Department of Health Care Policy and Financing

Funding Request for the FY 2023-24 Budget Cycle

Request Title

R-09 Advancing Birthing Equity

Dept. Approval By: Eri Dotts

OSPB Approval By: Megan Davisson

	Supplemental FY 2022-23
	Budget Amendment FY 2023-24
X	**Change Request FY 2023-24**

Summary Information	**Fund**	**FY 2022-23**		**FY 2023-24**		**FY 2024-25**
		Initial Appropriation	**Supplemental Request**	**Base Request**	**Change Request**	**Continuation**
Total of All Line Items Impacted by Change Request	**Total**	**$10,732,488,876**	**$0**	**$10,729,054,899**	**($702,853)**	**($75,237)**
	FTE	0.0	0.0	0.0	0.0	0.0
	GF	$2,933,495,438	$0	$2,983,637,115	($357,242)	($49,744)
	CF	$1,316,093,068	$0	$1,263,469,685	$0	$0
	RF	$90,094,408	$0	$101,271,328	$0	$0
	FF	$6,392,805,962	$0	$6,380,676,771	($345,611)	($25,493)

Line Item Information	Fund	FY 2022-23 Initial Appropriation	FY 2022-23 Supplemental Request	FY 2023-24 Base Request	FY 2023-24 Change Request	FY 2024-25 Continuation
	Total	**$69,154,379**	**$0**	**$55,183,648**	**$280,000**	**$130,000**
01. Executive Director's Office, (A) General Administration, (1) General Administration - General Professional Services and Special Projects	FTE	0.0	0.0	0.0	0.0	0.0
	GF	$8,779,012	$0	$12,870,720	$140,000	$65,000
	CF	$25,419,903	$0	$12,391,628	$0	$0
	RF	$81,000	$0	$81,000	$0	$0
	FF	$34,874,464	$0	$29,840,300	$140,000	$65,000
	Total	**$10,482,357,710**	**$0**	**$10,494,097,233**	**$881,471**	**$1,617,017**
02. Medical Services Premiums, (A) Medical Services Premiums, (1) Medical Services Premiums - Medical Services Premiums	FTE	0.0	0.0	0.0	0.0	0.0
	GF	$2,899,250,775	$0	$2,945,642,674	$440,736	$808,509
	CF	$1,252,446,475	$0	$1,212,977,275	$0	$0
	RF	$90,013,408	$0	$101,190,328	$0	$0
	FF	$6,240,647,052	$0	$6,234,286,956	$440,735	$808,508
	Total	**$179,073,696**	**$0**	**$177,870,927**	**$38,767**	**$80,837**
05. Indigent Care Program, (A) Indigent Care Program, (1) Indigent Care Program - Children's Basic Health Plan Medical and Dental Costs	FTE	0.0	0.0	0.0	0.0	0.0
	GF	$24,514,105	$0	$24,172,175	$13,568	$28,293
	CF	$38,226,690	$0	$38,100,782	$0	$0
	RF	$0	$0	$0	$0	$0
	FF	$116,332,901	$0	$115,597,970	$25,199	$52,544
	Total	**$1,903,091**	**$0**	**$1,903,091**	**($1,903,091)**	**($1,903,091)**
07. Department of Human Services Medicaid-Funded Programs, (D) Behavioral Health Administration - Medicaid Funding, (3) Substance Use Treatment and Prevention Services - High Risk Pregnant Women Program	FTE	0.0	0.0	0.0	0.0	0.0
	GF	$951,546	$0	$951,546	($951,546)	($951,546)
	CF	$0	$0	$0	$0	$0
	RF	$0	$0	$0	$0	$0
	FF	$951,545	$0	$951,545	($951,545)	($951,545)

Auxiliary Data			
Requires Legislation?	NO		
Type of Request?	Health Care Policy and Financing Prioritized Request	**Interagency Approval or Related Schedule 13s:**	Impacts Other Agency

Department Priority: R-9
Request Detail: Advancing Birthing Equity

Summary of Funding Change for FY 2023-24			
		Incremental Change	
	FY 2022-23 Appropriation	FY 2023-24 Request	FY 2024-25 Request
Total Funds	$10,732,488,876	($702,853)	($75,237)
FTE	0.0	0	0
General Fund	$2,933,495,438	($357,242)	($49,744)
Cash Funds	1,316,093,068	$0	$0
Reappropriated Funds	$90,094,408	$0	$0
Federal Funds	$6,392,805,962	($345,611)	($25,493)

Summary of Request

The Department requests funds to promote increased health equity outcomes by implementing coverage for birth doulas and human donor milk. These costs can be offset by eliminating the High-Risk Pregnant Women Line Item. The Department requests $1,320,879 total funds, including $653,646 General Fund, in FY 2023-24, $2,091,800 total funds, including $1,031,633 General Fund, in FY 2024-25, $2,179,707 total funds, including 1,074,873 General Fund, in FY 2025-26 and ongoing to implement coverage for birth doulas and human donor milk coverage. The Department requests to eliminate the High-Risk Pregnant Women Line-Item to save $1,903,091 total funds, including $951,546 General Fund, in FY 2022-23 and ongoing. In total, this represents less than a 1% drop in the current budget.

This request is essential to helping the Department achieve its Wildly Important Goals (WIGs) to promote equity, diversity, and inclusion for all Coloradans and to attain operational excellence and customer service and member health outcomes.

Requires Legislation	Evidence Level	Impacts Another Department?	Statutory Authority
No	Service Expansions are Step 3 and Step 4	Yes – Department of Human Services	27-60-108 Sets the precedent for agencies other than DORA to authorize nontraditional providers

Current Program

Perinatal Service Expansion

Doula Services

A doula is a trained, non-medical professional who provides continuous physical, emotional and informational support to a birthing person before, during and after childbirth to advocate on the person's behalf and help them achieve the healthiest experience possible. While the Department currently covers certified nurse midwives, doulas differ in that they do not perform the delivery and do not require the same medical training. There is no state sanctioned certification process in Colorado for doulas, but doula training centers exist and offer certification upon course completion. One of the largest doula-certifying organizations is DONA International, which offers certification workshops that can be completed in 24 cumulative hours.[1] Doula services are currently not covered by the Department nor are birthing classes nor are any other birthing support services.

