South Carolina EACH Mom & Baby Collaborative

Expanding Access to Community Health workers (EACH) in the Perinatal Period

A guide for replicating successful models of perinatal community health workers

CENTER FOR
COMMUNITY HEALTH
ALIGNMENT

Contents

Overview of Community Health Workers

What is a Community Health Worker?

You may know community health workers (CHWs) by many different names:

Lay Health Advisor
Outreach Worker
Promotores
Patient Navigator
Peer Counselor
Patient Advocate
Home Visitor
Community birth worker

CHW is the umbrella term for all these roles. The American Public Health Association's definition of a CHW, endorsed by the National Association of CHWs, is:

> *A community health worker is a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served.*
>
> *This trusting relationship enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.*
>
> *A community health worker also builds individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, community education, informal counseling, social support, and advocacy.*

CHWs build bridges between health and social service systems and the communities in which they live and work. Their trust and lived experience in the communities helps them bring health information and support to patients and clients. And they feed that awareness and understanding back into the systems that they serve, improving the quality and effectiveness of those services.

Adapted from Brooks et al (2018).

What does a Community Health Worker do?

Because their work is participant-centered and responsive to the needs of each individual, what a CHW does on each day may be very different. The CHW Core Consensus project, using a participatory, consensus building process, helped define overall CHW core roles. They are:

Core CHW Roles
Advocacy for individuals and communities
Assessments of individuals and communities
Building individual and community capacity
Care coordination, case management, & system navigation
Coaching and social support
Cultural mediation
Culturally appropriate health education
Direct services
Outreach
Participating in evaluation and research

What do we know about the effectiveness of CHWs?

Because there is so much variation the design and purpose of CHW care models, it is difficult to summarize the evidence of the CHW approach to care. However, with improved definition of their roles and skills, there is a growing base of evidence showing the value and effectiveness of the CHW approach. To date, there have been many systematic reviews published in peer-reviewed journals[2-13] and over a dozen published randomized control trials[14-25] that have found positive outcomes associated with CHW interventions in such fields as diabetes management, cancer screenings, and cardiovascular care.

Many professional organizations and leaders in the public health field recognize the potential of CHWs to not only improve health outcomes, but also be an important part of creating more equity in public health. Some examples include:

- In its report, "Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care," the Institute of Medicine supports expanding, evaluating, and replicating the use of CHWs in underserved and racial and ethnic minority populations. "**Community health workers offer promise as a community-based resource to increase racial and ethnic minorities' access to health care and to serve as a liaison between healthcare providers and the communities they serve**".
- A 2018 report from the American Hospital Association and National Urban League cited earlier literature reviews from the Institute for Clinical and Economic Review and the Agency for Healthcare Research and Quality, "**A majority of published studies show a positive impact of CHW-based interventions on health outcomes or resource utilization, relative to limited interventions or usual care**"[13,26,27].
- The Community Preventive Services Task Force finds **strong evidence of effectiveness for interventions that engage community health workers in a team-based care model** in several areas:
    - Strong evidence of effectiveness for interventions that engage CHWs to **improve blood pressure and cholesterol** in patients at increased risk for cardiovascular disease.[28]
    - Strong evidence of effectiveness in **improving glycemic and lipid control and reducing healthcare use** among participants with diabetes.[29]
    - Strong evidence of effectiveness of interventions that engage CHWs in **increasing screenings for breast, cervical, and colorectal cancer**.[30-32]
    - Sufficient evidence of effectiveness in improving glycemic control and weight-related outcomes among people at increased risk for type 2 diabetes.[33]
    - Overall, the weight of evidence indicates that all these CHW interventions are **cost-effective**, with the exception breast cancer screenings.[30-32]
- The CDC has created a Best Practice Strategy for CHWs in their Division for Heart Disease and Stroke Prevention, stating, "**Integrating CHWs on clinical care teams and in the community is an effective strategy for increasing patient knowledge and medication adherence and lowering blood pressure and cholesterol levels among diverse populations and in various settings**.".

In South Carolina, the Center for Community Health Alignment's mission to use evidence-based models and meaningful community engagement strategies to address health inequities, including training CHWs and providing technical assistance to organizations to integrate them effectively.

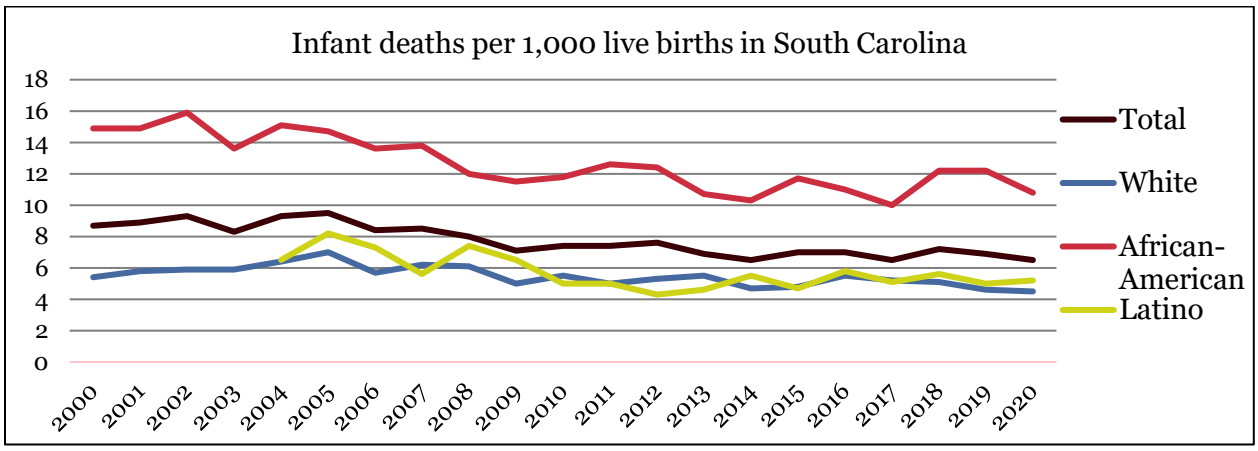
Why focus on the perinatal period?

