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Policies and Practices on Out-of-Hospital Birth: a Review of Qualitative Studies in the Time of Coronavirus

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Abstract

Purpose of Review The purpose of this review is to summarize the current knowledge on out-of-hospital births (at home or in an independent birth center) in high-income countries in the time of coronavirus. Qualitative studies published between 2020 and 2022 providing findings on women's and health providers' perspectives and experiences, as well as policies and practices implemented, are synthetized.

Recent Findings During the COVID-19 pandemic, the number of women choosing the home or a birth center to deliver has grown considerably. Main reasons for this choice include fear of contagion in facilities and restrictions during delivery and the post-partum period, especially women's separation from their companion of choice and their newborn. Findings suggest that homebirth within a public model has several advantages in the experience of birth for both women and professionals during the pandemic period, maintaining the benefits of biomedicine when needed.

Summary During the COVID-19 pandemic, the interest in out-of-hospital birth increased in high-income countries, and the number of women choosing the home or a birth center to deliver has grown considerably. This review aims to give a more in-depth understanding of women's and health providers' perspectives on and experiences of out-of-hospital birth services during this period. Twenty-five studies in different countries, including the USA, Canada, Australia, Switzerland, the Netherlands, the UK, Spain, Croatia, and Norway, were reviewed. Findings stress that out-of-hospital birth has allowed women to deliver according to their wishes and needs. In addition, the pandemic experience represents an opportunity for policy to better support and integrate out-of-hospital services in the health care system in the future.

Keywords Homebirth · Birth center · Community birth · Out-of-hospital birth · COVID-19

Introduction

Although out-of-hospital birth is still a controversial topic, evidence-based literature shows that in high-income countries, in low-risk women, and in well-integrated health systems, homebirth and independent birth centers are associated with fewer obstetrical interventions and equal safety compared to hospital births [1–6, 7••]. Sometimes, it is even safer than hospital birth, because it provides fewer unnecessary interventions, offers personalized care, and enhances women's empowerment [2]. During the COVID-19 pandemic, the interest in out-of-hospital births increased in high-income countries, and the number of women choosing the home or a birth center to deliver has grown considerably. This review aims to give a more in-depth understanding of women's and health providers' perspectives on and experiences of out-of-hospital birth services during the pandemic period. It also aims to foment the debate on the desirable better integration among different models of care in childbirth in high-income countries.

Methods

To perform this study, a qualitative synthesis was conducted [8]. The objective was to identify papers relating to out-of-hospital births and COVID-19 published in English or Spanish between 1 January 2020 and 30 June 2022.

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Search Strategy and Study Selection

The database search was conducted on PubMed and SciELO. Interdisciplinary approach was taken into account: both databases contain citations and abstracts of biomedical and social sciences literature. Qualitative approach is well-represented in these sources. The following key words were used: "out-of-hospital birth," "homebirth," "planned homebirth," "birth centre," and "Covid 19" or "Sars-Cov-2." In Spanish, "parto domicilio/domiciliar/en casa *and* Covid 19/Sars-Cov-2," "casa de parto/casa maternidad," and "Covid 19/Sars-Cov-2" were used. The inclusion criteria comprised primary data analysis characterizing women's and health care providers' perspectives on and experiences of out-of-hospital birth during the pandemic, written in English or Spanish and considering high-income countries. A total of 78 articles were initially obtained by data search. Each title and abstract were screened for inclusion. Following deduplication (33), 20 articles were excluded according to the following exclusion criteria: research conducted in middle- and low-income countries (12), systematic reviews (2), guideline and protocol studies (2), and articles addressing other topics (4) (Fig. 1). Twenty-five studies were included in the review. They were carried out in 9 countries (Table 1).

Data Extraction

Twenty-five studies were included in the review (Table 1). Full texts were analyzed. A thematic synthesis approach [9] was used to synthetize the data. It was based on an initial coding of the texts and the subsequent development of first-order descriptive categories, a second order of analytical themes, and a third order of domains (Table 2). ATLAS.ti qualitative data analysis software was used to code and synthetize the studies into categories and themes. The analysis synthetizes findings from research conducted in the following countries: the USA (15 studies), Canada (1), Australia (1), Switzerland (1), the Netherlands (2), the UK (2 studies), Spain (1), Poland (1), Croatia (1). Sixteen studies included women, 4 studies included health providers (especially midwives), 1 study included both women and health providers, and 4 studies discussed policies and laws.

Quality Assessment

Qualitative studies were assessed for quality using the JBI Critical Appraisal Checklist for Qualitative Research (QARI) tool [10]. Threshold for inclusion was confirmation of questions 2, 3, 4, 5, 8, and 10.

