

What, when, and how long? Doula time use in a community doula program in San Francisco, California

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Abstract

Objectives: Community doulas, who provide culturally concordant, nonclinical support during and after pregnancy, are increasingly promoted as an evidence-based intervention to advance birth equity. As valued members of their communities, community doulas often provide extensive physical and emotional pregnancy, birth, and postpartum support at low or no cost to clients. However, neither community doulas' scope of work nor the distribution of time among their different work activities has been clearly defined or enumerated; therefore, this project sought to describe the work activities and time use of doulas in one community-based doula organization.

Methods: In a quality improvement project, we reviewed case management system client data and collected 1 month of time diary data from eight doulas employed full-time at SisterWeb San Francisco Community Doula Network. We calculated descriptive statistics for activities community doulas reported in their time diaries and each visit/interaction logged in the case management system.

Results: SisterWeb doulas spent about half of their time in direct client care. For every hour that doulas spent with a client in prenatal and postpartum visits, on average, they spent an additional 2.15 h communicating with and supporting their clients in other ways. Overall, we estimate that SisterWeb doulas spend an average of 32 h providing care for a client receiving the standard course of care, including intake, prenatal visits, support during childbirth, and postpartum visits.

Conclusions: Results highlight the wide variety of work that SisterWeb community doulas do beyond direct client care. Acknowledgment of community doulas' broad scope of work and appropriate compensation for all activities is necessary if doula care is to be advanced as a health equity intervention.

Keywords

birth equity, community doulas, doulas, maternal health, pregnancy, time use

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Introduction

As nonclinical birth workers, doulas provide direct support for birthing people during pregnancy, childbirth, and the postpartum period.¹ Doula support can improve maternal health outcomes and experiences: birthing people with doula support have lower rates of preterm birth,^{2,3} low birth weight,^{3,4} epidural use,^{5,6} and birth complications.⁴ A Cochrane review found that birthing people with continuous birth support from a doula or similar person were more likely to have spontaneous vaginal birth and less likely to be dissatisfied with the birth experience.⁷ Doula support is also associated with higher rates of breastfeeding initiation^{4,6,8}

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and use of nonmedical pain management during birth.⁹ In the context of the United States' long-standing maternal and infant health inequities,^{10,11} doula care is increasingly considered as an evidence-based intervention that can improve birth experiences and outcomes and specifically reduce maternal health inequities.^{7,12–15}

Doulas provide a wide range of physical and emotional individualized support, including advice, advocacy, and physical assistance to ensure birthing people's nonclinical needs are met.^{16,17} As such, doulas spend a significant amount of time with their clients over the course of pregnancy and birth: a typical course of care with a privately hired doula includes one or two prenatal visits, support during labor and birth, and one or two postpartum visits.¹⁸ Visits are generally longer than a typical medical provider visit.¹⁹ Key components of doula care are the duration of the trusting relationship between doula and client and the provision of emotional support.²⁰

Community doulas and compensation mechanisms

Community doulas—doulas who are generally members of the communities they serve and often provide extensive services and referrals^{18,21}—may spend even more time with their clients than a private doula. Community doulas' course of care usually includes more prenatal and postpartum visits than private doulas (sometimes as many as 12 home visits)^{19,22} and an expanded suite of services, including connecting the client with community resources and providing holistic support longer in the postpartum period.^{18,20} Postpartum visits may include support for infant feeding, watching the infant while the new parents rest, or assisting with housework.^{13,19} In contrast to private doulas, who are paid directly by the client, community doulas may provide services at low or no cost to the client.¹⁸ The potential of community doulas to improve birth outcomes and experiences among people of color with low incomes is especially important. However, provision of low- or no-cost support also raises questions about the financial and organizational sustainability of standard models of doula care, particularly regarding compensation and insurance reimbursement for doula services.

The recent interest in doulas' potential to disrupt maternal health inequities drives the development of policies and programs to fund Medicaid and private insurance reimbursement for doula services, though there is no consensus on the most appropriate funding mechanisms and reimbursement rates.^{18,23–25} Nearly all current and planned efforts for Medicaid coverage of doula care provide reimbursement on a per-birth model, in which all care for a client is charged under a flat fee regardless of the exact number of hours of care provided, or place a cap on the amount that can be billed per client;²⁴ data from pilots suggest these approaches result in insufficient compensation and reduce doulas'

willingness to participate.^{22,25} An accurate understanding of the time that doulas work and the range of activities that fall under “doula care” is critical for setting appropriate compensation and insurance reimbursement for doulas and funding doula programs. Yet, even while these issues are debated^{19,22,26,27} and pilot programs for insurance reimbursement are developed, there is little information available on how doulas' spend their work time.