The health of infants and mothers serves as a barometer, or indicator, of the overall health of a community. Although the perinatal period has unique health risks, it also offers exciting opportunities to engage with families about their health.

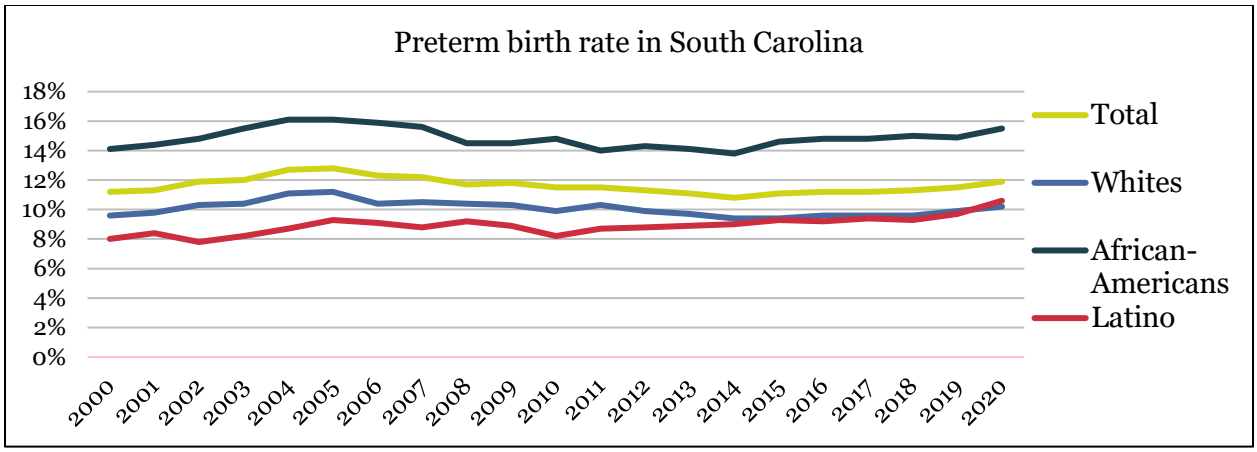
In South Carolina, 364 babies died before they reached their first birthday in 2020, and approximately 14 pregnant or postpartum mothers died, meaning one baby dies every day and one mom dies every month in this state[34,35].

South Carolina's infant mortality rate is 6.5 per 1,000 live births[34].

- The US's national rate is 5.6[36]. If South Carolina had the same infant mortality rate as the US, approximately 50 fewer babies would die in our state each year.
- For an international comparison, the United Kingdom's rate of infant mortality is 3.7 per 1,000 live births[37]; achieving that rate in South Carolina would save approximately 200 babies' lives every year.
- There are significant racial disparities in infant mortality rates, with African-American babies dying at over twice the rate of white babies (10.8 infant deaths per 1,000 live births, compared to 4.5).



To understand infant health better, it's helpful to look at prematurity and low birthweight, which was the leading cause of infant death in South Carolina in 2019[38]. In 2020, 11.9% of babies in South Carolina were born preterm (<37 weeks gestation), compared to 10.1% in the US[39].



Birth outcomes reflect a complex combination of lifelong and socio-environmental health, not often easily addressed during the perinatal period alone:

Factors associated with higher risk of preterm birth in South Carolina

- Mothers with diabetes and hypertension - both chronic and pregnancy-associated
- African-American race
- Mothers who use tobacco during pregnancy
- Mothers aged 35+ years old
- Mothers who were obese prior to pregnancy
- Mothers who were unmarried
- Medicaid eligibility
- Mothers with less than high school education

Factors not associated with a higher risk of preterm birth

- Mothers who receive "Less than adequate" prenatal care
- Adolescent mothers
- Mothers who were overweight prior to pregnancy
- Latina ethnicity
- White race

Racial disparities in birth outcomes have been particularly persistent, with African-American mothers experiencing higher rates of prematurity than white and Latinas even when they don't have other risk factors (such as tobacco use, obesity, chronic diseases, Medicaid eligibility, or low education levels). In fact, African-American mothers have lower rates of some of the higher risks (tobacco use and age over 35) than white mothers. It's clear that in order to address the problem of prematurity and infant illness and death, racial equity must be a persistent focus.

Looking at the well-being of the mothers, South Carolina's maternal mortality rate (the number of mothers who die while pregnant or up to six weeks postpartum per 100,000 live births) is 25.5 deaths per 100,000 live births[35]. The US maternal mortality rate is 17.7 deaths per 100,000

live births, or 30% lower than South Carolina's rate[40]. For international context, the United Kingdom's rate is 7 deaths per 100,000 live births[41].

As with infant health, there are distinct racial inequities in maternal mortality in South Carolina – the rate was 2.6 times higher for African-American (and other races) mothers compared to white women (43.3. vs. 16.4 maternal deaths per 100,000 live births, respectively)[35]. The most common causes of these deaths were hemorrhage and infections, and the South Carolina Morbidity and Mortality Review Committee determined that over half of maternal deaths were preventable. In addition, the rates of severe maternal morbidity (life-threatening labor and delivery outcomes) follow similar patterns, with African-American women experiencing approximately twice the rates of white mothers[42].

It's clear that improving birth outcomes, and particularly racial inequities in birth outcomes, is a complicated and dynamic challenge that may not be solved through clinical care, behavioral change, or social programs alone. That is a reason that pairing perinatal families with CHWs is a promising intervention – CHWs tailor their efforts to each family's own strengths, aspirations, and needs, and can help each family navigate through the intense adjustments of the perinatal period and access services available to them.

At the same time, CHWs provide valuable insight for clinical systems and community organizations to improve their services for their population of interest. CHWs have a profound knowledge, through their work and lived experience, of the impact of programs and policies, and can help shape them to be more equitable and effective. This is particularly important for perinatal services, in which the US invests billions in healthcare and social services.