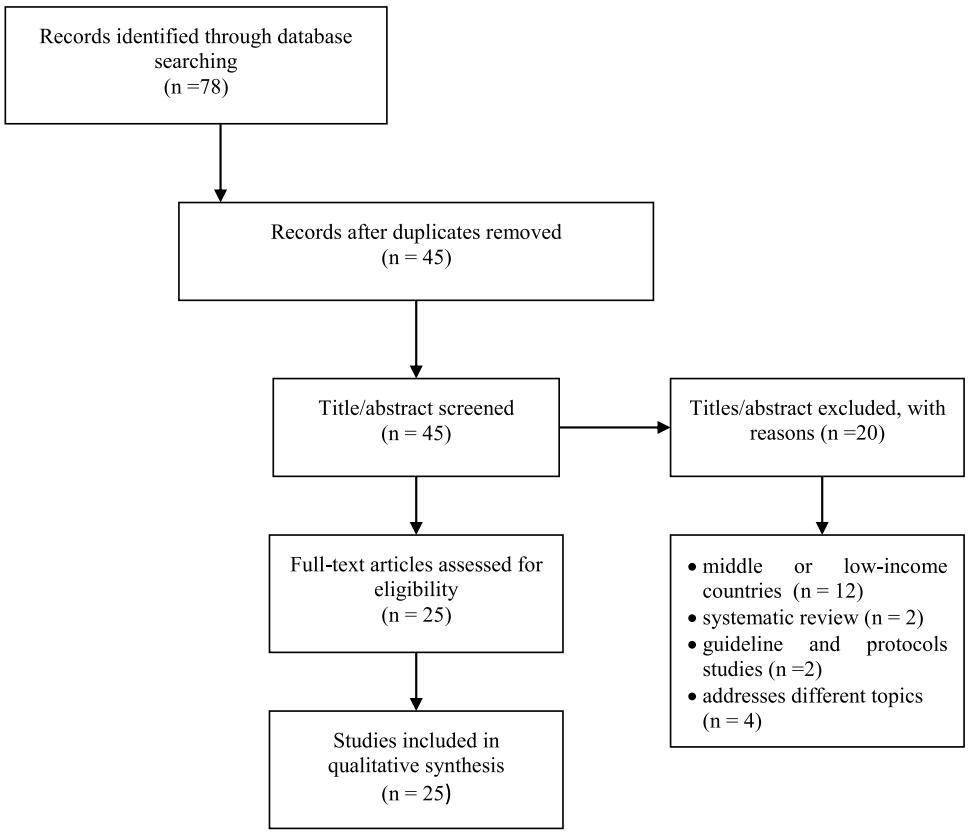

Fig. 1 Flow diagram of search and study inclusion

Table 1 Selected studies. Source: author's elaboration

Reference number	Study	Country	Study aim	Study population	Methodology
11	Rauch S, Arnold L, Stuerner Z, Rauh J, Rost M. A true choice of place of birth? Swiss women's access to birth hospitals and birth centers. PLoS One. 2022Jul6;17(7):e0270834. 10.1371/journal.pone.0270834. PMID: 35,793,367; PMCID: PMC9258807	Switzerland	To analyze Swiss women's choice between birth hospitals and birth centers	1,896,669 (99.8 of Swiss women of childbearing age) were included	Spatial accessibility analysis, based on four data types: highly disaggregated population data, administrative data, street network data, addresses of birth hospitals and birth centers. If both birth settings were available within 30 min, a woman was considered to have a true choice
12	MacDorman MF, Barnard-Mayers R, Declercq E. United States community births increased by 20% from 2019 to 2020. Birth. 2022 Feb 25. 10.1111/birt.12627. Epub ahead of print. PMID: 35,218,065	USA	To examine trends in community births from 2019 to 2020, and the risk profile of these births	A total of 3,613,647 were analyzed	Analysis of birth certificates transmitted to the National Center for Health Statistics. 2020 birth certificate data were compared with prior years' data to analyze trends in community births by socio-demographic and medical characteristics
13	Vanderlaan J, Woeber K. Early perinatal workforce adaptations to the COVID-19 pandemic. J Perinat Neonatal Nurs. 2022 Jan-Mar 01;36(1):37–45. 10.1097/JPN.0000000000000617PMID: 35,089,176	USA	To describe the system's initial pandemic response from the perspectives of perinatal health workers and to identify opportunities for improved future preparedness	A total of 181 nurses, midwives, and physicians	Exploratory survey to identify perinatal practice changes and workforce challenges during the initial weeks of the COVID-19 pandemic. The survey included baseline data collection and weekly surveys
14	Grünebaum A, Bornstein E, Katz A, Chervenak FA. Worsening risk profiles of out-of-hospital births during the COVID-19 pandemic. Am J Obstet Gynecol. 2022. Jan;226(1):137–138. 10.1016/j.ajog.2021.11.1346. Epub 2021 Dec 10. PMID: 34,895,908; PMCID: PMC8660066	USA	To evaluate changes of place of births and risk profiles before (2019) and during (2020) the COVID-19 pandemic	3,747,540 births in 2019 and 3,613,647 in 2020	Retrospective descriptive population-based cohort study that used the Centers for Disease Control and Prevention Natality online database for the years 2019 (before the pandemic) and 2020 (during the pandemic). Comparison of births in birth centers and home births with those in hospitals (births by midwives and births by others, such as doctors)

Table 1 (continued)