Doula time use

The limited published reports on doulas' time use are primarily based on imprecise estimates or anecdotal information and rely on data that were not collected with the intention of using it to determine compensation. Some community doula organizations collect basic information about the amount of time their doulas spend with clients;²⁸ however, since most doulas work on a contract basis and are not full-time employees of an organization, activities and time outside of this direct care are not typically tracked. The doula training and certification organization DONA International includes basic time information in their voluntary data collection program^{29–31} but has only published minimal analysis of average time spent in labor/birth support for adolescent clients (8 h).³² Reports based on doulas' estimates note that community doulas spend about 2 h per prenatal and postpartum visit;¹⁹ 13–20 h in labor/birth support;²⁶ and an additional 2 h on remote support over the course of care.¹⁹

Time use studies have been describing how people use their time, particularly in relation to gender, work, and economic productivity, since the 1800s.³³ In healthcare settings, time-use studies are commonly used in the context of quality improvement and cost effectiveness.³⁴ Time-use studies with healthcare providers,^{35–38} including community health workers,^{39–41} exist, but we are not aware of any similar systematic efforts to track doulas' time use.

Time use in a community doula organization

Since 2018, SisterWeb San Francisco Community Doula Network and researchers at the University of California, Berkeley and the University of California, San Francisco have been collaborating on process and outcome evaluations of SisterWeb's programs,⁴² which included qualitative interviews with SisterWeb doulas. A major finding was the importance of compensation and benefits structures and policies to advance equitable labor conditions and financial security for community doulas, which would allow them to dedicate more time to improving birth equity for their clients.^{42,43} SisterWeb then conducted an internal quality improvement project to understand the scope of activities that comprise the doulas' workdays and how they apportion time among different activities. We present results from the doula time use quality improvement project here.

Methods

Community doula organization description

SisterWeb⁴⁴ is a network of culturally congruent community doulas from and for Black (KBC, the Kindred Birth Companions program); Pacific Islander (the M.A.N.A. Pasefika program); and Latina/o/x (the Semilla Sagrada program) communities. SisterWeb provides no-cost doula care to their clients, who are often experiencing the health, social, and economic effects of long-standing structural inequities.

SisterWeb's model includes an intake visit (with a program coordinator, who is also a doula) after which the client is matched with doulas, three prenatal visits (at 12–29, 31–33, and 34–36 weeks), labor/birth support (in-person when possible, and via text, phone, and video), and four postpartum visits (within 2 days of birth, between days 5 and 12 after birth, 3–4 weeks after birth, and 6 weeks after birth). In addition, SisterWeb doulas typically spend significant time providing extra support to clients by text, phone, video, and in-person. A unique aspect of SisterWeb's model is the cohort structure: two or three doulas work as a team to provide clients with consistent support and guard against burnout, with support from an experienced doula mentor. SisterWeb doulas are hired as full-time, hourly employees with benefits (for 32 h/week). Compared to per-birth payment as contractors, SisterWeb's leadership believes that this structure more appropriately accounts for and compensates the doulas for their work. Doula cohorts meet regularly with mentors, and doulas, mentors, and staff are required to participate in regular professional development.

Data collection

Time diary data. In February 2021, as part of their internal evaluation practice under a Results Based Accountability framework,⁴⁵ SisterWeb implemented a quality improvement time use project, through which doulas tracked their daily work activities over the course of the month. Inclusion criteria were being a SisterWeb doula in February 2021; all doulas employed by SisterWeb at the time were included in the project. At the time of the project, most SisterWeb prenatal and postpartum appointments were taking place virtually; hospital birth accompaniment policies varied, and not all births were able to be attended by doulas. Given the additional data collection required for this project, SisterWeb incentivized participation through weekly prizes for timely and accurate time diary completion.