Florida, Maryland, Minnesota, New Jersey, Oregon, and Virginia currently cover doula services under their respective Medicaid programs. Six other states are working on implementing coverage.

Donor Milk

Human milk consumption is associated with beneficial health outcomes. The American Academy of Pediatrics recommends that donor human milk be used when the birthing person's milk is insufficient in quantity for high-risk infants. The Department does not currently cover the cost of human donor milk as a benefit to new birthing persons and infants. Thirteen states and the District of Columbia's Medicaid programs cover human donor milk based on medical necessity. Rocky Mountain Children's Health Foundation operates Mothers' Milk Bank (MMB), a nonprofit, Arvada-based milk bank that adheres to the guidelines of the Human Milk Banking Association of North America. MMB charges $4.50 per ounce of milk to cover the costs of screenings, processing, and testing. Due to

[1] https://www.dona.org/the-dona-advantage/about/

limited supply, MMB prioritizes orders to NICUs, and remaining donor human milk is distributed to outpatients.

High Risk Pregnant Women Line-Item Elimination
Historically, the Department covered residential and outpatient treatment services for high-risk pregnant people with a substance use disorder through a separate line item. The Department expanded coverage for substance use disorder treatment to include inpatient and residential treatment for adults in FY 2020-21. Pregnant adults are now covered under this overarching benefit in the Behavioral Health Capitation program.

Problem or Opportunity

Perinatal Service Expansion
Doulas
The Department is committed to ensuring equal access to services and equitable health outcomes for all members regardless of age, ethnicity, gender, race, religion, sexual orientation, gender identity, socio-economic status, or body size. However, equity gaps persist. "Cultural and language barriers keep patients and providers from building strong relationships, posing considerable obstacles to a positive patient experience," which can "can lead to fewer doctor visits, avoidance of preventive health services, misdiagnoses and poor patient satisfaction." [2,3] Health outcomes, particularly maternal health, vary drastically by race and socioeconomic status, and other factors. This is reflected in surveys of trust and satisfaction with the health care system that vary by race.[4,5] Doulas directly engage with these underserved populations to ensure that their concerns are being heard and addressed, and ultimately close persistent equity gaps.

The United States has one of the highest maternal mortality rates among high income countries at over 23 deaths per 100,000 live births, and the rate has been increasing since 2000.[6] That rate varies drastically by race, with black birthing people experiencing over 55 deaths per 100,000 live births.[7] Other maternal health outcomes also vary drastically by race. A study conducted in southern states between 2006 and 2007 among Medicaid

[2] 2018 study published in the Journal of Medical Internet Research
[3] Mitchell Katz, MD, President and CEO, NYC Health + Hospitals.
[4] https://healthlaw.org/wp-content/uploads/2020/04/DoulasRacialDisparity_4.16.2020.pdf
[5] https://www.census.gov/library/stories/2021/12/who-are-the-adults-not-vaccinated-against-covid.html
[6] Melillo, Gianna. "US Ranks Worst in Maternal Care, Mortality Compared with 10 Other Developed Nations." AJMC, AJMC, 3 Dec. 2020, https://www.ajmc.com/view/us-ranks-worst-in-maternal-care-mortality-compared-with-10-other-developed-nations.
[7] "Maternal Mortality Rates in the United States, 2020." Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 23 Feb. 2022, https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm#:~:text=In%202020%2C%20861%20women%20were,20.1%20in%202019%20(Table).

recipients found that black pregnant people were more likely than white pregnant people to experience preeclampsia, placental abruption, preterm births, and fetal death.[8]

Colorado's Maternal Mortality Review Committee (MMRC) confirmed that Colorado mirrors many national trends and additionally illustrated that maternal mortality is four times more likely if a birthing person has Medicaid as her primary insurer. Their recommendations include "expanding access to alternative methods of providing care."[9]

There is evidence across several studies that doula support leads to better health outcomes including lower Cesarean-section, pre-term, and low birth weights rates. Additionally, there is evidence that doula support leads to increased breastfeeding, lowered post-partum depression rates, and increased adherence to infant safety protocols. In addition to these positive health outcomes, there is also evidence to suggest that birthing people who have doula support have a more positive birthing experience.

Donor Milk

While 95% of Coloradans who give birth breastfeed their children, low-income birthing persons are less likely to breastfeed. [10] According to CDPHE's Pregnancy Risk Assessment Monitoring System, 4.9% of Colorado birthing persons never breastfed, compared to 17.4% of Colorado birthing persons on WIC who never breastfed.[11] In Colorado, Medicaid covers about 42% of all births and a disproportionate share of Hispanic and Black infants.[12] Breast milk is known to significantly reduce the risk of infants developing necrotizing enterocolitis (NEC). Black and Hispanic infants are significantly more likely to receive this diagnosis.[13] For families, it is significantly more expensive to purchase donor human milk from the Mothers' Milk Bank than to purchase infant formula. Donor human milk costs $4.50 compared to $0.11 per ounce for infant formula.[14] Thus, lower-income families are more likely to become reliant on infant formula. According to the National Association of Neonatal Nurses, every dollar spent to purchase donor human milk from a milk bank saves as much as $11 in medical costs due to decreased rates of sepsis, feeding intolerance, and NEC while also reducing hospital stays and rehospitalizations and improving developmental outcomes for premature infants.[15] In outpatient settings, reliance on infant formula can lead a breastfeeding person to have compounding

[8] Zhang, Shun, et al. "Racial Disparities in Economic and Clinical Outcomes of Pregnancy among Medicaid Recipients." Maternal and Child Health Journal, vol. 17, no. 8, 2012, pp. 1518–1525., https://doi.org/10.1007/s10995-012-1162-0.