What is the evidence behind CHWs during the perinatal period?

Much of the research on perinatal community health workers (PCHWs) comes from low- and middle-income countries, where PCHW interventions have been associated with decreases in neonatal mortality and fetal deaths,[5,8,43] increased breastfeeding and immunizations,[8] increased "appropriate care seeking" for illness and implications, and improved child nutrition status.[44] The World Health Organization has developed several guides for using perinatal CHWs as an important component of reproductive, maternal and newborn healthcare.[45-49]

There is emerging data from the US as well. It includes:

- An evaluation of the "Safe Start" program in Philadelphia, where pregnant women with chronic health conditions have PCHW care that results in lower odds of inadequate

prenatal care, lower rates of inpatient admission or triage visits during pregnancy, and higher odds of attendance at the postpartum visit and using postpartum contraception than a comparison group[50].

- An evaluation of the Baby Love program in Rochester found PCHW clients had fewer adverse outcomes such as preterm birth and low birthweight, and higher rates of postpartum visit attendance and well-child care, than non-participants[51].
- The Health Start PCHW program in Arizona is associated with significantly lower rates of low birthweight than a comparison group among mothers who are American Indians, Latinas, teens, or have pre-existing health conditions[52,53].
- Studies in Minnesota that indicated an association between community-based doulas and lower rates of preterm births and c-sections, increased rates of breastfeeding, and decreased costs compared to births without doulas.[54,55]
- A randomized control trial of community-based doulas indicated it was associated with increased breastfeeding rates and delayed solid food introduction,[17] as well as a positive impact on parent–child interactions, maternal attitudes about parenting practices, and a delayed impact on reducing maternal stress; however, the impact on parenting skills diminished after the end of the intervention.[56]
- The Community Health Access Project in Ohio, which found perinatal CHWs were associated with lower risks of low birthweight, compared to a matched cohort.[57]

Perinatal Community Health Worker programs that work in South Carolina

Fortunately, South Carolina has three local Perinatal Community Health Worker (PCHW) models that are experienced and effective at improving birth outcomes.

Doulas as CHWs

BirthMatters' community-based doulas provide individually tailored, culturally congruent care and advocacy for pregnant and postpartum participants through information, education, and physical, social, and emotional support. BirthMatters replicates HealthConnect One's community-based doula model to reach expectant mothers in Spartanburg who are Medicaid-eligible and less than 24 years old. Starting by 24 weeks gestation through the first postpartum year, a community-based doula meets with her client approximately 45 times, in their home or in the healthcare setting. In addition, they provide continuous support during labor and delivery.

Potential participants connect with the BirthMatters team through three main pathways. The first, and most common source of new participants, is a well-established "closed-loop" referral process between BirthMatters and the main obstetrical care provider in their area that accepts Medicaid. The second most common source of new participants is word of mouth in the community, followed by social media.

Community-based doulas go through 70 hours of initial training and orientation, followed by ongoing reflective supervision and leadership development. An experienced community-based doula manages a caseload of 18-20 clients per year.

The BirthMatters team has built relationships with the staff at the main referring clinicians' office, visiting them several times per year to discuss collaboration and community input. The

doulas use "Maternity Neighborhoods" software to track encounters and outcomes, and Sales Force software to track referrals and participation.

Why it's a best practice:

- In 2017, researchers at Wofford College compared 93 BirthMatters patients' outcomes to a similar group of women who delivered in Spartanburg during the same time frame (2013-16). They found that BirthMatters' patients had:
  - ~ Lower rate of c-sections - 23.7% compared to 26.6%
  - ~ Lower rates of NICU admissions – 6.5% compared to 11.7%
  - ~ High rates of breastfeeding – 90% compared to the statewide rate of 83%
  - ~ High rates of uptake of long-acting reversible contraception – 68 out of the 93 patients had one placed (73%)
- A 2017 Cochrane review found that the continuous labor support that doulas provide is associated with increased rates of vaginal deliveries and fewer c-sections, shorter labors, improved APGAR scores, and decreased negative feelings about childbirth experiences. Although it was not the highest level of evidence, there was no evidence of harm.[3]
- In their 2014 consensus statement, "Safe Prevention of the Primary Cesarean Delivery," the American College of Obstetricians and Gynecologists and the Society for Maternal and Fetal Medicine included the following statement, "Published data indicate that one of the most effective tools to improve labor and delivery outcomes is the continuous presence of support personnel, such as a doula… Given that there are no associated measurable harms, this resource is probably underutilized.[58]"

Understanding doulas
Clarification about various doula services and structures, according to HealthConnect One[1].
Services:

- **Community-based doula**: A CHW with perinatal training who provides services through home visits during pregnancy and postpartum and continuous labor support at the birth site.
- **Birth doula**: A labor support person who is trained in providing continuous physical, emotional, and informational support to a mother and her family during the birth process.
- **Postpartum doula**: A trained support professional who provides information, assistance, and support for baby care and postpartum adjustment.

Administrative and payment models:

- **Community-based doula**: Doulas are salaried employees whose services are provided at no cost to the participant. Programs are often paid for by grants or philanthropy.
- **Private-practice doula**: An independent doula who offers doula services to families for a fee that patients pay directly to the doula.
- **Hospital-based doula**: A doula service that is offered as part of a hospital's labor and delivery unit.

SOUTH CAROLINA OFFICE OF RURAL HEALTH
FAMILY SOLUTIONS

Rural, underserved areas

For over 20 years, SC Office of Rural Health / Family Solutions (SCORH / FS) has provided targeted case management, outreach and health education services to pregnant and postpartum women and their infants in four rural, underserved counties of South Carolina (Orangeburg, Allendale, Bamberg, and Hampton). This region has had significantly higher infant mortality rates than the rest of South Carolina, and are designated as primary care Health Professional Shortage Areas for the low-income population[59].