We used a modified time diary approach in which doulas entered the total amount of time spent on each activity for each working day in a spreadsheet, rounding to 15-min increments. Doulas could describe their activities in an unstructured format, without a prescribed list of tasks from

which to select. This approach for documenting doulas' activities aligned with the time use project's motivation—that there is significant work that community doulas do on a regular basis that is not accounted for, even within a doula program; therefore, it would have been impossible for SisterWeb leadership to provide a full, accurate list of tasks or task types at the outset of the project. Due to the open-ended format for the time diaries, doulas did not uniformly record their activities or disaggregate by client. Some added activities individually (e.g., “1 hr. prenatal appointment, 1.5 hrs. prenatal appointment”), while others reported the total time spent on each activity daily, across clients (e.g., “2.5 hrs. prenatal appointments”). Some doulas recorded activities in the time diary as they occurred and others recorded activities at the end of the day; doulas did not record the time of day that they completed activities.

Three authors reviewed all the time diary data and placed doulas' recorded activities into 21 standardized categories within seven types of activities (Table 1). At least one author who did not complete the original categorization reviewed the activity categorizations to ensure we consistently categorized the activities.

Case management system client data. Because doulas did not uniformly disaggregate by the client in their time diaries and we wanted to understand the time spent per client and visit, we analyzed deidentified February 2021 data from SisterWeb's case management system. SisterWeb doulas log all client interactions in the system, including regular visits and one-off interactions (i.e., “client encounters”), such as follow-ups and responding to client questions. These logs include narratives about the encounter and the doula's report of the length of time it took. Therefore, inclusion criteria for this portion of the project were being a SisterWeb client and having any recorded interaction with a SisterWeb doula in February 2021. This programmatic data provided information on time the doulas spent on standard visits and additional encounters, disaggregated by the client.

Ethical considerations. During their intake appointment, all SisterWeb clients sign a consent form that allows SisterWeb and their evaluation partners to use deidentified client programmatic data for evaluation and reporting. The protocol for the process evaluation of SisterWeb that included analysis of client programmatic data was approved by the University of California, Berkeley Committee for the Protection of Human Subjects. The time diaries were completed by doulas as part of their regular job duties as determined by their supervisors and SisterWeb leadership; they were collected for internal quality improvement and thus were determined to not require institutional review board approval.

Table 1. SisterWeb doulas' work by category.

Client care and support
Prenatal doula visits (3 visits)
Labor/birth support
Postpartum doula visits (4 visits)
Research and resource gathering for clients
Client encounters (follow-ups, reminders, responding to questions outside of scheduled visits)
Distributing supplies to clients (diapers, food, etc.)
Care coordination with other providers and community partners
Documentation (online case management notes on client visits and encounters)
Client care–focused meetings
Cohort meetings and check-ins
Supervision meetings with program coordinators
Program meetings for each SisterWeb program
Training and professional development
Training workshops and professional development sessions
Individual mentorship meetings (doulas meet one-on-one with their mentors)
Cohort mentorship meetings (doula cohorts meet with their mentors)
SisterWeb organizational work
Committee work
All staff meetings
Administration
General emails, planning, other administrative tasks, including time diaries
Human resources (resolving payroll or other issues with fiscal sponsor's HR department)
Organization of SisterWeb cottage (sorting and packing supplies to distribute to clients)
Community work
Community meetings and outreach, general meetings with public health nurses
Research/evaluation work
Participant recruitment for outcome evaluation; participation in evaluation as an interviewee

Data analysis

Using the time diary data, we calculated the mean, standard deviation, median, and range of minutes worked for the month, overall and for the 21 activity categories, and the percent of total mean monthly hours for each activity. Using the case management system data, we calculated the mean, median, and range time on each visit or encounter type and the mean time across all visits per client. We analyzed the time diary data in Stata SE Statistical Software⁴⁶ and the case management data in Microsoft Excel.⁴⁷

Results

Descriptive characteristics of SisterWeb doulas in February 2021

There were eight SisterWeb doulas in February 2021 (Table 2). KBC was the largest with four doulas, and M.A.N.A. Pasefika was smallest with one doula. All but one SisterWeb doula was younger than 35, and five had additional employment outside of SisterWeb. They had an average of 2.2 years of experience as a doula. Seven doulas had at least one client with an expected delivery date (EDD) in February 2021; there were six client births in the month, which were attended by five doulas (one doula attended two births).