[9] Colorado Department of Public Health and Environment (2020). Colorado Maternal Mortality Prevention Program Legislative Report 2014–2016.

[10] https://cohealthviz.dphe.state.co.us/t/HSEBPublic/views/2020TableauSummaryTables_NewLogo/2020PRAMSSummaryTables?%3Aembed=y&%3Aiid=5&%3AisGuestRedirectFromVizportal=y

[11] https://drive.google.com/file/d/115Hlg4AajjjVfasS4TP3FBdVuiF7Q9xS/view

[12] https://hcpf.colorado.gov/sites/hcpf/files/Maternity%20Report%20-%20Sept2021.pdf

[13] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7930220/#:~:text=A%20more%20recent%20study%20from,differences%20in%20NEC%20as%20well.

[14] https://bfcaa.com/resources/cost-of-formula-feeding/

[15] http://nann.org/publications/e-news/march2017/health-policy-and-advocacy

breastfeeding issues, produce less milk, and breastfeed less often. With no-cost access to donor human milk immediately post-birth, lower-income families are more likely to initiate and be able to continue breastfeeding throughout their child's infancy resulting in greater health benefits received.

High Risk Pregnant Women Line-Item Elimination
The funding in the High-Risk Pregnant Women line item is duplicative of funding for inpatient and residential treatment services for all adults in the behavioral health capitation line item. Elimination of this line item for the Department would also eliminate the reappropriated line item titled High-Risk Pregnant Women Program in the Colorado Department of Human Services Long Bill section.

Proposed Solution and Anticipated Outcomes

Perinatal Service Expansion
Doula Services
The Department requests to implement coverage for doula services for Colorado residents eligible for Health First Colorado benefits during the perinatal period.

This will allow for Medicaid members to have experienced birthing support. This is essential as the Department does not currently cover birthing classes or any birthing support services. The Department plans to cover 6-12 visits, plus attendance at the member's labor and delivery. The Department will use stakeholder engagement on the model of care to determine how many of those total visits are delivered pre- or postnatally and the most appropriate payment structure. Other states that have added doulas as a covered Medicaid provider have allowed various billing strategies that include 1-12 prenatal and postpartum visits.

As Colorado does not currently regulate doula licensure, the Department would assume responsibility for developing a standardized verification system in order to ensure that providers meet agreed upon requirements.

Stakeholder engagement sessions would also be needed to address and implement various components of the model of care, including the number of pre/post-natal visits as well as fair, safe and equitable requirements for Medicaid provider enrollment. This process is expected to be completed by December 2023, which would allow for the service to be implemented by January 1, 2024. The Department requests funds in FY 2023-24 for a stakeholder engagement process to co-create this model in a way that will best serve Coloradans, particularly Black, Indigenous, and People of Color (BIPOC).

This request would help the Department meet its Wildly Important Goals (WIGs) to promote equity, diversity, and inclusion for all Coloradans and to attain operational excellence and customer service and member health outcomes. As discussed under the Problem or Opportunity Section, maternal health outcomes are in dire need of

improvement and vary widely across race and income groups. The need for better community support, including doulas, has been called for by the Department's Maternity Advisory Committee (MAC). The MAC is a group of birthing people who have had a birth on Medicaid in the last five years. The members of the group are also required in the Colorado Code of Regulations to be composed primarily of people who identify as BIPOC. Committee members report that their experiences of giving birth on Medicaid would be greatly improved with additional pre- and post-partum support from community members like doulas who better understand the unique challenges of parenting—particularly as a BIPOC individual on Medicaid. Additional information on this request from the MAC will be published in the Department's 2nd Annual Maternity Report (Winter 2022).

The Department anticipates better health outcomes including lower rates of Cesarean-sections, pre-term, and low birth weight. Additionally, there is evidence that doula support leads to increased breastfeeding, lowered post-partum depression rates, and increased adherence to infant safety protocols.

Programs to provide doulas to low-income pregnant people have had measured success. The Community Based Doula Program conducted by Health Connect One in eight communities across the U.S, provided doulas to low-income pregnant people and found they had lower Cesarean-section and higher breast-feeding rates than other pregnant people in their areas.[16] The By My Side program in low-income neighborhoods in New York City showed lower pre-term and low-birth-weight rates.[17] The Everyday Miracles program in Minneapolis targeting pregnant people on Medicaid through a Medicaid Managed Care referral program showed lower Cesarean-section and preterm birth rates than the national Medicaid population.[18]

A controlled trial conducted in Cleveland between 1988 and 1992, randomly assigned pregnant people enrolled in birthing classes (primarily middle-class pregnant people whose partner's intended to support them during delivery) to a doula or a control group that did not receive any additional support. The pregnant people assigned a doula saw an 11.6% reduction in Cesarean-section rates and 87.9% agreed to respond to a questionnaire about their experience, all of whom rated their experience with a doula positively.[19]

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[16] Promotion and Support of Community-Based Doula Programs. "The Perinatal Revolution." Healthconnectone.org, https://www.healthconnectone.org/wp-content/uploads/2020/03/The-Perinatal-Revolution-CBD-Study.pdf. Accessed 2022.

[17] Thomas, Mary-Powel, et al. "Doula Services within a Healthy Start Program: Increasing Access for an Underserved Population." Maternal and Child Health Journal, vol. 21, no. S1, 2017, pp. 59–64., https://link.springer.com/article/10.1007/s10995-017-2402-0.

[18] Kozhimannil, Katy Backes, et al. "Doula Care, Birth Outcomes, and Costs among Medicaid Beneficiaries." American Journal of Public Health, vol. 103, no. 4, 2013, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3617571/.