All pregnant residents of the service area are eligible for FS services. The FS team identifies potential participants through referrals from clinical practices, hospitals, social service organizations, schools, others community members, or the women themselves. Coordination and case management services begin at the initial enrollment, with a comprehensive risk screening to assess health and well-being, including both medical and psychosocial factors and conditions. This assessment determines the level of care and health interventions that each client needs.

FS employs a trained team of masters-level social workers (MSWs) and perinatal community health workers (PCHWs) culturally and linguistically matched to the women and families served. Their PCHWs spend 18 months conducting approximately 20-24 home visits with each pregnant and postpartum mother, using the "Partners for a Healthy Baby" curriculum from Florida State University. Their MSW home visitors assume the care of mothers who need more intensive counseling. PCHWs have a typical caseload of about 50 clients; PCHWs who are MSWs and see women with higher levels of risk can maintain 25-35 clients at a time.

FS also operates the "Opportunity Knocks" fatherhood initiative, to strengthen families by empowering fathers to become financially stable, build self-worth and self-esteem, and improve job readiness.

FS emphasizes active engagement not only between PCHWs and the families they serve, but also with health care providers and community leaders in their areas. The Community Action Network (CAN) includes representatives from local community agencies with similar goals, and the Provider Action Network (PAN) consists of the local medical professionals who see the same population. Both groups meet regularly. The goals for these stakeholder collaboratives are to:

- Monitor FS's service data,
- Identify and address systems weaknesses and gaps, and
- Identify and address community and client issues.

This intentional focus on multi-directional communication helps all of them improve their services to their clients and patients.

The FS team collects participant-level data at various intervals with a web-based case management system. They collect participant demographics and the results of screening tools (including pregnancy history, parenting screenings, and more). It tracks participant appointment status, pregnancy outcome data, and referrals and referral completion data. They also engage an external evaluator with Mercer University to help strengthen their work and assure FS is meeting program requirements and expectations.

Why it's a best practice:

- From 2016-2019, African American infant mortality rate among FS program participants decreased from 7 to 6.9.
- In 2017, SCORH / Family Solutions program again compared its data to birth certificate data on infant mortality among African-American infants. The FS service area had a rate of 4.1 per 1,000 live births, compared to the state rate of 11.9.
- In 2019, 100% of FS participants attended their postpartum visit, which is a major Healthy Start goal.

Latino families

PASOs supports Latino communities throughout South Carolina with CHWs that focus on education, advocacy, and empowerment with families. Their CHWs are all bilingual and bicultural community leaders who go through PASOs' 80-hour CHW training that is accredited by the SC Community Health Worker Credentialing Council. PASOs has a strong Central Office team responsible for training, supervision, evaluation, and program development. The CHWs are mostly employees of affiliate organizations located in areas with high numbers or percentages of Latinos.

The affiliate structure of PASOs is an example of their strong focus on building relationships, both with partner organizations and with community members. Both the Central Office team and CHWs build trust with formal and informal leaders who are trusted in the Latino community, to improve communication and effectiveness of health initiatives.

PASOs has three signature programs:

- "Health Connections" helps families address their social determinants of health through resource navigation.
- "Connections for Child Development" employs CHWs to screen children in the community for developmental milestones and help them get the resources they need to address any challenges identified.
- "Strengthening Systems of Care" collaborates with partner organizations to build their capacity to effectively serve Latino families.

The PASOs team uses a case management tracking software system which follows individual cases as well as organizations that are working to develop more culturally appropriate and tailored services. Each case follows a pathway for CHWs to continue and document until they "close the case" on that person's or organization's need. This allows them to plan and document follow-up with families to ensure that they accessed the resource they needed and are satisfied with the outcome.

Important terms and concepts

Pasos ~ Steps

Confianza ~ Trust built through interpersonal relationships

Compromiso ~ Deep commitment to service

Why it's a best practice:

- The Association of Maternal Child Health Programs (AMCHP), which has a review committee of experts in the public health field, designated PASOs Healthy Connections as a "Best Practice" and Connections for Child Development as a "Promising Practice."
- In 2018, of the almost 6,000 participants that worked with a PASOs Healthy Connections CHW, 82% reported that they completed the goal that they set. The most common goals achieved included ~
    - Renewing Medicaid or other insurance
    - Connecting with healthcare providers (including prenatal care)
    - Selecting a birth control method with reproductive health education
    - Signing up for WIC
    - Resolving a social determinant of health such as limited material resources (clothes, food, etc.), transportation, housing, education, or legal assistance

- Also in 2018, PASOs CHWs connected with almost 5,000 people through community outreach and engagement.
- In 2018, PASOs CHWs partnered with 230 organizations. They documented 30 process changes to improve services to Latino families at those partner organizations, such as hiring bilingual staff or eliminating citizenship documentation as part of required paperwork.
- In 2018, PASOs Connections for Child Development CHWs screened over 800 children for developmental milestones using the ASQ-3 tool. While completing screenings, families also set goals with the CHWs such as connecting with a pediatrician or finding a specialist. Not only that, but the CHWs trained home visitors across the state in working with Latino families.

In an effort to expand the reach of these successful PCHW models to more families and communities in South Carolina, this guide provides the following information about each model:

1. **Best practices**
2. **Ideal fit**
3. **Resources required**
4. **Replication and evaluation indicators**

1. Best practices

When initiating a perinatal community health worker (PCHW) program, there are a several best practices to consider. The following are adapted from the Center for Community Health Alignment's CHW Toolkit and from the Centers for Disease Control and Prevention's "Including CHWs in Health Care Settings: A Checklist for Public Health Practitioners"[60]. To demonstrate how that component looks in "real world" implementation, there are some examples of these components in action.

1. **Design the PCHW job description and scope of work that align with and take full advantage of PCHW core qualities, skills, and roles.**

   - ***Non-clinical support providers*** ~ PCHWs help families create a plan of care to address their self-identified social determinants of health**.** Their focus is on the many social and environmental factors that affect their clients' health. They are not nurses or social workers, and should not be seen as "taking the place" of clinical providers such as those. PCHWs carefully manage their scope of work so as not to interfere or take on tasks they are not qualified to perform.