Monthly time use

On average, each SisterWeb doula worked 108.8 h in February 2021 (Table 3). Doulas spent about half (51.7%) of the average working hours in direct client care and support (e.g., prenatal and postpartum doula visits, labor/birth support, researching client questions, nonvisit client interactions, documentation in the case management system). They spent an additional 13.6% of the average working hours in the month in client care–focused meetings. Doulas spent the least amount of time on community outreach (0.2%), research/evaluation (1.3%), and general organizational work (2.7%).

For every 60 min that doulas spent with a client in prenatal and postpartum visits, on average, they spent an additional 129 min supporting their clients. This included 47 min communicating with clients and directly supporting them (usually by text); 22 min gathering research and resources for clients, distributing supplies to clients, and coordinating care with other providers; and 60 min working with their cohort and supervisor to coordinate care.

Time spent per client and per visit

Programmatic data in SisterWeb's case management system allowed us to calculate per visit and per client indicators. Of the 47 clients who had any recorded interaction

Table 2. Characteristics of SisterWeb doulas in February 2021.

	Number of doulas	Percent
SisterWeb program		
Kindred Birth Companions	4	50
Semilla Sagrada	3	38
M.A.N.A. Pasefika	1	13
Age		
18–24	2	25
25–29	3	38
30–34	2	25
35+	1	13
Employment outside of SisterWeb		
Yes	5	63
No	3	38
EDDs in February 2021		
Had at least 1 client with February 2021 EDD	7	88
No February 2021 EDDs	1	13
Doulas with clients with births in February 2021		
Had at least 1 client with February 2021 birth	5	63
No clients with February 2021 births	3	38
Average years of doula experience	2.2 (SD: 0.88)	

EDDs: estimated delivery dates; SD: standard deviation.

Table 3. Hours worked per month by category, February 2021.

	Range monthly hours	Median monthly hours	Mean monthly hours (SD)	Percent of total mean hours
Client care and support	42.0–95.5	52.1	56.3 (17.5)	51.7
Prenatal doula visits	0.0–22.0	7.8	9.7 (7.0)	8.9
Labor/birth support	0.0–34.0	2.8	8.3 (12.0)	7.6
Postpartum doula visits	0.0–13.0	3.5	5.1 (4.4)	4.7
Care coordination	0.0–1.0	0.3	0.4 (0.4)	0.3
Research and resource gathering	0.0–8.0	4.0	3.9 (3.3)	3.6
Distributing supplies	0.0–4.0	0.0	1.1 (1.6)	1.0%
Client encounters	5.5–26.0	10.6	11.7 (6.7)	10.7
Documentation	6.5–36.0	13.0	16.2 (10.7)	14.9
Client care-focused meetings	10.0–25.3	13.6	14.8 (4.9)	13.6
Cohort meetings and check-ins	0.0–17.0	6.5	6.7 (5.3)	6.2
Supervision meetings	2.0–10.5	4.9	5.4 (3.1)	5.0
Program meetings for each SisterWeb program	0.0–10.5	2.0	2.7 (3.2)	2.5
Training and professional development	0.0–11.0	6.6	6.1 (3.2)	5.6
Individual mentorship meetings	0.0–9.0	2.5	3.5 (3.0)	3.2
Cohort mentorship meetings	0.0–4.0	0.0	1.1 (1.7)	1.0
Training workshops and professional development sessions	0.0–3.5	2.0	1.5 (1.3)	1.4
SisterWeb organizational work	0.0–15.0	1.5	2.9 (5.0)	2.7
All-staff meetings	0.0–2.0	0.0	0.5 (0.8)	0.5
Committee work	0.0–13.0	0.5	2.4 (4.4)	2.2
Administration	7.0–44.5	11.4	20.5 (16.0)	18.9
General emails, planning, etc.	4.0–42.3	9.8	18.1 (15.7)	16.7
Human resources	0.0–4.5	1.3	1.5 (1.5)	1.4
Organization of SisterWeb cottage	0.0–7.0	0.0	0.9 (2.5)	0.8
Community work	0.0–1.0	0.0	0.3 (0.5)	0.2
Research/evaluation work	0.0–5.5	1.0	1.4 (1.9)	1.3
Paid vacation/sick	0.0–23.0	6.5	6.5 (7.6)	6.0
Total number of hours worked per month	84.0–139.0	105.8	108.8 (20.4)	

SD: standard deviation.