Reference number	Study	Country	Study aim	Study population	Methodology
15	Strózik M, Szarpak L, Adam I, Smereka J. Determinants of place of delivery during the COVID-19 pandemic-internet survey in polish pregnant women. Medicina 2022, 58, 831. 10.3390/medicina5806083	Poland	To determine the factors influencing the choice of place of delivery and the impact of the COVID 19 pandemic on these factors	517 women who gave birth during the pandemic or are about to give birth	Survey questionnaire distributed via the Internet from 8 to 23 June 2021. Statistical analysis of measurable (quantitative) and non-measurable (qualitative) features. The analysis of the relationships between the qualitative variables was carried out with the use of cross tables with the use of chi-2 tests, Likelihood ratio chi-2, and the exact Fisher test. The strength of the compounds was measured using the Phi Yule coefficient. A correlation between quantitative variables was verified using Spearman's rho test. A significance level of $p < 0.05$ was adopted, indicating the presence of statistically significant relationships or differences. Statistical analysis was performed using the SPSS 26 software
16	Applebaum J. Expanding certified professional midwife services during the COVID-19 pandemic. Birth. 2022 Apr 15:10.1111/birt.12643. 10.1111/birt.12643. Epub ahead of print. PMID: 35,429,017; PMCID: PMC9111869	USA	To discuss issues surrounding the expansion of CPM services including safety, standardization of care, patient satisfaction, racial and income equity, and an overburdened health care system		Discussed policy
17	Mikuš M, Sokol Karadjole V, Kalafatić D, Orešković S, Šarčević A. Increase of stillbirths and unplanned out-of-hospital births during coronavirus disease 2019 lockdown and the Zagreb earthquake. Acta Obstet Gynecol Scand. 2021Nov;100(11):2119–2120. 10.1111/aogs.14250. Epub 2021 Aug 26. PMID:34,448,194; PMCID: PMC8652766	Croatia	To evaluate the effect of the first wave of COVID-19 pandemic and the Zagreb earthquake on perinatal outcomes in the largest Croatian maternity clinic at the University Hospital Center Zagreb	Total single births 3277 (2029) and 2732 (2020)	Retrospective study. The analysis covered the data of all pregnant women with singleton gestation admitted during the pandemic period from February 25 to December 31, 2020 (study group) and the corresponding prepandemic period in 2019 (comparison group)

Table 1 (continued)

Reference number	Study	Country	Study aim	Study population	Methodology
18	Rice KF, Williams SA. Making good care essential: the impact of increased obstetric interventions and decreased services during the COVID-19 pandemic. Women Birth. 2021 Oct 27:S1871-5192(21)00,182–7. 10.1016/j.wombi.2021.10.008. Epub ahead of print. PMID: 34,774,446; PMCID:PMC8559154	Canada	To examine the impact of pandemic policy changes on experiences of pregnancy and birth, thereby identifying barriers to good care; to inform understandings of medicalization, care, pregnancy, and subjectivity during times of crisis; and to critically examine the assumptions about pregnancy and birth that are sustained and produced through policy	65 pregnant people	Qualitative descriptive study drawing on 67 in-depth interviews with people who were pregnant and/or gave birth in Canada during the pandemic. Constructionist standpoint and employed thematic analysis to derive meaning from study data
19	DeJoy SB, Mandel D, McFadden N, Petrecca L. Concerns of women choosing community birth during the COVID-19 pandemic: a qualitative study. J Midwifery Womens Health. 2021 Sep;66(5):624–630. 10.1111/jmwh.13290. Epub 2021 Oct 1.PMID: 34,596,940; PMCID: PMC8662103	USA	To understand childbearing persons' decision-making during the pandemic and to illuminate their experiences giving birth in community settings	17 pregnant women	Semi-structural interviews, content analysis, and phenomenological approach
20	Preis H, Mahaffey B, Lobel M. The role of pandemic-related pregnancy stress in preference for community birth during the beginning of the COVID-19 pandemic in the United States. Birth. 2021 Jun;48(2):242–250. 10.1111/birt.12533. Epub 2021 Mar 6. PMID: 33,677,838; PMCID: PMC8250474	USA	To quantitatively investigate psychological factors related to this birth preference	3896 pregnant women	This study included 3896 pregnant women from the COVID-19 Pregnancy Experiences (COPE) Study who were anticipating a vaginal birth. COPE Study participants were recruited online between April 24 and May 15, 2020, and completed a questionnaire that included preference with respect to place of birth and psychological constructs: fear of childbirth, basic beliefs about birth, pandemic-related preparedness stress, and pandemic-related perinatal infection stress
21	Daviss BA, Anderson DA, Johnson KC. Pivoting to childbirth at home or in freestanding birth centers in the US during COVID-19: safety, economics and logistics. Front Sociol. 2021 Mar 26;6:618,210. 10.3389/fsoc.2021.618210. PMID: 33,869,572; PMCID: PMC8022486	USA	To examine the intersections of safety, economic efficiency, insurance, liability, and birthing persons' needs that have become critical as the pandemic has ravaged bodies and economies around the world		Discuss policy

Table 1 (continued)