     Best practice in action: BirthMatters doulas' scope of practice includes providing emotional and physical comfort for mothers during labor and delivery. They are not midwives or nurses, and do not interfere with the medical care that those roles provide. They can, in collaboration with the medical team, assist their client to understand medical language, and support their clients' decision-making processes. Respecting the boundaries and autonomy of everyone involved in the childbirth process – the patient, the clinicians, and the doulas – is an essential part of the doula's work.

   - ***Full-scope, participant-centered practice*** ~ While it's a best practice to integrate PCHWs into care coordination teams with clinical and social service providers, PCHWs should not be co-opted into inappropriate roles such as administrative tasks or supporting the office's agenda instead of the clients' priorities.

     Best practice in action: A PASOs Affiliate was interested in improving the proportion of their pregnant patients who received "adequate" prenatal care, and identified the PASOs CHW as someone who could help them achieve that goal. While prenatal care is important, the PASOs CHW does not impose the office's priorities on the participant's plan of care, but rather allows the participants to set their own agenda based on their understanding of their own needs and opportunities. Concentrating on the office's goals instead of the family's priorities may impede the PCHW from building trust with the participant and assisting them with what they consider most urgent. The PASOs CHW agreed to share information with her participants about the availability of prenatal care, transportation assistance, payment plans, and bilingual staff, but explained that the participants may choose to focus on other goals first. In reality, if

parents successfully address their other social determinants of health, they may be more likely to attend their prenatal care appointments, so it's ultimately a "win-win."

2. **Engage and support the best PCHWs**
   - ***Lived experience in the community that you are seeking to help*** ~ Having personal knowledge of the community means they understand the struggle, assets, and characteristics of the population, and can more easily establish trust with families. Even better, many PCHWs have also received the services they now offer to other families.

     Best practice in action: SCORH / Family Solutions (FS) hires from within the communities they serve and, in some cases, former recipients of services. This helps with relatability and rapport-building with their participants. For example, one of the PCHWs on the FS team initially came to them as a pregnant high school student who needed their support. She, along with other PCHWs who are former participants, credits the encouragement, mentoring and individual help FS gave her as a key motivator to her success. Being employed at FS, they are now, in turn, helping other young women build their lives, families and careers, and providing a role model for them as well. When they tell their clients, "I've been there," they mean it.

   - ***Training and certification through an accredited curriculum*** ~ CCHA and PASOs offer training that is certified through the SC Community Health Worker Credentialing Council. BirthMatters' training curriculum is certified by HealthConnect One. SCORH / Family Solutions' PCHWs are trained internally and accredited with SC CHW Credentialing Council, and also receive trainings from the Maternal Child Health Bureau's Division of Healthy Start and Perinatal Services.

     Best practice in action: PASOs has provided training for its Promotores for years, with particular focus on making connections with participants and supporting their health decision-making. Recently, they have had their training credentialed by the SC Community Health Worker Association's Community Health Worker Credentialing Council. PASOs Training Manager, Ana Cossio, found that this has deepened the training experience and content for their Promotores. "We spend a lot of time practicing how to build trusting relationships with our participants –

that's the most important part. But now we also cover ethics, values, and specific health issues with interactive activities like role-playing scenarios, World Café, and discussions. We also pay a lot of attention to Promotores' feedback, which led us to add professional development and team-building activities focused on peer collaboration, leadership, and communication skills. I hear from our team members often that this really helps our Promotores 're-charge their batteries' for our work."

- ***Full integration into the workflow of the organization*** ~ Familiarize all staff at the PCHW's workplace and partner organizations to the PCHWs' roles and skills. This should include a thorough orientation to what to expect from PCHWs, and how best to collaborate with them.

  Best practice in action: A PASOs Affiliate was struggling with how to effectively use the PCHW's services and skills. Because she was not regularly in the office during clinical hours, they weren't comfortable with how to refer patients to her, communicate directly with her, and understand more deeply about how she works with their patients. One of the ways that the PASOs PCHW addressed this situation was to make sure to attend the monthly staff meetings and bimonthly clinical team meetings, and the clinic manager added PASOs as a standing agenda item at those meetings. This regular opportunity to discuss her work and how it fits with the clinical services, as well as having a "touchpoint" opportunity to build relationships with the clinical staff, has helped everyone feel like the PASOs PCHW is more of a part of their team.

- ***A living-wage-salary*** ~ That CHWs come from the community that they serve is an essential feature of the CHW model. This means CHWs are more likely to come from communities of disadvantage, and may lack economic stability. Therefore, it is important for them to have a consistent and fair salary, as opposed to being paid by the encounter, or by the patient. Salaries must be a living wage, or the program will be vulnerable to high levels of disruptive turnover. *Do not mistake a lack of formal education or formal work experience for lack of PCHW qualifications*. Their "lived experience" with the community they serve is a critical key to their success.

Best practice in action: Some states have instituted doula payment programs that require doulas to register with the state as a provider and receive limited reimbursements per-delivery or per-encounter. At BirthMatters, however, they have committed to a more reliable salary structure. "Providing steady income and benefits to our community-based doulas is a way to prevent burnout from day one," says Molly Chappell-McPhail, Director of Advocacy and Expansion. "This work can be heavy, and in addition, the doulas have to be on-call for the deliveries 24 hours a day. It's important to support the doulas well, because they are the magic of the program."

- ***Reflective supervision, intensive mentoring, and professional development*** ~ PCHW supervisors should invest significant time and energy to supporting PCHWs. PCHWs' work may involve extensive and personal contact with patients and clients at high levels of stress. Because they are out in the community, there is less distance – both physical and emotional – between them and their clients than traditional service or clinical providers. In addition, some PCHWs may have less experience in the professional environment of a social service or clinical provider's office, and may benefit from extra help adjusting to it.

  Best practice in action: At BirthMatters, reflective supervision means modeling the problem-solving support that doulas give their participants. "It's about believing that you can. These doulas have so much community knowledge, and we invest in them with training and guidance. They know the community side of the work, and our supervisors knows the business side. We can blend those constructively" – Amber Pendergraph-Leak, Executive Director.