[19] Heaman, Maureen. "A Randomized Controlled Trial of Continuous Labor Support for Middle-Class Couples." MCN: The American Journal of Maternal/Child Nursing, vol. 34, no. 2, 2009, p. 133., https://nbvd.nl/wp-content/uploads/2013/09/randomized-controlled-trial.pdf.

A more recent controlled trial conducted between 2011 and 2015 through four agencies offering services in high-poverty Illinois communities randomly assigned pregnant people to a doula or a case manager, who would refer them to community resources and provide a pre- and post-natal visit but not be present during the birth. It found that the doula group did not have a significant reduction in Cesarean-section rates or breastfeeding but did see improvement in infant safety precautions including car-seat usage and putting infants to sleep on their backs.[20]

Donor Milk

The Department also requests to implement coverage for human donor milk as a new perinatal service. This will allow Medicaid members to have access to human donor milk, which has been shown to improve infant health outcomes and increase rates of initial breastfeeding and longevity of breastfeeding. This benefit will complement ongoing expansion efforts in lactation support and perinatal coverage. The Department will utilize a similar stakeholder engagement model to that of doulas in order to determine conditions of medical necessity for this benefit. The Department will use the 14 other state Medicaid programs that cover human donor milk to inform the stakeholder process. Through this process, the Department will also explore the possibility of extending this coverage from only pre-term infants to all infants with medical necessity regardless of gestational age at birth.

High Risk Pregnant Women Line-Item Elimination

As a technical adjustment, the Department requests to eliminate the High-Risk Pregnant Women line item, for an annual savings of $1,903,901. Elimination of this line item for the Department would also eliminate the reappropriated line item titled High-Risk Pregnant Women Program in the Colorado Department of Human Services Long Bill section.

Evidence-Continuum

Program Objective	Doula Benefit: To improve health outcomes across all birthing people enrolled in Health First Colorado, especially BIPOC birthing people. Donor Milk Benefit: To provide coverage of donor human milk for infant Medicaid beneficiaries born prematurely.
Outputs being measured	Doula Benefit: Maternal support services being provided Donor Milk Benefit: Number of members utilizing Donor Human Milk Benefit in outpatient settings
Outcomes being measured	Doula Benefit: Several maternal health outcome metrics including, maternal mortality, Cesarean-section, pre-term, low birth weight, and post-partum depression rates.

[20] Hans, Sydney L., et al. "Randomized Controlled Trial of Doula-Home-Visiting Services: Impact on Maternal and Infant Health." Maternal and Child Health Journal, vol. 22, no. S1, 2018, pp. 105–113., https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6153776/.

	Donor Milk Benefit: Impact of new benefit on rates of breastfeeding for Medicaid members through the first 6 months after giving birth and long-term health outcomes of babies who utilized this benefit compared to those who did not or used infant formula.		
Evaluations	Pre-Post	Quasi-Experimental Design	Randomized Control Trial
Results of Evaluation	Donor Milk Benefit: The pre and post evaluation will examine short and long-term health outcomes of infants utilizing this benefit relative to those that did not.		Doula Benefit: Several trials surrounding doulas have shown improved maternal health outcomes. See Anticipated Outcomes Section
SB21-284 Evidence Category and Evidence Continuum Level	Doula Service Expansion is Step 4: Proven Several controlled trials have shown the benefit of doulas Donor Milk Benefit is Step 3: Evidence Informed While there have been studies proving that breast feeding rates improved with access to donor milk in hospital settings, the evidence of impact outside of a hospital setting is limited[21]		

Perinatal Service Expansion

Doula Services

Several studies have shown doulas have a positive effect across a wide variety of health outcomes. The results from state Medicaid programs that cover doulas are less definitive. Oregon, Minnesota, and Florida have covered doulas for at least four years. By nature of Florida's program, it is difficult to find a set rate, benefits package, or utilization data. Oregon and Minnesota have struggled with provider shortages. In the combined 10 years their programs have been active, they have only attracted enough providers to service a combined total of 1,008 births.

However, the Department believes that it can attract enough providers to service a significant number of members and realize the benefits if it receives the full requested reimbursement rate funding ($1500), a stakeholder engagement process, member outreach efforts, and doula training programs. Nine other states beyond Oregon, Minnesota, and Florida have recently implemented, or are in the process of implementing

[21] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4771129/

coverage. Their data is not yet available, but the Department will learn continue to monitor and learn from their experiences to the extent possible.

Promoting Equitable Outcomes

Historically underserved population or group[22]	Description of existing equity gap(s)	How does the request affect the gaps? (quantify wherever possible).
Non-White Populations	Birthing people of color are more likely to experience severe morbidity or adverse birth outcomes	Covering doulas and donor milk is expected to improve birth outcomes, which is expected to reduce gaps across populations.

Assumptions and Calculations

Other Department Impact Calculation Table	
	Department of Human Services
Total Funds	($1,903,091)
FTE	0.0
Ongoing	0
Term-limited	0
General Fund	$0
Cash Funds	$0
Reappropriated Funds	($1,903,091)

Perinatal Service Expansion

Doula Services

Due to the limited number of doulas the Department preformed a capacity-based service cost estimate and concluded that an estimated 1,116 members could be serviced by a doula every year. This is approximately 4.75% of the members who deliver a child every year (not including non-citizen emergency only deliveries, which would not be eligible for the service at this time).

[22] The characterization of the population impacted by the budget request is at the discretion of each department. However, the Colorado Equity Alliance often refers to common identities when discussing the history, institutions, and policies in Colorado. The "Big 9" include: Ability (mental or physical neurodivergence), age, ethnicity, gender, race, religion/religious minorities, sexual orientation / gender identity, socio-economic status / class, and body size.