Reference number	Study	Country	Study aim	Study population	Methodology
22	Gildner TE, Thayer ZM. Maternity care preferences for future pregnancies among United States childbearers: the impacts of COVID-19. Front Sociol. 2021Feb 18;6:611,407. https://doi.org/10.3389/fsoc.2021.611407. PMID: 33,869,560; PMCID:PMC8022446	USA	To analyze how the pandemic may shape future maternity care preferences post-pandemic	1175 women participants	Online convenience survey. Prenatal survey and postnatal survey 4 weeks after their due date
23	Grünebaum A, McCullough LB, Bornstein E, Klein R, Dudenhausen JW, Chervenak FA. Professionally responsible counseling about birth location during the COVID-19 pandemic. J Perinat Med. 2020 Jun 25;48(5):450–452. 10.1515/jpm-2020–0183. PMID: 32,401,227	USA	Discuss policies and health providers recommendation		Discuss policy
24	Noddin K, Bradley D, Wolfberg A. Delivery outcomes during the COVID-19 pandemic as reported in a pregnancy mobile app: retrospective cohort study. JMIR Pediatr Parent. 2021 Oct 4;4(4):e27769. 10.2196/27769. PMID: 34,509,975; PMCID: PMC8491643	USA	To assess the incidence of key obstetrics outcomes (preterm delivery, cesarean sections, and home births) and length of hospital stay during the COVID-19 pandemic as compared to the 6 months prior	304,023 birth reports of women aged 18–44 years who delivered between October 1, 2019, and September 30, 2020, had singleton deliveries, and completed a birth report in the Ovia Pregnancy mobile app	Retrospective cohort study. Women were assigned to the prepandemic cohort if they delivered between October 2019 and March 2020, and the pandemic cohort if they delivered between April and September 2020. Gestational age at delivery, delivery method, delivery facility type, and length of hospital stay were compared
25	Nelson A, Romanis EC. The medicalisation of childbirth and access to homebirth in the UK: COVID-19 and beyond. Med Law Rev. 2021 Dec 6;29(4):661–687. 10.1093/medlaw/fwab040. PMID: 34,668,011; PMCID: PMC8574542	United Kingdom	To explore how the law has perpetuated the medicalisation of childbirth, and outline why this may limit the ability of birthing persons to access and opt for homebirth		Low and policies analysis
26	Van Manen ELM, Hollander M, Feijen-de Jong E, de Jonge A, Verhoeven C, Gitsels J. Experiences of Dutch maternity care professionals during the first wave of COVID-19 in a community based maternity care system. PLoS One. 2021 Jun 17;16(6):e0252735. 10.1371/journal.pone.0252735. PMID: 34,138,877; PMCID: PMC8211230	The Netherlands	To present the opinions and experiences of maternity care professionals with the organization of maternity care during the COVID-19 pandemic; and outline the opportunities for the long-term organization of maternity care	495 respondents: 364community midwives 75 hospital-based midwives 34 obstetricians 22 resident obstetrics	Online survey. Multinomial logistic regression analyses were used to investigate associations between the respondents' characteristics and answers. The data were imported from Survalyzer and analyzed using IBM SPSS Statistics for Windows, version 26

Table 1 (continued)

Reference number	Study	Country	Study aim	Study population	Methodology
27	Oparah JC, James JE, Barnett D, Jones LM, Melbourne D, Peprah S, Walker JA. Creativity, resilience and resistance: black birthworkers' responses to the COVID-19 pandemic. Front Sociol. 2021 Mar 25;6:636,029. 10.3389/fsoc.2021.636029. Erratum in: Front Sociol. 2021 May 13;6:695,303. PMID: 33,869,584; PMCID: PMC8022614	USA	To present the experiences of Black birthworkers supporting pregnant and birthing people and new mamas during the first 6 months of the COVID-19 pandemic	38 participants (2 midwives, 2 lactation consultants, 7 community health workers, 23 doulas, and 2 obstetric/gynecologists)	Narratives of Black birthworker were collected and analyzed. Participants were invited to participate in one of four sharing circles, held virtually over Zoom. Sharing circles were attended by 8–12 participants. A set of guiding questions were asked in the Zoom chat and each participant shared their experience. Conversations were taped, transcribed, and analyzed using Dedoose qualitative research software
28	Greenfield M, Payne-Gifford S, McKenzie G. Between a rock and a hard place: considering "freebirth" during COVID-19. Front Glob Womens Health. 2021 Feb 18;2:603,744. 10.3389/fgwh.2021.603744. PMID: 34,816,178; PMCID: PMC8594025	United Kingdom	To provide real-time data to capture the lived experiences of expectant families during COVID-19	1700 respondents. The survey was open to those in the third trimester of pregnancy, and the partners of pregnant women and people who were in these circumstances	A mixed-methods online survey was carried out over 2 weeks between 10 and 24th April 2020. 1700 responses were received
29	Homer CSE, Davies-Tuck M, Dahlen HG, Scarf VL. The impact of planning for COVID-19 on private practicing midwives in Australia. Women Birth. 2021. Feb;34(1):e32-e37. 10.1016/j.wombi.2020.09.013. Epub 2020 Sep 23. PMID: 32,994,144; PMCID: PMC7510523	Australia	To explore the experience of privately practicing midwives in relation to the response to planning for the COVID-19 pandemic	103 privately practicing midwives	An online survey was distributed through social media and personal networks to privately practicing midwives in Australia in April 2020
30	Verhoeven CJM, Boer J, Kok M, Nieuwenhuijze M, de Jonge A, Peters LL. More home births during the COVID-19 pandemic in the Netherlands. Birth. 2022 May 12. 10.1111/birt.12646. Epub ahead of print. PMID: 35,554,962	The Netherlands	To examine whether the course of pregnancy and birth and accompanying outcomes among low-risk pregnant women changed in the COVID-19 pandemic compared to the prepandemic period	5913 women, 2963 (50.1%) of them were pregnant in the COVID-19 pandemic, whereas 2950 (49.9%) were pregnant in the prepandemic period. They were healthy women, with a singleton pregnancy, who gave birth from 24 weeks of gestation onward, and had at least one appointment with a primary care midwife after 24 weeks of gestation	Observational study. Analysis of data from the Dutch Midwifery Case Registration System (VeCaS). Differences in the course of pregnancy and birth, and accompanying maternal and neonatal outcomes, were calculated between women pregnant during the initial months of the COVID-19 pandemic (March 1 to August 3, 2020) and the prepandemic period (March 1–August 3, 2019)