3. **Clinical and social service care partners allow the PCHW to participate in case reviews, coordinate care plans, and/or inform clinical services.**

   PCHWs offer a valuable service both to families and care providers by being a bridge, or link, between them. This functions best when there are clear and explicit communication plans between the PCHW and care partners, such as regular meetings and frequent, user-friendly methods of contact.

Best practice in action: SCORH / Family Solutions coordinates several stakeholder engagement meetings on a regular basis. One of these meetings is a clinical case review, in which the PCHWs discuss their participant's care plan with their clinical care provider. This gives both the clinician and the PCHW an opportunity to learn from each other and better serve their mutual patient. In one case, a clinician's practice was preparing to discharge a pregnant FS participant from their practice due to excessive "no-shows." The PCHW knew that the participant did not feel comfortable enough with their clinical provider to share some of their barriers to attending appointments. In this case, the provider was routinely scheduling prenatal care appointments early in the mornings to fit their clinical schedule. This particular patient did not have their own car and relied on the Medicaid van for a ride to the clinic. While this is a valuable service, the pick-up and drop-off times can be highly variable, and they often came at times when the patient had to prepare her other children for school. Working together, the PCHW and prenatal care provider identified later appointment options for the patient and developed better communication with the patients for sharing transportation problems.

4. **Unique support for each family**
   - ***Strength-based, participant-centered care*** ~ The strengths-based approach contrasts with the problem-based approach of much clinical care. PCHWs help the participants identify and draw on their own strengths to meet their needs and challenges. Being participant-centered contrasts with provider-centered care, in which the clinician is the expert that doles out information and recommendations to the patient. The participant-centered approach means that PCHWs encourage participants to identify, prioritize, and address their own determinants of health.

Best practice in action: Center for Community Health Alignment's CHW Core Competency training covers participant-centered concepts, repeatedly practicing the skills. Some CHWs who have experience in helping fields are accustomed to taking the lead on deciding what information and resources to provide to families, and have to adjust to this different approach. "We frequently hear CHWs immediately want to jump into a participant interaction with lots of brochures and advice and plans. We have to practice with them to step back and let the participant lead, first finding and recognizing the strengths and resources that

they have. Then we can help out in a supporting role, to provide the referrals and information that the participant identifies that they want. It takes practice, but it's worth it!" -Dom Francis, CCHA Training Coordinator.

- ***In the community, including participants' homes*** ~ PCHWs meet their clients where they are, not expecting the clients to come to them. This means they conduct home visits and community outreach, and should not be expected to stay in the office for the majority of their work hours. They also may not always have traditional schedules of Monday-Friday 9:00-5:00; they may better reach their clients on evenings or weekends. This flexibility helps break down the barriers that many families have with addressing their needs or seeking help, including transportation, lack of understanding of resources, intimidation, prohibitive work or childcare schedules, and others.

  Best practice in action: SCORH / Family Solutions team members are flexible and willing to work non-traditional hours when necessary. "24-7 we do a lot of community outreach. We do health fairs, set up at stores, partner with the libraries, host community events… A lot of that is on Saturdays. But it's really important – because when they see your face a lot out in the community, they remember" – Tracy Golden, Senior Program Manager. In addition to outreach, sometimes it's necessary to see the participants for one-on-one meetings outside regular office hours, if that's what they need. Even though they have to be flexible, team members collaborate to make sure they stay within their expected number of hours per week, to avoid both human burnout and budget overruns.

5. Evaluation and improvement

- ***Collect, analyze, and report data*** ~ PCHW programs use this information to strengthen and expand their service to the community.

  Best practice in action: BirthMatters shared data with evaluators from the Institute for Child Success (ICS) as part of their feasibility study for a "Pay For Success" program with the City of Spartanburg. ICS found BirthMatters "…is promising and has financial benefits," ultimately recommending it for the financing strategy[61]. As a result, Spartanburg has included BirthMatters in its innovative "Hello Family" social investment initiative.

- ***Share data and celebrate successes with partners and the community*** ~ As part of the focus on strengths, emphasizing the power of their clients and communities, it's important for PCHW programs to publicly and joyfully share their triumphs and accomplishments. This can be in the form of graduations, participant family reunions, or recognition luncheons, for some examples.

  Best practice in action: SCORH / Family Solutions has held an annual "Infant Mortality Awareness Luncheon" in Orangeburg for 13 years. This has become a major event for the community, routinely attracting over 500 attendees from across the state and region. In addition to inspirational and informational speakers, the event honors families that have completed their programs and received scholarships for their further education. "Family Solutions' Infant Mortality Awareness Luncheon is one of my favorite things every year; it really brings me back to the meaning and purpose behind what we do. It's so gratifying to see these amazing mothers get some recognition for all they've overcome and accomplished, and keeps me motivated to continue supporting this work." – Birth Outcomes Initiative member

2. Ideal fit

Community health workers (CHWs) work in all different geographies, settings, and communities. There is no wrong place for a CHW. But there are some situations in which perinatal CHWs (PCHWs) are ideal for addressing challenges:

1. Where there is a **persistent need**, such as high levels of infant mortality or maternal morbidity, that other clinical care or social services haven't been able to adequately address. PCHWs can make stronger connections between families and services, because of the trust they build with both. CCHA developed the CHW Prioritization Index to help identify the areas of greatest need for CHWs, which includes factors like poverty, uninsured population, healthcare provider availability, and population demographics.

   SCORH / Family Solutions began as a Healthy Start program when the federal Health Resources and Services Administration identified African-Americans in Allendale, Bamberg, Hampton, and Orangeburg counties as having an infant mortality rate over 1.5 times that of the national average. All four counties are medically underserved areas for primary care, and Allendale is a "Maternity Care Desert," while Orangeburg and Hampton have "Limited Access to Maternity Care."[62,63]

2. Where pregnant people and infants lack **continuity of care**. Examples might include:
   - Rural areas that lack obstetric care, where patients may have fewer resources to travel long distances in order to comply with "adequate" care guidelines.
   - Patients who have health risks or financial need that routinely require them to transfer from one clinical practice to another during their care.
   - Cities in which a medical teaching service provides the majority of obstetrical or pediatric care. In these practices, patients may see multiple providers during their care without options to have one main, trusted provider.