Table 4. Time spent on client visits and encounters in February 2021^a.

Visit/encounter type	Number of clients who completed the visit/ encounter	Mean time per visit/ encounter (min) (SD)	Median time per visit/ encounter (min)	Range time per visit/ encounter (min)
Intake appointment	3	60.0 (0.00)	60.0	60.0–60.0
Prenatal visit #1	6	59.7 (19.61)	60.0	28.0–90.0
Prenatal visit #2	5	72.0 (16.43)	60.0	60.0–90.0
Prenatal visit #3	2	75.0 (21.21)	75.0	60.0–90.0
Labor and birth support	6	735.0 (1081.29)	330.0	60.0–2880.0
Postpartum visit #1	6	69.2 (46.09)	60.0	25.0–120.0
Postpartum visit #2	8	82.5 (114.24)	30.0	30.0–360.0
Postpartum visit #3	8	75.0 (55.55)	60.0	30.0–180.0
Postpartum visit #4	4	75.0 (38.73)	75.0	30.0–120.0
Other client encounters ^b	38	28.5 (25.35)	20.0	0.5–180.0

SD: standard deviation.

^aBased on documentation in the client case management system.

^bClient encounters are interactions with clients outside of scheduled visits, such as follow-ups, reminders, and responding to questions. The average number of encounters per unique client was 3.5.

with SisterWeb doulas in February 2021, 25 clients had at least one regular prenatal or postpartum doula visit (42 total visits—given the time frame ranges for prenatal and postpartum visits, not every client will have a visit in every calendar month; data not shown), and six gave birth (Table 4). Thirty-eight clients had at least one encounter outside of regularly scheduled visits, such as follow-up after a visit, reminders, and responding to questions (166 total client encounters, with an average of 3.5 encounters per client).

The time spent with clients on regular doula visits varied by visit type. Intake appointments lasted an average of 60 min. Prenatal appointments were longer later in pregnancy, with prenatal visit #1 (at 12–29 weeks' gestational age) lasting an average of 60 min, prenatal visit #2 (31–33 weeks) lasting an average of 72 min, and prenatal visit #3 (34–46 weeks) lasting an average of 75 min. Postpartum visit length varied, with postpartum visit #2 (5–12 days after birth) lasting the longest, at 83 min on average. The average time spent supporting a client during labor and at birth was 12.25 h (range: 1 to 48 h). Time spent on additional client encounters ranged from 30 s for sending a text message with support group information to 180 min for a video call to answer client questions.

Estimated total time expected per client over the course of doula care

We used the case management data on average visit length to estimate the time spent on direct care per client that could be expected over the full course of care with SisterWeb (three prenatal visits, labor/birth support, and four postpartum visits). Based on the average time for each type of client visit in February 2021, we estimate that SisterWeb doulas spend an average of 22 h in direct care for each client over the full course of care. The average number of encounters per client per month is 3.5,

the average time per encounter is 28.5 min (Table 4), and clients are with SisterWeb for about 6 months of care. Accounting for these additional client encounters, on average, adds another 10 h of communication and support during pregnancy and postpartum, for an average total of 32 h of direct support per client. Notably, in this per client estimate, we cannot include time spent discussing client care in supervision and mentorship meetings, preparing for client visits, conducting extra research for clients, or general professional development and learning that also influences direct client care.

Discussion

This analysis highlighted the substantial amount of time that SisterWeb's community-based doulas spend working with and for their clients during the prescribed course of care and outside of planned visits. Our analysis showed that SisterWeb doulas engaged in 21 different types of activities in their workdays, with about half (51.7%, or an average of 56.3 h/month) of their time spent in direct client care and support work and about 13.6% of their time in client care-focused meetings. The remainder of the SisterWeb doulas' time was occupied with the work that keeps a direct service organization running, such as general administration, planning, and training/professional development—work that is often undervalued and uncompensated in the traditional approach of paying doulas a flat fee per client. The considerable time that SisterWeb doulas spend supporting their clients in a myriad of ways is the crux of *community* doula care. The additional time spent with and working for clients outside standard doula care visits is important in the context of community doulas' specific roles and contributions to maternal care and equity. Detailed data reflecting this holistic scope of work is key to understanding how community doulas can function as a valuable intervention to decrease maternal health inequities.