Table 1 (continued)

Reference number	Study	Country	Study aim	Study population	Methodology
31	Davis-Floyd R, Gutschow K, Schwartz DA. Pregnancy, birth and the COVID-19 pandemic in the United States. Med Anthropol. 2020 Jul;39(5):413–427. https://doi.org/10.1080/01459740.2020.1761804Epub 2020 May 14. PMID: 32,406,755	USA	To show the changes that have occurred in birth practices across the USA as a result of the pandemic	41 members of the listservs of the Council on Anthropology and Reproduction, REPRONETWORK, and birth practitioners, including midwives, doulas, and obstetricians	Queried via e-mail members of the listservs of the Council and birth practitioners between March 27 and April 11, 2020. Content analysis
32	Premkumar A, Cassimatis I, Berhie SH, Jao J, Cohn SE, Sutton SH, Condron B,Levesque J, Garcia PM, Miller ES, Yee LM. Home birth in the era of COVID-19: counseling and preparation for pregnant persons living with HIV. Am J Perinatol. 2020 Aug;37(10):1038–1043. 10.1055/s-0040–1,712,513. Epub 2020 Jun 4. PMID:32,498,092; PMCID: PMC7416217	USA	Discuss experience and recommendations for counseling and preparation of pregnant persons living with HIV who may be considering home birth or at risk for unintentional home birth due to the pandemic; discuss issues associated with implementing a risk mitigation strategy involving high-risk births occurring at home during a pandemic	Persons living with HIV who may be considering home birth or at risk for unintentional home birth due to the pandemic	Analysis of components of counseling for pregnant persons living with HIV who are choosing home birth and literature
33	Costa Abós S, Behaghel M. Parir en casa en tiempos de coronavirus, Musas. 2020;5(2): 4–22. 10.1344/musas2020.vol5.num2.1	Spain	To present women's experience of giving birth	1 woman giving birth at home	In-depth interview and content analysis
34	Combellick JL, Basile Ibrahim B, Julien T, Scharer K, Jackson K, Powell Kennedy H. Birth during the COVID-19 pandemic: what childbearing people in the United States needed to achieve a positive birth experience. Birth. 2022 Jun;49(2):341–351. 10.1111/birt.12616. Epub 2022 Feb 25. Erratum in: Birth. 2022 Jul 13;: PMID: 35,218,067; PMCID: PMC9111370	USA	To identify what childbearing people needed to achieve a positive birth experience during the pandemic	707 participants from 46 states and the District of Columbia completed the questionnaire, with 394 contributing qualitative data about their experiences. Participants were who gave birth during the COVID pandemic from 3/1/2020 to 11/1/2020	Mixed-methods, cross-sectional study. Participants were sampled via a web-based questionnaire that was distributed nationally. Descriptive and bivariate statistics were analyzed. Thematic and content analyses of qualitative data were based on narrative information provided by participants. Qualitative and convergent quantitative data were reported
35	Monteblanco AD. The COVID-19 pandemic: a focusing event to promote community midwifery policies in the United States. Soc Sci Humanit Open. 2021;3(1):100,104. 10.1016/j.ssaho.2020.100104. Epub 2021 Jan 1. PMID: 34,173,508; PMCID: PMC7775796	USA	To theorize that the COVID-19- disrupted health care system and the heightened visibility of community midwives may create a "focusing event," or policy window, which may enable midwives and their advocates to shift policy		Discuss policies

Table 2 Analysis: codes, categories, and domains. Source: author's elaboration

Third order: domains	Second order: themes	Studies	First order: codes
Data	Increase of delivery in out-of-hospital birth Increase of interest in out-of-hospital birth	[12–15, 17, 18, 21, 22, 24, 25•, 26–28, 30, 32, 33]	Increase number of out-of-hospital births Increase interest in out-of-hospital birth Increase interest in freebirth Increase according to women and pregnant persons' profile ----Race/ethnicity ----Gender ----Socio-economics status ----Medical condition
Midwives perspectives and experience	Midwives' perceptions on use of out-of-hospital birth services Midwives' perceptions on interest in out-of-hospital birth Midwives' experiences/role on out-of-hospital birth	[13, 16, 19, 21, 24, 26, 27, 29, 31, 33–35]	More questions More consultants More births Hospital-based midwives experience Community-based midwives experience
Women's and pregnant persons' perspective and experience	Reasons for the choose homebirth	[15–22, 25•, 26–28, 30–33]	Fear of being infected in hospital setting Restrictions Fear of interventionism/unnecessary practices Fear for lack of support
	Women's experiences	[10, 14, 16, 19, 21, 23, 26, 27, 31–34]	Women's satisfaction Safety (perception of) Risk (perception of) Increasing in risk profile
Policy	Barriers to out-of-hospital birth	[11, 12, 19, 21, 22, 25•, 33–35]	Spatial accessibility Costs Laws and policies Protocols Preference for the future
	Recommendations	[11, 18, 20–22, 25•, 29, 31–35]	