   In these cases, PCHWs offer the opportunity to be the continuity for the clinical care team, helping the patients trust and access care.

   In Spartanburg, one of the few options for prenatal care for many young Medicaid-eligible mothers is a practice in which the majority of clinicians are residency fellows whose clinical assignment changes monthly. Therefore, the patients may see a different provider at each visit and have a

clinician at their labor and delivery whom they've never met. The community-based doulas of BirthMatters build strong relationships with their clients and can help provide consistent support.

3. Where there are particularly **vulnerable populations** that need extra care due to their social determinants of health. PCHWs can be the bridge between these communities with clinical and social service providers.

   The immigrant Latino community faces several extra barriers to prenatal care, including lower rates of insurance coverage, language challenges, discrimination, unfamiliarity with local medical systems, and fears related to their immigration statuses. PASOs CHWs meet them in their language and cultural practices to help explain and connect them with local resources. When a resource doesn't exist, or isn't culturally appropriate, PASOs advocates for appropriate changes.

3. Resources required

It's critical to ensure perinatal community health worker (PCHW) models of care are fully funded; inadequate resources put the programs' sustainability and effectiveness at risk. Each of the three PCHW models discussed here have unique budgets, but there are many commonalities.

1. **PCHW salaries** – As one of the essential components of PCHW models, PCHWs must have a salary that is considered high enough to prevent frequent turnover and provide a living wage.
2. **Supervisor salaries** – Another essential component, the supportive supervision and mentoring of PCHWs requires dedicated time. Some suggest that supervision should be budgeted at 40% of the CHW salary[64].
3. **Office space** – Although PCHWs spend much of their time in the community, they can use, at least, a "landing spot" (such as a cubicle or shared desk) in a physical space. This will help them store materials, meet with colleagues, and focus on data entry and other reporting duties.
4. **Communication equipment** – Because PCHWs are mobile - entering clients' homes and visiting sites in vulnerable communities – they need reliable cell phones and coverage in all the areas that they may be visiting. They also use text and app features to communicate with participants and colleagues.
5. **Computer and / or tablet** – PCHWs use computers to communicate with clients and colleagues, enter data and encounter notes, research information for their clients, and typical office work.
6. **Mileage** –Travel costs for home visits and community activities cover PCHW's gas and car maintenance costs and are often one of the highest costs of a PCHW program.
7. **Technical Assistance** – BirthMatters, SCORH / Family Solutions, and PASOs each have centralized program support teams, which help consistently improve the programs and keep costs low through economies of scale. Each organization that implements one of these models becomes a program affiliate, and benefits of affiliation include:
    - Marketing and communications – program branding and coordinated statewide messaging
    - Training and professional development – assistance with the hiring process, new staff orientation and training, continuing education, and regular meetings for updating collective knowledge and sharing resources

- Evaluation – staff and software to collect, analyze, and report program data
- Coaching and support – personalized consultation to support strategic planning, grant management and fundraising, quality improvement, and problem-solving

This cost will vary according to the number of team members, program growth, and size of each affiliate, and EACH Collaborative will support sites to plan for sustainability.

4. Data and evaluation

PROCESS INDICATORS *As a collaborative, EACH member organizations recognize the importance of an intentionally thoughtful implementation process to the ultimate accomplishments and outcomes of PCHW programs. This includes the hiring, training, and mentorship of the PCHWs and their teams, who are the key to the success of this approach.*			
All EACH Collaborative organizations	**BirthMatters**	**SCORH / Family Solutions**	**PASOs**
Perinatal community health workers (PCHWs) receive training and certification through a standardized curriculum (source: internal report)	100% of community-based doulas (CDs) complete the BirthMatters / HealthConnect One training and observation	100% of PCHWs are trained in the Partners for a Healthy Baby curriculum 100% of PCHWs are certified through SC CHWA	100% of PASOs PCHWs are trained in the PASOs CHW Core Competency Training 100% of PCHWs are certified through SC CHWA 100% of PASOs PCHWs attend the Perinatal CHW Specialty Workshop, the Connections for Child Development training, and the Ages-and-Stages Questionnaire training
PCHWs are matched with participants based on a shared lived experience or exceptionally close, trusted relationships (source: internal report)	CDs have at least one commonality with 100% of their participants (race, ethnicity, language, neighborhood of origin, or experience)	100% of participants have a culturally- and linguistically-matched PCHW	100% of PASOs PCHWs are bilingual (Spanish-English) and bicultural (significant experience living among Latin@s and United States residents and the deep understanding that emerges from that experience)
Organizations provide supportive supervision and professional development for PCHWs (source: internal report)	BirthMatters leadership provides individual reflective supervision meetings to support CDs' performance and professional development	FS team holds monthly PCHW professional development meetings PCHWs have quarterly individual meetings with their supervisors PCHWs and other care team members hold monthly case meetings to discuss participant care plan progress	PASOs Mentors provide individual reflective supervision meetings at least monthly PASOs PCHWs participate in at least nine monthly statewide network meetings annually PASOs PCHWs attend the annual promotores' conferences training events

