postpartum visits and reimbursement allowed per visit, along with any labor and delivery reimbursement. Most states cover some prenatal and postpartum visits and labor and delivery. Labor and delivery reimbursement is typically higher than individual appointments.

Medicaid reimbursement is not a straightforward policy lever and various implementation difficulties have been experienced in early state rollouts. For example, community-based doulas in New Jersey found it difficult to navigate the procedures and documentation required to become a Medicaid provider. The process was overburdened by applications that are not entirely relevant to non-clinical providers such as community-based doulas.<sup>53</sup> Additionally, the reimbursement rates provided by



Medicaid were too low to incentivize community-based doulas to complete the registration process and were not representative of the high-quality, individualized care doulas provide.<sup>53</sup>

Furthermore, reimbursement rates must be initially set at an equitable and sustainable rate for community-based doulas to buy in to the program and accurately reflect the amount of care and time that a doula dedicates to a patient. For example, Oregon originally set its total reimbursement rate at \$75 per patient and then increased it to \$350 per patient.<sup>54</sup> The extremely low reimbursement rate caused low doula participation in the program. In 2022, Oregon created legislation to raise the reimbursement rate to a more equitable \$1,500.<sup>51</sup>

One doula stakeholder workgroup in California recommended a minimum rate of \$1,000 for attendance at labor and delivery, \$100 for every visit, and \$250 for support during an abortion or miscarriage.<sup>55</sup> As a result of the hands-on and attentive nature of community-based doulas, they spend more time with patients than physicians and step beyond the physician role to provide emotional support and connections to social services and community supports. Doulas are on call 24/7 for each of their patients. Evidence from a pilot program in California found that doulas spend an average of 76 hours with each client throughout their perinatal journey.<sup>56</sup> This time commitment restricts doulas to only one to three clients per month instead of the multiple patients seen daily by physicians. Ensuring adequate reimbursement for services strengthens the sustainability of the community-based doula workforce and makes services more accessible to birthing people.

States can also use multiple policy options to expand access to community-based doula care and make it more accessible to all birthing people. One financial option for states is the allocation of Title V MCH Services Block Grant funds to programs that encourage community-based doula programs. For example, Indiana used these funds to start the Indiana Safety PIN (Protecting Indiana's Newborns) Program that works with community-based organizations like Speak Life Doula Program. The doula program works with birthing people who have Medicaid coverage and matches them with a community-based doula throughout their pregnancy.<sup>42</sup> This is just one example of state actions to expand access to community-based doula care.

Other examples include state-supported pilot programs that introduce a new community-based doula organization on a local level. States can also create statewide registries of doulas so birthing people have a centralized location to search for providers. State commissions or advisory committees that focus on doula care for maternal health and have doula representatives present can increase the accessibility of doulas.<sup>51</sup>

States can also pass legislation and implement policies that support the community-based doula workforce. Burnout is a prominent problem for the workforce because community-based doulas provide a wide number of services and are often underpaid and underfunded. This puts extra stress on the doula and the doula's family.<sup>2</sup> Community-based doulas often burnout within a couple years and are forced to move out of the doula workforce, creating a shortage of available doulas.<sup>30,53</sup> States can support doulas by developing clear certification processes, including doulas in workforce advisory committees, and providing funding for education and training opportunities. One example of workforce support is the New Jersey Doula Learning Collaborative created through a collaboration between HealthConnect One and the New Jersey Department of

Health. The collaborative provides support with Medicaid contracting, training, hospital policies, and job recruitment.<sup>57</sup>

Other ways states can support community-based doula care is to increase accessibility of doulas to the public. This can be done through statewide registries such as the optional registry in Louisiana; introducing pilot programs such as ones occurring in Georgia, Iowa, New York, and Wisconsin; creating state commissions to investigate statewide community-based doula care; or providing funding and grants to community-based doula programs.<sup>51</sup> Awareness campaigns can also be essential to teach birthing people what support community-based doulas provide and where to find community-based doula services.<sup>58</sup>

Table 3: State Variation in Community-Based Doulas

State	Medicaid Coverage Yes/No	Medicaid Reimbursement Rate	Expanding Access to Care	Workforce Support
<b>Alabama</b>	No	N/A	Statewide committee	No steps taken
<b>Alaska</b>	No	N/A	No steps taken	No steps taken
<b>Arizona</b>	No	N/A	State advisory committee	Certification process created
<b>Arkansas</b>	No	N/A	No steps taken	No steps taken
<b>California</b>	Yes	Up to \$1,154 total	No steps taken	Workforce financial support program
<b>Colorado</b>	No	N/A	Allow doulas to be present	No steps taken
<b>Connecticut</b>	In progress	In progress	No steps taken	State advisory committee
<b>Delaware</b>	No	N/A	Medicaid coverage committee; recognizes access to doula services	No steps taken
<b>District of Columbia</b>	Yes	Up to \$1,950.71 total	Doula representative on state taskforce	Certification and training process
<b>Florida</b>	Yes	\$450-1,110 total	No steps taken	No steps taken
<b>Georgia</b>	No	N/A	Pilot program	No steps taken
<b>Hawaii</b>	No	N/A	No steps taken	Reviewing certification
<b>Idaho</b>	No	N/A	No steps taken	No steps taken
<b>Illinois</b>	Yes	In progress	Doula representative on state taskforce	No steps taken

Table 3: State Variation in Community-Based Doulas (continued)