A Listening to Mothers survey, conducted in 2013, found that 6% of pregnant people nationwide had chosen to use a doula and up to 33% of pregnant people would have liked a doula had they been aware of the service and if it had been covered by their insurance.[23] Based on this, the Department assumes that if capacity rises, between 1,410 and 7,754 members may choose to take advantage of the service every year. However, because there are few training or other systems in place to allow new doulas to become certified, the Department projects a 5% growth in the number of available doulas each year.

Six states currently cover doulas under their Medicaid programs. By nature of Florida's program, it is difficult to find a set rate or definition of benefits package. Among the other five states, rates range from $770 to $1,500 and covers between four and twelve in-home visits. Minnesota provides the lowest rate of $770, and in the six years that coverage has been available only 804 births have been covered. Oregon formerly provided a lower rate of $350 and only covered 204 births in four years. As a result, Oregon has recently increased its rate to $1,500. Given the low utilization of the active programs, the Department believes this enhanced rate of $1500 is appropriate. This is consistent with Rhode Island's program, which plans to provide a rate of $1,500 when the service is implemented in July. [24]

Based on the numerous studies showing improved outcomes with a doula, the Department anticipates part of this cost to be offset through reduced Cesarean-section rates, reduced inpatient and NICU stays, and a general reduced need for other services.

Based on the findings of several studies, the Department projects a 6% drop in Cesarean-section deliveries and a 1.5% drop in preterm births among members utilizing the service.

The Department estimates that each avoided Cesarean-section will save the Department $1,764 based on the difference in average delivery costs between cesarean and vaginal births in calendar year 2019. The Department used calendar year 2019 to avoid data noise from the pandemic. Assuming a 6% reduction in Cesarean-section rates among the estimated utilizers, the Department estimates an annual savings of approximately $130,000 due to avoided Cesarean-sections.

The Department estimated that each avoided preterm birth will save the Department $7,804. This was calculated under the assumption that preterm babies stay 21 days in the neonatal intensive care unit (NICU). Preterm babies are at a minimum born three weeks before their due date. It is recommended they stay in the NICU until their due date. Lacking any data on how many preterm births in doula study control groups were more than three weeks away from their due date, the minimum was assumed. Given that,

[23] Declercq ER, Sakala C, Corry MP, Applebaum S, Herrlich A. Listening to MothersSM III: Pregnancy and Birth. New York: Childbirth Connection, May 2013. https://www.nationalpartnership.org/our-work/resources/health-care/maternity/listening-to-mothers-iii-pregnancy-and-birth-2013.pdf

[24] Chen, Amy. "Doula Medicaid Project." National Health Law Program, 13 June 2022, https://healthlaw.org/doulamedicaidproject/.

the cost savings per avoided preterm birth is the normal newborn impatient day rate, $372 multiplied by 21, for $7,804. Assuming a 1.5% reduction in preterm birth rates among the estimated utilizers, the Department estimates an annual savings of around $140,000 due to avoided preterm births.

This is an annual total savings of approximately $270,000, which is assumed to be conservative. Doulas are associated with several cost-saving health outcomes, but only the avoidance of Cesarean-section and preterm births were calculated. Some studies showed a significant drop in Cesarean-section and preterm birth rates, but the lower numbers were assumed. The cost of preterm babies varies drastically depending on their gestational age, but the minimum of 21 days was assumed. Cesarean-sections and preterm births are linked with significant costs other than the increased delivery costs and inpatient hospital stays, but only the direct delivery costs were calculated.

As Colorado currently does not place any requirements on doula licensure, the Department assumes that a verification system would need to be developed. This work is expected to be completed by December 2023, which would allow for the service to be implemented by January 1, 2024. Given the nuances of a doula's work and the complications other states have had in developing standardized provider qualifications, the Department requests $150,000 for a stakeholder engagement contract to assist in the community-led development of appropriate and evidence-based provider qualifications.

Additionally, to encourage participation the program and allow more doulas to be trained, the Department requests $100,000 to subsidize doula training programs in Colorado. These programs currently train an estimated 100 people annually for a minimum of $500. Most of these people do not enter the public market but instead service a relatively small number of people on an hoc basis. The Department believes that providing educational subsidies and working directly with the training program to teach people how to become a Medicaid provider is the best way to increase capacity and avoid the issues experienced by Oregon and Minnesota, particularly in underserved communities and communities of color.

The Department requests an additional $30,000 annually for member outreach. The Listening to Mother's survey found that 36% of Medicaid or CHP+ members had never heard of doulas.[25] Therefore the Department assumes that member outreach and education resources will be needed to ensure equitable access to the service.

Donor Milk

The Mothers' Milk Bank (MMB) is assumed to be able to supply 102,564 ounces of donor human milk to families outside of hospitals annually based on historical supply. On average, patients utilize approximately 104 oz. each in outpatient settings. When factoring in shipping costs, each ounce of human donor milk costs $4.64. The Department

[25] Declercq ER, Sakala C, Corry MP, Applebaum S, Herrlich A. Listening to MothersSM III: Pregnancy and Birth. New York: Childbirth Connection, May 2013. https://www.nationalpartnership.org/our-work/resources/health-care/maternity/listening-to-mothers-iii-pregnancy-and-birth-2013.pdf

assumes that the reimbursement rate will be similar or equal to this total current cost for patients purchasing milk out of pocket. Eligibility and availability of this benefit is limited by the supply of human donor milk. Eligibility based on medical necessity, and potentially other factors such as the gestational age of the infant at birth, will be determined through a stakeholder engagement process and in consultation with the Center for Medicare and Medicaid Services. The Department assumes Medicaid members would utilize a proportional amount of the total supply of human donor milk available for outpatient use, relative to the number of births covered by Medicaid. Annually, Medicaid covers 42.8% of births in the state and 10.4% of Medicaid-covered births occur preterm.