Findings

The studies included in this review show the perspective and experience of women regarding home birth during the COVID-19 pandemic [11–24, 25•, 26–35]. A few case protocols or policies are also discussed [17, 19, 25•, 34]. In the qualitative synthesis, the following themes emerged as significative during the pandemic: (1) increased use of and interest in homebirth and independent birth centers by pregnant women (16 studies); (2) midwives' perceptions and role (10 studies); (3) reasons of the preference of giving birth in an out-of-hospital setting (17 studies); (4) women's experiences (10 studies); (5) barriers to access a no hospitalized birth (9 studies); (6) recommendations (12 studies).

Themes were aggregated into four domains: (1) data, (2) midwives' perspectives and experiences, (3) women's perspectives and experiences, and (4) policies (Table 2).

1. **Data**

Increase of delivery in homebirth and independent birth centers. During the COVID-19 pandemic, more women desired and had a home birth. Most of the studies show a significant increase of out-of-hospital births during the pandemic period [12–15, 17, 22, 24, 25•, 26, 27, 30]. In the USA in 2020, one out of every 50 births (2.0%) was a community birth [2]. Community birth increased in every states in the USA, from 19.5 to 30% [12, 14, 24]. Homebirth increased from 23.3 to 30%, and birth center birth increased from 9.2 to 13.2% (2, 4]. Increases occurred for all racial and ethnic groups, particularly non-Hispanic Black mothers [12–14, 24]. An increase between 20 and 30% of out-of-hospital births is reported also in Poland, in the Netherlands, in the UK, in Australia, and in Croatia [15, 17, 25•, 26, 29, 31]. In Croatia during the pandemic period, the overall prevalence of unplanned out-of-hospital births was 0.4%, against the annual out-of-hospital birth rate reported in the last decade, consistently around 0.05–0.10% of all singleton gestations [17].

2. **Midwives' perspectives and experiences**

The perceptions of community midwives and midwives working in hospital-based care regarding the

increasing birth rate in their country are reported [16, 19, 21, 24]. Midwives also reported increased interest in or desire for out-of-hospital birth, increase in the number of enquiries by women relating to homebirth, more confidence in giving birth at home, and better-informed choices about the place of birth [16, 19, 21, 24]. Women with high-risk pregnancies, such as those living with HIV, are increasingly investigating the option of home birth, according to the midwives' experiences [24]. Findings also show the positive role of community midwives in supporting birthing women during the pandemic and their ability to find innovative ways to offer care in the pandemic situation. Flexibility and their ability to work when supplies or institutional support is limited were particularly useful during this period [13, 16, 19, 26, 27, 29, 31, 33–35]. Changes reported in their practices included more wearing of personal protective equipment (masks and gloves); sanitizing their workspace; fewer in-persons visits or childbirth classes; more video calls, phone calls, and virtual prenatal and postpartum visits; and sharing online documents to inform women [26, 27, 31, 35]. Strategies were developed to contrast the lack of PPE, for instance homemade sanitizer and cloth masks [29]. Some difficulties emerged, such as financial strain for independent midwives, due to the loss of job for many parents because of the pandemic [16, 27], and the inability to support women who needed transfer from home to hospital because of the restrictions (health professionals were seen as "support people" or visitors, not as professionals) [29, 31].

3. **Women's perspectives and experiences: the reasons for the choice**

3.1 Motivations/reasons for the preference of giving birth in an out-of-hospital setting. More women have chosen out-of-hospital birth due to (a) the perception of the hospital as a more dangerous place in the time of pandemic (greater chance of becoming infected) [15, 17, 20, 30]; (b) the restrictions implemented in facilities [15, 16, 18–20, 22, 26–28, 30, 31], especially restriction on birth partners and visitors, being separated from the newborn after birth, and restriction on doulas; and (c) fear of unnecessary intervention in response to the pandemic stresses and uncertain condition (i.e., unnecessary induction of labor, cesarean section, etc.) or lack of support [18, 26, 27, 30]. Interest in "freebirth" (giving birth without a professional present) is also reported, particularly for lesbian, bisexual, pansexual, and queer women [28, 31]. Many women had a preexistenting desire for community birth and used the pandemic to justify or consolidate their choice [19, 33].

3.2 Women's satisfaction. Women who choose to give birth at home or in an independent birth center reported significantly higher satisfaction: they reported to be better informed and less stressed during pregnancy; receiving care in their home kept them safe; fear of contagion was better managed; more autonomy and self-efficacy were also reported [10, 16, 19, 21, 27, 34]. Increases in the risk profiles in community birth (increase of women giving birth to twins, preterm births, breeched newborns, post-cesarean delivery, or persons living with HIV) were also reported [14, 23, 32, 33].

4. **Policies**

4.1 Evidence reported some logistic, financial, and legal *barriers* to access an out-of-hospital birth setting, preventing women from a true choice [11, 12, 19, 21, 22, 25•]. Limited accessibility of birth centers (birth setting not close to the women's home), high costs, and suspended services due to the emergency were reported during the pandemic period.