State	Medicaid Coverage Yes/No	Medicaid Reimbursement Rate	Expanding Access to Care	Workforce Support
<b>Indiana</b>	No	N/A	Advisory board	Advisory board
<b>Iowa</b>	No	N/A	Pilot program	No steps taken
<b>Kansas</b>	No	N/A	No steps taken	No steps taken
<b>Kentucky</b>	No	N/A	No steps taken	No steps taken
<b>Louisiana</b>	No	N/A	Optional statewide registry	State advisory committee
<b>Maine</b>	No	N/A	No steps taken	No steps taken
<b>Maryland</b>	Yes	Up to \$930 total	No steps taken	No steps taken
<b>Massachusetts</b>	No	N/A	No steps taken	No steps taken
<b>Michigan</b>	Yes	Up to \$1,150 total	No steps taken	No steps taken
<b>Minnesota</b>	Yes	Up to \$770 total	Right to doula support recognized	No steps taken
<b>Mississippi</b>	No	N/A	No steps taken	No steps taken
<b>Missouri</b>	No	N/A	No steps taken	Statewide training grant program
<b>Montana</b>	No	N/A	No steps taken	No steps taken
<b>Nebraska</b>	No	N/A	No steps taken	No steps taken
<b>Nevada</b>	Yes	Up to \$350 total	No steps taken	No steps taken
<b>New Hampshire</b>	No	N/A	No steps taken	No steps taken
<b>New Jersey</b>	Yes	Up to \$1,165-1,331 total	Doula registry and state grants	No steps taken
<b>New Mexico</b>	No	N/A	No steps taken	No steps taken
<b>New York</b>	No	N/A	Pilot program	No steps taken
<b>North Carolina</b>	No	N/A	No steps taken	No steps taken
<b>North Dakota</b>	No	N/A	No steps taken	No steps taken
<b>Ohio</b>	In progress	In progress	No steps taken	No steps taken
<b>Oklahoma</b>	No	N/A	Right to doula support recognized	No steps taken
<b>Oregon</b>	Yes	Up to \$1,500 total	Doula representative on state committee	No steps taken
<b>Pennsylvania</b>	No	N/A	State commission	State commission
<b>Rhode Island</b>	Yes	Up to \$1,500 total	No steps taken	No steps taken
<b>South Carolina</b>	No	N/A	State committee	No steps taken
<b>South Dakota</b>	No	N/A	No steps taken	No steps taken

Table 3: State Variation in Community-Based Doulas (continued)

State	Medicaid Coverage Yes/No	Medicaid Reimbursement Rate	Expanding Access to Care	Workforce Support
Tennessee	No	N/A	No steps taken	State commission
Texas	No	N/A	No steps taken	No steps taken
Utah	No	N/A	No steps taken	No steps taken
Vermont	No	N/A	No steps taken	No steps taken
Virginia	Yes	Up to \$859 total	No steps taken	Certification process
Washington	No	N/A	No steps taken	State workgroup; state certification process
West Virginia	No	N/A	State grant to expand services	State grant to expand training
Wisconsin	No	N/A	Pilot program	No steps taken
Wyoming	No	N/A	No steps taken	No steps taken

Source: National Health Law Program. (2023). Doula Medicaid Project. Retrieved March 1, 2023. from <https://healthlaw.org/doulamedicaidproject>.

## How Did We Reach Our Conclusions?

### Method of Review

This evidence review began with a broad search of all literature related to the policy and its impacts on child and family wellbeing during the prenatal-to-3 period. First, we identified and collected relevant peer-reviewed academic studies as well as research briefs, government reports, and working papers, using predefined search parameters, keywords, and trusted search engines. From this large body of work, we then singled out for more careful review those studies that endeavored to identify causal links between the policy and our outcomes of interest, taking into consideration characteristics such as the research designs put in place, the analytic methods used, and the relevance of the populations and outcomes studied.

Our scope is limited to community-based doula programs. These programs are identified through explicit program descriptions discussing the community-based aspect of care and include visits during pregnancy, support, and postpartum. Home visiting aspects of a program are not necessary to be considered community-based doula care, but most community-based doula programs in this review do include home visits. Lay doula and doulas who are assigned to a birthing person only for the birth are not included in this review as these groups of doulas have different training requirements and relationship with doula program participants than community-based doulas.

Community-based doulas included in the review had explicit goals of matching lived experiences with patients and addressing social determinants of health and other barriers to care caused by inequitable systems. We then subjected this literature to an in-depth critique and chose only the most methodologically rigorous research to inform our conclusions about policy effectiveness. All studies considered to date for this review were released on or before February 15, 2023.

## **Standards of Strong Causal Evidence**

When conducting a policy review, we consider only the strongest studies to be part of the evidence base for accurately assessing policy effectiveness. A strong study has a sufficiently large, representative sample, has been subjected to methodologically rigorous analyses, and has a well-executed research design allowing for causal inference—in other words, it demonstrates that changes in the outcome of interest were likely caused by the policy being studied.

The study design considered most reliable for establishing causality is a randomized controlled trial (RCT), an approach in which an intervention is applied to a randomly assigned subset of people. This approach is rare in policy evaluation because policies typically affect entire populations; application of a policy only to a subset of people is ethically and logistically prohibitive under most circumstances. However, when available, RCTs are an integral part of a policy's evidence base and an invaluable resource for understanding policy effectiveness. Because RCTs are often available in evaluating the effectiveness of community-based doula care, the scope of this evidence review is limited to RCTs.

Although outside the scope of this evidence review, the strongest designs typically used for studying policy impacts are quasi-experimental designs (QEDs) and longitudinal studies with adequate controls for internal validity (for example, using statistical methods to ensure that the policy, rather than some other variable, is the most likely cause of any changes in the outcomes of interest). Our conclusions are informed largely by these types of studies, which employ sophisticated techniques to identify causal relationships between policies and outcomes. Rigorous meta-analyses with sufficient numbers of studies, when available, also inform our conclusions.

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Prenatal-to-3 Policy Impact Center  
Vanderbilt University | Peabody College of Education and Human Development  
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