High Risk Pregnant Women Line-Item Elimination
Eliminating the High-Risk Pregnant Women line item will result in an annual savings of $1,903,091, as this is what was appropriated to that line.

Supplemental, 1331 Supplemental

High Risk Pregnant Women Line-Item Elimination
This meets the supplemental criteria of a technical error which has a substantive effect on the operation of the program. The Department does not need duplicative funds for treatment costs for high risk pregnant women with a substance abuse disorder. This adjustment will save $1,903,091 total funds annually.

Table 1.0
Summary by Line Item
FY 2022-23

Row	Line Item	Total Funds	FTE	General Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP Rate	Notes/Calculations
A	(7) DHS, High Risk Pregnant Women Program	($1,903,091)	0.00	($951,546)	$0	$0	($951,545)	50.00%	Table 4.1 Row D
B	**Total**	**($1,903,091)**	**0.00**	**($951,546)**	**$0**	**$0**	**($951,545)**	-	Row A

Table 1.1
Summary by Line Item
FY 2023-24

Row	Line Item	Total Funds	FTE	General Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP Rate	Notes/Calculations
A	(1) EDO, (A) General Administration, General Professional Services and Special Projects	$280,000	0.00	$140,000	$0	$0	$140,000	50.00%	Table 4.1 Row A
B	(2) MSP, Medical and LT Care Services for Medicaid Eligible Indvdls	$881,471	0.00	$440,736	$0	$0	$440,735	50.00%	Table 3.1 Row D
C	(5) ICP, Children's Basic Health Plan Medical and Dental Costs	$38,767	0.00	$13,568	$0	$0	$25,199	65.00%	Table 3.1 Row E
D	(7) DHS, High Risk Pregnant Women Program	($1,903,091)	0.00	($951,546)	$0	$0	($951,545)	50.00%	Table 4.1 Row D
E	**Total**	**($702,853)**	**0.00**	**($357,242)**	**$0**	**$0**	**($345,611)**	-	Sum Rows A - D

Table 1.2
Summary by Line Item
FY 2024-25

Row	Line Item	Total Funds	FTE	General Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP Rate	Notes/Calculations
A	(1) EDO, (A) General Administration, General Professional Services and Special Projects	$130,000	0.00	$65,000	$0	$0	$65,000	50.00%	Table 4.1 Row A
B	(2) MSP, Medical and LT Care Services for Medicaid Eligible Indvdls	$1,617,017	0.00	$808,509	$0	$0	$808,508	50.00%	Table 3.1 Row D
C	(5) ICP, Children's Basic Health Plan Medical and Dental Costs	$80,837	0.00	$28,293	$0	$0	$52,544	65.00%	Table 3.1 Row E
D	(7) DHS, High Risk Pregnant Women Program	($1,903,091)	0.00	($951,546)	$0	$0	($951,545)	50.00%	Table 4.1 Row D
E	**Total**	**($75,237)**	**$0**	**($49,744)**	**$0**	**$0**	**($25,493)**	-	Sum Rows A - D

Table 1.3
Summary by Line Item
FY 2025-26 and Ongoing

Row	Line Item	Total Funds	FTE	General Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP Rate	Notes/Calculations
A	(1) EDO, (A) General Administration, General Professional Services and Special Projects	$130,000	0.00	$65,000	$0	$0	$65,000	50.00%	Table 4.1 Row A
B	(2) MSP, Medical and LT Care Services for Medicaid Eligible Indvdls	$1,693,494	0.00	$846,747	$0	$0	$846,747	50.00%	Table 3.1 Row D
C	(5) ICP, Children's Basic Health Plan Medical and Dental Costs	$85,211	0.00	$29,824	$0	$0	$55,387	65.00%	Table 3.1 Row E
D	(7) DHS, High Risk Pregnant Women Program	($1,903,091)	0.00	($951,546)	$0	$0	($951,545)	50.00%	Table 4.1 Row D
E	**Total**	**$5,614**	**0.00**	**($9,975)**	**$0**	**$0**	**$15,589**	-	Sum Rows A - D

Table 2.0
Summary by Initiative
FY 2022-23

Row	Line Item	Total Funds	FTE	General Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP Rate	Notes/Calculations
High Risk Pregnant Women									
A	High Risk Pregnant Women Line-Item Elimination	($1,903,091)	0.00	($951,546)	$0	$0	($951,545)	50.00%	Table 4.1 Row D
B	**Total**	**($1,903,091)**	**0.00**	**($951,546)**	**$0**	**$0**	**($951,545)**	**50.00%**	Row A

Table 2.1
Summary by Initiative
FY 2023-24

Row	Line Item	Total Funds	FTE	General Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP Rate	Notes/Calculations
High Risk Pregnant Women									
A	High Risk Pregnant Women Line-Item Elimination	($1,903,091)	0.00	($951,546)	$0	$0	($951,545)	50.00%	Table 4.1 Row D
Donor Milk Expansion									
B	Donor Milk - Service Cost Estimate	$203,677	0.00	$101,839	$0	$0	$101,838	50.00%	Table 5.1, Row G
Doula Service Expansion									
C	Doula - Service Cost Estimate	$837,202	0.00	$411,807	$0	$0	$425,395	50.81%	Table 3.1 Row C
D	Doula - Stakeholder Engagement	$150,000	0.00	$75,000	$0	$0	$75,000	50.00%	Table 4.1 Row A
E	Doula - Trainings	$100,000	0.00	$50,000	$0	$0	$50,000	50.00%	Table 4.1 Row B
F	Doula - Outreach	$30,000	0.00	$15,000	$0	$0	$15,000	50.00%	Table 4.1 Row C
G	Doula - Savings Estimate	($120,641)	0.00	($59,342)	$0	$0	($61,299)	50.81%	Table 3.1 Row C
H	**Total**	**($702,853)**	**0.00**	**($357,242)**	**$0**	**$0**	**($345,611)**	**49.17%**	Sum Rows A - G