4.2 Recommendations. According to many studies, the pandemic is an opportunity to restructure reproductive health care, particularly to better support out-of-hospital births [11, 18, 20, 22, 25•, 29–33, 35]. Findings stressed the pandemic served as a positive example of the need to recognize and better integrate in the broader health system home birth services and birth centers. This involves rethinking laws, policies, and practices in order to offer a *real* choice to all women regarding the model and place of birth. This is recommended due to the positive impact of out-of-hospital services in women's and midwives' experiences and in clinical outcomes.

Discussion

The impact of the COVID-19 pandemic had a profound effect on childbearing women, their families, and midwives [36••]. Evidence shows that restrictions and measures taken during the period disrupted the quality of care provided to women during labor and childbirth and respectful maternity care [37] and impacted the choice of the place of birth. On the one hand, fear of being infected or ill led some to perceive hospitals as no longer "safe" places for mothers and newborns. This occurred even if the risk was defined by scientific evidence as contained for pregnant women [38].

On the other hand, the implementation of rigorous protocols in a standardized way (in most cases, for all deliveries and birthing women) discouraged many women from delivering in hospitals and caused them to take interest in

alternative models of care. The WHO, since the beginning of the emergency and throughout the pandemic period, has repeatedly recommended not to separate women in labor from their newborn and their companion of choice, even when suspected of or infected with SARS-CoV-2 [38]. Despite these recommendations, separation of mother–partner–child has been implemented all over the world [39]. The impact on the mother and newborn in terms of well-being and "positive birth" [40] has emerged in the literature [41, 42], as well as the lack of exercise of human rights in childbirth and the loss of women's autonomy in reproductive health [43, 44].

Qualitative studies on out-of-hospital birth carried out between 2020 and 2022 in different countries are discussed within this context. The pandemic has accelerated the demand for homebirth and birth centers, increasing in the last decades in high-income countries (Macdormen and Declerq 2019 [45]. Women's needs and expectations—well investigated in high-income countries also before the pandemic [46–49]—were highlighted during the COVID-19 emergency, involving more women and parents. The increasing rate of using homebirth and birth centers shows that out-of-hospital births have been a fundamental "safety valve" to manage fear, uncertainty, and stress during pregnancy and birth for both women and midwives; it has also offered women the possibility to maintain certain autonomy and freedom of choice in the reproductive process. This calls for novel social and political awareness for accessing different models of care (hospitalized or not) as a human right in daily life and as an efficient response strategy for present or future emergencies involving health systems. A novel policy effort to better support and integrate out-of-hospital services in health care systems is urgent in high-income countries. Lessons learned from these experiences during the pandemic represent an opportunity to rethink our models of care in childbirth, focusing on women's needs and contrasting abuse and disrespect that can turn into forms of obstetric violence, which is well known in research [50–56] and recently addressed in the debate of international bodies [57–59]. Expanding biomedical concepts of safety and risk, while also considering social, cultural, and family dimensions—as clearly emerge from women giving birth at home or in birth centers also before the pandemic, is taken into account in this perspective [54, 60].

Conclusion

Interest in out-of-hospital births has increased during the COVID-19 pandemic. More women have delivered at home or in an independent birth center. Main reasons for this choice are fear of contagion in facilities and standardized protocols, such as restrictions during delivery and the post-partum period, especially women's separation from their companion of choice and their newborn. Research findings suggest that homebirth and birth centers have conferred several advantages for both women and professionals during the pandemic period, maintaining the benefits of biomedicine when needed. This calls for renewed support for out-of-hospital models of care within a public model of care.

Compliancewith Ethical Standards

Conflict of Interest The author declares no competing interests.

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by the author.

References

Papers of particular interest, published recently, have been highlighted as:
• Of importance
•• Of major importance

1. Olsen O. Meta-analysis of the safety of home birth. Birth. 1997;24:4–13.
2. Olsen O, Clausen JA. Planned hospital birth versus planned home birth. Cochrane Libr Database Syst Rev. 2012.
3. Vedam S, Schummers L, Stoll K, Fulton C. Home birth: an annotated guide to the literature. Mana. 2012.
4. Hollowell J, Rowe R, Townend J, Knight M, Li Y, Linsell L, Redshaw M, Brocklehurst P, Macfarlane A, Marlow N, McCourt C, Newburn M. Sandall J, Silverton L. The Birthplace in England national prospective cohort study: further analyses to enhance policy and service delivery decision-making for planned place of birth. NIHR J Libr. 2015.
5. National Institute for Health and Care Excellence. Intrapartum care for healthy women and babies, Clinical guideline. No.19. London: National Institute for Health and Care Excellence (NICE). 2015.
6. Dahlen HG. Is it time to ask whether facility based birth is safe for low risk women and their babies? EClinicalMed. 2019;14:9–10. https://doi.org/10.1016/j.eclinm.2019.08.003.
7. •• Reitsma A, Simioni J, Brunton G, Kaufman K, Hutton EK. Maternal outcomes and birth interventions among women who begin labour intending to give birth at home compared to women of low obstetrical risk who intend to give birth in hospital: a systematic review and meta-analyses. EClinicalMedicine. 2020;21:100319. https://doi.org/10.1016/j.eclinm.2020.100319. **The publication highlights the outcomes of homebirth compared to hospital birth. Evidence shows women who gave birth at home were less likely to experience obstetrical interventions.**
8. Sandelowski M, Barroso J. Handbook for synthesizing qualitative research. New York: Springer Publishing Company; 2007.
9. Lewin S, Glenton C, Munthe-Kaas H, Carlsen B, Colvin CJ, Gülmezoglu M, Noyes J, Booth A, Garside R, Rashidian AU. Using qualitative evidence in decision making for health and social interventions: an approach to assess confidence in findings from qualitative evidence syntheses (GRADE-CERQual). PLoS Med.