The handful of other reports that include doula time use data^{19,26,32} are not comparable to this more comprehensive project. Notably, several features of this project and SisterWeb are unique, making prior data inappropriate for comparison because of substantial differences in compensation approach, program type, data collection, and data quality. First, SisterWeb is a community-based organization of community doulas who are full-time employees working with underserved clients in an urban setting, whereas much existing data^{26,32} on doula time use include primarily private doulas working with clients who may be able to pay large fees out of pocket. Second, SisterWeb already had a robust data collection process for client data and was able to leverage their team's relative comfort with evaluation to collect the detailed doula time diary data. Third, these data reflect 1 month during the COVID-19 pandemic; differences in care necessitated by public health conditions may affect doulas' time use in ways that make comparison to prior reports inaccurate (e.g., unusually little time spent on travel due to virtual visits).

SisterWeb's employment model also means that the doulas have the additional work that comes with being an employee of a community-based organization. Indeed, SisterWeb doulas spent substantial time participating in training/professional development, mentorship, organizational work, general administrative tasks, and research/evaluation work. In the private doula or per birth models, these are activities that either would not be required or for which the doulas' time would not be compensated. SisterWeb's employment model, in which the doulas are full-time employees, means that the doulas are compensated for their time spent on this work, but there is continued internal discussion, evaluation, and fine-tuning of the distribution of SisterWeb doulas' time. For example, SisterWeb leadership and doulas reviewed the results of the time-use project and created a prioritization matrix to help doulas manage the myriad tasks and responsibilities. Leadership also took the findings into account during SisterWeb's strategic planning process, with the direct result of adding a goal supporting organizational sustainability to more directly address these operational needs that arise when providing a professional home for doulas. Viewing these nondirect client care tasks as essential to achieving positive outcomes for birthing people of color, SisterWeb has also increased attention on supporting the nondirect client care responsibilities of doulas in both funding and external communications materials. Research addressing doulas' potential contributions to reducing maternal morbidity and mortality frequently recommends more training, mentorship, and professional development opportunities for doulas.^{14,15,19,27,48} However, to have highly skilled, professional doulas based at strong organizations, who have mentorship and supervision by senior doulas and who keep good records of their interactions with clients, doulas—like any professional—need compensated time for administrative, professional development, and other nondirect client care activities.

SisterWeb's cohort structure, where two to three doulas work together, is intended to provide stronger client care—a doula who is familiar with a client's situation is always available and by working together, the doulas can guard against burnout. However, it may also mean that individual doulas spend more time in meetings and on documentation since each SisterWeb doula needs to ensure that the other doulas in her cohort are always fully briefed on each client. While doulas working in other types of community doula programs also spend at least some time on client documentation,²⁰ this time is rarely, if ever, accounted for in the limited existing reports of doula time use. Extant reports on how doulas allocate their work time tend to collect and report only on time spent in direct client care and support, particularly during labor and birth.^{19,28,32} However, time allocations in medical billing for other providers do account for administrative time. As states develop and implement Medicaid reimbursement for doula services—with its attendant increase in paperwork—it will be important to understand the time required for documentation and how to appropriately compensate for it.

Similarly, as states and private health insurance companies develop plans for including doulas as reimbursable providers, they must decide on the number and types of covered doula visits. Typically, fewer postpartum doula visits than prenatal visits are included or are eligible for reimbursement, though some programs do include up to four or more postpartum visits.¹⁹ However, our project showed that some postpartum visits were substantially longer than prenatal visits. Specifically, the average time spent at the second postpartum visit (occurring 5–12 days after birth) was 82.5 min (range: 30–360 min), longer than any prenatal visit. The personal emotional support that doulas can provide for their clients is unique among maternal health providers, and our data suggests that more support at this time is needed. Given the potential for perinatal mental and physical complications, the general lack of postpartum support in the United States, and inequities in the availability of postpartum support, increasing the availability of postpartum doula support is important to decrease postpartum inequities.^{49,50}