Table 2.2
Summary by Initiative
FY 2024-25

Row	Line Item	Total Funds	FTE	General Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP Rate	Notes/Calculations
High Risk Pregnant Women									
A	High Risk Pregnant Women Line-Item Elimination	($1,903,091)	0.00	($951,546)	$0	$0	($951,545)	50.00%	Table 4.1 Row D
Donor Milk Expansion									
B	Donor Milk - Service Cost Estimate	$203,677	0.00	$101,839	$0	$0	$101,838	50.00%	Table 5.1, Row G
Doula Service Expansion									
C	Doula - Service Cost Estimate	$1,758,123	0.00	$864,794	$0	$0	$893,329	50.81%	Table 3.1 Row C
D	Doula - Stakeholder Engagement	$0	0.00	$0	$0	$0	$0	0.00%	Table 4.1 Row A
E	Doula - Trainings	$100,000	0.00	$50,000	$0	$0	$50,000	50.00%	Table 4.1 Row B
F	Doula - Outreach	$30,000	0.00	$15,000	$0	$0	$15,000	50.00%	Table 4.1 Row C
G	Doula - Savings Estimate	($263,946)	0.00	($129,831)	$0	$0	($134,115)	50.81%	Table 3.1 Row C
H	**Total**	**($75,237)**	**0.00**	**($49,744)**	**$0**	**$0**	**($25,493)**	**33.88%**	Sum Rows A - G

Table 2.3
Summary by Initiative
FY 2025-26 and Ongoing

Row	Line Item	Total Funds	FTE	General Fund	Cash Funds	Reappropriated Funds	Federal Funds	FFP Rate	Notes/Calculations
High Risk Pregnant Women									
A	High Risk Pregnant Women Line-Item Elimination	($1,903,091)	0.00	($951,546)	$0	$0	($951,545)	50.00%	Table 4.1 Row D
Donor Milk Expansion									
B	Donor Milk - Service Cost Estimate	$203,677	0.00	$101,839	$0	$0	$101,838	50.00%	Table 5.1, Row G
Doula Service Expansion									
C	Doula - Service Cost Estimate	$1,846,030	0.00	$908,034	$0	$0	$937,996	50.81%	Table 3.1 Row C
D	Doula - Stakeholder Engagement	$0	0.00	$0	$0	$0	$0	0.00%	Table 4.1 Row A
E	Doula - Trainings	$100,000	0.00	$50,000	$0	$0	$50,000	50.00%	Table 4.1 Row B
F	Doula - Outreach	$30,000	0.00	$15,000	$0	$0	$15,000	50.00%	Table 4.1 Row C
G	Doula - Savings Estimate	($271,002)	0.00	($133,302)	$0	$0	($137,700)	50.81%	Table 3.1 Row C
H	**Total**	**$5,614**	**0.00**	**($9,975)**	**$0**	**$0**	**$15,589**	**277.68%**	Sum Rows A - G

Table 3.1: Doula Net Cost Estimate					
Row	**Line Item**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**Notes/Calculations**
A	Total Estimated Cost	$837,202	$1,758,123	$1,846,030	Table 3.2 Row H
B	Total Estimated Savings	($120,641)	($263,946)	($271,002)	Table 3.3 Row N
C	**Total Estimated Net Cost**	**$716,561**	**$1,494,177**	**$1,575,028**	Sum Rows A - B
D	*Total Medicaid Cost*	*$677,794*	*$1,413,340*	*$1,489,817*	*Table 3.2 Row I + Table 3.3 Row O*
E	*Total CHP Cost*	*$38,767*	*$80,837*	*$85,211*	*Table 3.2 Row J + Table 3.3 Row P*

Table 3.2: Doula Service Cost Estimate					
Row	**Line Item**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**Notes/Calculations**
A	Service Rate	$1,500	$1,500	$1,500	Medicaid rates in other states range from $500 to $1,500
B	Number of Doulas in Colorado	94	99	104	According to DoulaMatch.net as of 6/7/2022[1] Assummed 5% Growth Per Year
C	Births Per Doula Per Year	48	48	48	Estimate from Care.com[2]
D	Colorado-Wide Capacity Limit for Doulas	4,512	4,738	4,974	Row B x Row C
E	Precent of Colorado Population on Medicaid and CHP	24.74%	24.74%	24.74%	Colorado population data and projections from DOLA (averaged across calender years).[3] Compared against caseload forecast. Assummed constant in out years
F	Precent of the Year in Effect	50%	100%	100%	Assumed January 1st, 2024 implementation
G	Estimated Capacity Limit for Doulas	558	1,172	1,231	Row D x Row E x Row F
H	**Total Estimated Cost**	**$837,202**	**$1,758,123**	**$1,846,030**	Row A x Row G
I	*Total Medicaid Cost*	*$791,908*	*$1,663,006*	*$1,746,157*	*Based on relative caseload forecasts*
J	*Total CHP Cost*	*$45,294*	*$95,117*	*$99,873*	*Based on relative caseload forecasts*

[1] https://doulamatch.net/list/birth/co#:~:text=93%20birth%20doulas%20in%20Colorado.