PROCESS INDICATORS continued			
All EACH Collaborative organizations	**BirthMatters**	**SCORH / Family Solutions**	**PASOs**
Organizations use a data collection system to collect participant outcomes (source: internal report)	BirthMatters team uses Maternity Neighborhoods to collect data on participants': • Birthweights • Breastfeeding • Reproductive life plans • Mode of delivery • NICU admissions • ASQ and depression screens • Success connecting with resources to address their social determinants of health and care needs ("closed loop referrals")	FS team uses Well Family Systems to collect data on participants': • Breastfeeding • Reproductive life plans • Birthweights • Mode of delivery • NICU admission • Success connecting with resources to address their social determinants of health and care needs ("closed loop referrals")	PASOs PCHWs use Apricot to collect data on participants': • Perinatal Pathway needs assessments and goal plans • Reproductive Life Plan • Adequate or higher prenatal care • Infant ASQ scores • Breastfeeding • Success connecting with resources to address their social determinants of health and care needs ("closed loop referrals")
Each model uses these process indicators and quarterly meetings with EACH program leadership to ensure fidelity and quality improvements (source: internal report)	BirthMatters leadership meets with replication teams to review process indicators and follow up on any implementation support needed	Family Solutions leadership meets with replication teams to review process indicators and follow up on any implementation support needed	PASOs leadership meets with replication teams to review process indicators and follow up on any implementation support needed

OUTPUT INDICATORS *As a collaborative, EACH member organizations recognize the unique contributions of PCHWs to the well-being of their participants. Each participant co-creates their individualized plan of care with their PCHW to address their particular strengths, needs and social determinants of health.* *In addition, PCHWs provide a unique bridge between participants and healthcare providers and social services – providing multidirectional communication and insight to improve services and support participants.*			
All EACH Collaborative organizations	**BirthMatters**	**SCORH/Family Solutions**	**PASOs**
PCHWs provide support to participants that: • **Takes full advantage of PCHWs' skills, roles, and qualities** • **Is participant-centered** • **Takes place in the community, including participants' homes** **Addresses social determinants of participants' health** (source: internal report)	Community-based doulas (CDs) initiate cases before the participant reaches 25 weeks' gestation, and maintain care until they reach six months postpartum CDs maintain a caseload of at least 16-20 births and 24 participants per year CDs conduct weekly prenatal encounters with participants and 15 postpartum home visits over six months	FS team initiates a case within 3 days of receiving the referral PCHWs maintain a caseload of at least 30 participants per year PCHWs conduct approximately 30 visits, which includes prenatal and postpartum period, with participants in their home or other community sites PCHWs visit postpartum participants weekly for the first 4 weeks following delivery and then at least once per month	PCHWs maintain a caseload of at least 75-80 participants per year PCHWs will create a Perinatal Pathway for pregnant families, a Connection for Child Develop (CCD) Pathway for families with children 0-2 years old, and other Pathways (Access to Care, Social Determinants of Health, and/or others) based on a needs assessment for each participant. The PCHW will assist participants to choose goals to meet their needs, and follow up with them to ensure goals have been met At least 80% of participants with infants (3-12 months) complete at least one ASQ CHWs will review 100% of screening results with the primary care giver and support participants to develop a goal based on them CHWs will provide parent education and a toolkit on child development with 100% of primary care givers

OUTPUT INDICATORS continued			
All EACH Collaborative organizations	**BirthMatters**	**SCORH/Family Solutions**	**PASOs**
Organizations engage community stakeholders to inform and enhance both PCHW programs and community partners (source: internal report)	BirthMatters team convenes stakeholders at least once per year	FS team convenes their Community Action Network at least once per quarter.	At least 2 community partners make a change in their policy to engage and better serve Latino families based on their partnership with PASOs
Organizations engage healthcare providers to inform both PCHW programs and clinical care (source: internal report)	Engage at least one prenatal care provider in a formalized participant referral process	FS team conducts monthly case reviews participating providers and MCOs	CHWs working in clinical settings will communicate on a regular basis with clinical staff to help advocate and share information for Program participants

OUTCOME INDICATORS *EACH Collaborative members work towards the ultimate outcome of improving the health and well-being of families in their population of focus.*			
All EACH Collaborative organizations	**BirthMatters**	**SCORH/Family Solutions**	**PASOs**
At least 80% of participants attend their postpartum visit within one year after delivery **At least 80% of participants attend at least six well-child visits by 18 months of age** (source: SC RFA for Medicaid-eligible participants, participant self-report for those without Medicaid) **At least 80% of program participants are effectively connected with resources addressing one or more social determinants of health (nutrition, housing, Medicaid, employment, safety, etc)** **At least 85% of participants have documented positive health outcomes (infant ASQs, NICU admission, number of well-child visits completed, vaccinations received, etc).** (source: case management documentation from each organization: Maternity Neighborhoods (BM), Well Family (FS), Apricot (PASOs))	At least 70% of participants initiate breastfeeding At least 80% of participants have a reproductive life plan initiated within 3 months of delivery At least 75% of participants have a vaginal delivery At least 85% of participants' infants' birthweights will be $\geq$ 2500 grams	At least 80% attend a well-woman (including postpartum) visit annually At least 80% of participants report using safe sleep practices At least 70% women initiate breastfeeding At least 90% of participants attended their most recent scheduled well-child visit	At least 80% of participants have established a Reproductive Life Plan At least 80% of participants start prenatal care during the first trimester of pregnancy 100% of participants are receiving prenatal care in the second and third trimester of pregnancy At least 80% of participants have identified a medical home for their newborns within 2 months of delivery At least 80% of infants whose ASQs result in developmental concerns and need further assessment will be connected to one or more resources. CHWs follow up with the primary care givers of 100% children screened until at least 80% of them have their goals met

Mentoring and support

The EACH Mom and Baby Collaborative, housed at the Center for Community Health Alignment (CCHA) within the Arnold School of Public Health at the University of South Carolina, exists to support new perinatal community health worker (PCHW) programs across the state. Our partners have years of experience implementing these PCHW initiatives and are committed to assisting new sites to successfully offer their model. This includes helping new sites with:

- Designing implementation
- Allowing potential new partners to observe their program and talk with their team
- Spreading the word – recruiting the right collaborators and informing key stakeholders
- Hiring the right PCHWs
- Supportive supervision for PCHWs
- Identifying sources of data, managing data, and meaningful evaluation

CCHA provides advocacy for sustainable payment mechanisms for PCHWs with health insurers, community partners, and philanthropy.

Endnotes

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