Strengths and limitations

As an internal quality improvement project conducted over 1 month by a single doula organization, this project has some limitations. First, this project was conducted by one small community doula organization and results are not generalizable across other doula programs. Second, we collected the time diaries during one month of the COVID-19 pandemic, which disrupted the provision of doula services and the time spent on certain activities (e.g., virtual prenatal and postpartum visits, no travel time). In addition, only three of the six births during the timeframe had in-person doula support due to one hospital not allowing doulas to return until March 2021 and a misunderstanding of

another hospital's policy. Third, because motivation for the project was for SisterWeb to capture the full range of tasks that their doulas undertook, the time diaries did not include a standard list of activities; instead, each doula created their own descriptions. This likely required more work for the doulas to complete the diaries and may have slightly skewed the distribution of time in the general administration category. During this month, SisterWeb was also preparing for its first organization-wide retreat in March 2021, with no births expected in March, so the doulas were likely spending more time on SisterWeb organizational work and less time on prenatal appointments compared to a typical month. A follow-up time-use project in development may address these challenges through an improved data collection mechanism and in a time period with more open COVID-19 policies. The estimates for the total time expected per client over the course of doula care were extrapolated only from time spent with clients in February 2021, but most clients' doula care spans 6 months or more. The amount of time per visit and, consequently, the total time expected per client may change as circumstances change, such as the return to in-person appointments. Travel time to clients' homes, where doula visits often take place, was not included in this analysis, but doulas' travel time is important to consider.¹⁹

Most time-use studies in healthcare use self-reported data^{35,51} or observation^{36–38,41} to track the time spent by providers on different activities; others approach time use from a per client perspective by tracking all activities related to a client over a specific period of time.^{52,53} We did not include any observational methods, so all data are based on doulas' self-reports and potentially subject to self-report and social desirability biases. Future studies could include observational methods and follow individual clients through their full course of doula care. We did not ask doulas to track the time of day they worked on different activities; this may be an important avenue for future research, given the inherently unpredictable nature of birth work and the deep engagement of community doulas with their clients. Doulas are likely to spend significant time communicating with clients at night and on the weekend due to their clients' schedules and needs, and it will be important for community doula programs and payers to understand and allow for this when managing doulas' work hours, schedules, and reimbursable time.

The major strength of this project is its novelty and the gaps it addresses. SisterWeb collected detailed data about the scope of work activities that community doulas do and how community doulas distribute their working hours over those activities. We were able to combine the doula time use data with case management data to develop a robust description of community doulas' time use on both direct client care activities and the other work necessary for a well-functioning community doula organization with highly trained doulas. Other doula programs may collect similar data, but to our knowledge, this is the first public

account of the full scope of community doulas' work for their clients and their communities.

Conclusion

Implications for practice and policy

With the increase in public funding proposals and pilot programs for insurance reimbursement for doula services,^{18,23,24} it is imperative to understand the full scope of work of a community doula and where these work activities, time spent on them, compensation, and the goals of community doula care are in harmony or conflict with each other. Community and peer birth support has always existed and often is offered without monetary compensation. However, integration of doula care into the healthcare and insurance systems, particularly as a health equity advancing intervention, requires acknowledgment of it as a skilled profession with a justly compensated workforce. Through this description of SisterWeb community doulas' scope of work and time use, our analysis reinforces that community doulas are important contributors to addressing birth inequities. Recognizing community doulas' contributions to and value in maternal also requires investing in data-driven strategies to accurately capture their full scope of work and appropriately compensate them for the care they provide.

Declarations

Ethics approval and consent to participate

During their intake appointment, all SisterWeb clients sign a consent form that allows SisterWeb and their evaluation partners to use deidentified client programmatic data for evaluation and reporting. The protocol for the process evaluation of SisterWeb that included analysis of this programmatic data was approved by the University of California, Berkeley Committee for the Protection of Human Subjects. The time diaries were completed by doulas as part of their regular job duties as determined by their supervisors and SisterWeb leadership; they were collected for internal quality improvement and thus did not require institutional review board approval.

Consent for publication

All participants gave consent for their data to be used in publications.

Author contribution(s)

Jennet Arcara: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Writing – original draft; Writing – review & editing.

Alli Cuentos: Conceptualization; Data curation; Funding acquisition; Investigation; Methodology; Project administration; Supervision; Writing – original draft; Writing – review & editing.

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Marna Armstead: Conceptualization; Funding acquisition; Project administration; Supervision; Writing – review & editing.

Andrea Jackson: Conceptualization; Funding acquisition; Methodology; Supervision; Writing – review & editing.

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Competing interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Availability of data and materials

Due to the nature of the project, the data are not available to other researchers.

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