[2] https://www.care.com/c/how-much-does-a-doula-make/

[3] https://data.colorado.gov/Demographics/Population-Projections-in-Colorado/q5vp-adf3

Table 3.3: Doula Service Savings Estimate					
Row	**Line Item**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**Notes/Calculations**
A	Number of Utilizers	558	1,172	1,231	Table 3.2 Row G
B	Estimated Drop in Cesareans Deliveries	6%	6%	6%	Health Connect One found a 6% drop in cesarean rate between deliveries within the community based doula program and the average community data across eight participating neighborhoods. This is assumed conservative based on the findings of several other studies
C	Estimated Avoided Cesareans Deliveries	33	70	74	Row A x Row B
D	Average Cost Per Vaginal Birth	$3,842	$3,842	$3,842	Only includes delivery costs. Data from calendar year 2019
E	Average Cost Per Cesarean Birth	$5,606	$5,606	$5,606	Only includes delivery costs. Data from calendar year 2019
F	Cost Savings Per Avoided Cesarean	($1,764)	($1,764)	($1,764)	Row D - Row E
G	**Total Savings Through Avoided Cesareans**	**($58,212)**	**($123,481)**	**($130,537)**	**Row C x Row F**
H	Estimated Drop in Preterm Births	1.50%	1.50%	1.50%	The Everyday Miracles program that provides doulas to women on Medicaid in Minneapolis found a 1.2% drop in preterm births compared against the nationwide Medicaid rate. This is assumed conservative based on the findings of the By My Side program and a randomized controlled trial
I	Estimated Avoided Preterm Births	8	18	18	Row A x Row H
J	NICU Days Avoided Per Avoided Pre Term Birth	21	21	21	Preterm births are at a minimum born three weeks before their due date. It is recommended they stay in the NICU until their due date. Lacking any data on how many preterm births were more than three weeks away from their due date, the minimum was assumed
K	Cost Savings Per Avoided NICU Day	($372)	($372)	($372)	Normal newborn inpatient day rate
L	Cost Savings per avoided Pre Term Birth	($7,804)	($7,804)	($7,804)	Row J x Row K
M	**Total Savings Through Avoided NICU Stays**	**($62,429)**	**($140,465)**	**($140,465)**	**Row L x Row I**
N	**Total Estimated Savings**	**($120,641)**	**($263,946)**	**($271,002)**	Row G + Row M
O	*Total Medicaid Cost*	*($114,114)*	*($249,666)*	*($256,340)*	*Based on relative caseload forecasts*
P	*Total CHP Cost*	*($6,527)*	*($14,280)*	*($14,662)*	*Based on relative caseload forecasts*

[1]https://pretermbirthca.ucsf.edu/sites/g/files/tkssra2851/f/wysiwyg/Kennell%20-%201991%20-%20Continuous%20emotional%20support%20during%20labor%20in%20a%20US%20hospital.pdf

Table 4.1: Stakeholder Engagement Costs						
Row	**Line Item**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**Notes/Calculations**
A	Stakeholder Engagement Cost	$0	$150,000	$0	$0	Table 4.2 Row C
B	Doula Trainings Cost	$0	$100,000	$100,000	$100,000	Table 4.3 Row D
C	Outreach Cost	$0	$30,000	$30,000	$30,000	Table 4.3 Row E
D	High Risk Pregnant Women Line-Item Elimination	($1,903,091)	($1,903,091)	($1,903,091)	($1,903,091)	Table 4.4 Row B
E	**Total Estimated Admin Costs**	**($1,903,091)**	**($1,623,091)**	**($1,773,091)**	**($1,773,091)**	**Sum Rows A - C**

Table 4.2: Stakeholder Engagement Costs						
Row	**Line Item**	**FY 2023-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**Notes/Calculations**
A	Estimated Stakeholder Engagement Hours	0	500	0	0	Based on projects of similar scope
B	Contractor Rate	$300	$300	$300	$300	Standard Stakeholder Engagement Contractor Rate
C	**Total Stakeholder Engagement Costs**	**$0**	**$150,000**	**$0**	**$0**	**Row A x Row B**

Table 4.3: Trainings and Outreach Costs						
Row	**Line Item**	**FY 2023-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**Notes/Calculations**
Doula Trainings						
A	Number of Doula Training Centers in CO	2	2	2	2	From DONA International
B	Number of Doula's Trained Per Center Per Year	0	100	100	100	Estimate from Denver Doula Training
C	Training Cost	$500	$500	$500	$500	Posted rates between $500 - $750
D	**Doula Trainings Costs**	**$0**	**$100,000**	**$100,000**	**$100,000**	**Row A x Row B x Row C**
Outreach						
E	**Outreach Cost**	**$0**	**$30,000**	**$30,000**	**$30,000**	**Based on projects of similar scope**
F	**Total Estimated Net Cost**	**$0**	**$130,000**	**$130,000**	**$130,000**	**Row D + Row E**

Table 4.4: High Risk Pregnant Women Line-Item Elimination						
Row	**Line Item**	**FY 2023-23**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**Notes/Calculations**
A	High Risk Pregnant Women Line-Item Elimination	(1,903,091)	(1,903,091)	(1,903,091)	(1,903,091)	Amount appropriated to High Risk Pregnant Women Program in FY 22-23
B	**Total Estimated Savings**	**(1,903,091)**	**($1,903,091)**	**($1,903,091)**	**($1,903,091)**	**Row A**

Table 5.1: Donor Milk Service Cost Estimate					
Row	**Line Item**	**FY 2023-24**	**FY 2024-25**	**FY 2025-26**	**Notes/Calculations**
A	Supply of Outpatient Milk	102,564	102,564	102,564	Mother's Milk Bank (MMB) dispensed 51,282 ounces of outpatient milk from January - June 2022. The yearly supply is estimated to be double that half year amount
B	Consumption Adjustment	42.80%	42.80%	42.80%	Percent of supply that can be consumed by members. Calculated in Table 3.2 Row K
C	Supply of Outpatient Milk Available to Members	43,896	43,896	43,896	Row A x Row B
D	Milk Cost Per Ounce of Milk	$4.50	$4.50	$4.50	Estimate from MMB
E	Shipping Cost Per Ounce of Milk	$0.14	$0.14	$0.14	Estimate from MMB
F	Total Cost Per Ounce of Milk	$4.64	$4.64	$4.64	Row D + Row E
G	**Total Estimated Cost**	**$203,677**	**$203,677**	**$203,677**	**Row C x Row F**