2015;12(10):e1001895. https://doi.org/10.1371/journal.pmed.1001895.
10. The Joanna Briggs Institute Critical Appraisal tools for use in JBI Systematic Reviews https://jbi.global/sites/default/files/201905/JBI_Critical_AppraisalChecklist_for_Qualitative_Research2017_0.pdf
11. Rauch S, Arnold L, Stuerner Z, Rauh J, Rost M. A true choice of place of birth? Swiss women's access to birth hospitals and birth centers. PLoS One. 2022;17(7):e0270834. https://doi.org/10.1371/journal.pone.0270834.
12. MacDorman MF, Barnard-Mayers R, Declercq E. United States community births increased by 20% from 2019 to 2020. Birth. 2022. https://doi.org/10.1111/birt.12627.
13 Vanderlaan J, Woeber K. Early perinatal workforce adaptations to the COVID-19 pandemic. J Perinat Neonatal Nurs. 2022;36(1):37–45. https://doi.org/10.1097/JPN.0000000000000617.
14. Grünebaum A, Bornstein E, Katz A, Chervenak FA. Worsening risk profiles of out-of-hospital births during the COVID-19 pandemic. Am J Obstet Gynecol. 2022;226(1):137–8. https://doi.org/10.1016/j.ajog.2021.11.1346.
15. Strózik M, Szarpak L, Adam I, Smereka J. Determinants of place of delivery during the COVID-19 pandemic-internet survey in Polish pregnant women. Medicina (Kaunas). 2022;58(6):831. https://doi.org/10.3390/medicina58060831.
16. Applebaum J. Expanding certified professional midwife services during the COVID-19 pandemic. Birth. 2022 https://doi.org/10.1111/birt.12643.
17. Mikuš M, SokolKaradjole V, Kalafatić D, Orešković S, Šarčević A. Increase of stillbirths and unplanned out-of-hospital births during coronavirus disease 2019 lockdown and the Zagreb earthquake. Acta Obstet Gynecol Scand. 2021;100(11):2119–20. https://doi.org/10.1111/aogs.14250.
18. Rice KF, Williams SA. Making good care essential: the impact of increased obstetric interventions and decreased services during the COVID-19 pandemic. Women Birth. 2021;S1871–5192(21):00182–7. https://doi.org/10.1016/j.wombi.2021.10.008.
19. DeJoy SB, Mandel D, McFadden N, Petrecca L. Concerns of women choosing community birth during the COVID-19 pandemic: a qualitative study. J Midwifery Womens Health. 2021;66(5):624–30. https://doi.org/10.1111/jmwh.13290.
20. Preis H, Mahaffey B, Lobel M. The role of pandemic-related pregnancy stress in preference for community birth during the beginning of the COVID-19 pandemic in the United States. Birth. 2021;48(2):242–50. https://doi.org/10.1111/birt.12533.
21. Daviss BA, Anderson DA, Johnson KC. Pivoting to Childbirth at home or in freestanding birth centers in the US during COVID-19: safety, economics and logistics. Front Sociol. 2021;26(6):618210. https://doi.org/10.3389/fsoc.2021.618210.
22 Gildner TE, Thayer ZM. Maternity care preferences for future pregnancies among United States childbearers: the impacts of COVID-19. Front Sociol. 2021;6:611407. https://doi.org/10.3389/fsoc.2021.611407.
23. Grünebaum A, McCullough LB, Bornstein E, Klein R, Dudenhausen JW, Chervenak FA. Professionally responsible counseling about birth location during the COVID-19 pandemic. J Perinat Med. 2020;48(5):450–2. https://doi.org/10.1515/jpm-2020-0183.
24. Noddin K, Bradley D, Wolfberg A. Delivery outcomes during the COVID-19 pandemic as reported in a pregnancy mobile app: retrospective cohort study. JMIR Pediatr Parent. 2021;4(4):e27769. https://doi.org/10.2196/27769.
25.• Nelson A, Romanis EC. The medicalisation of childbirth and access to homebirth in the UK: COVID-19 and Beyond. Med Law Rev. 2021;29(4):661–687. https://doi.org/10.1093/medlaw/fwab040 **The publication highlights the potential of the law to support, rather than restrict, choice regarding place of birth. It argues that homebirth is not sufficiently unsafe to justify restricting access**.
26. Van Manen ELM, Hollander M, Feijen-de Jong E, de Jonge A, Verhoeven C, Gitsels J. Experiences of Dutch maternity care professionals during the first wave of COVID-19 in a community based maternity care system. PLoS One. 2021;16(6):e0252735. https://doi.org/10.1371/journal.pone.0252735.
27. Oparah JC, James JE, Barnett D, Jones LM, Melbourne D, Peprah S, Walker JA. Creativity, resilience and resistance: Black birthworkers' responses to the COVID-19 pandemic. Front Sociol. 2021;25(6):636029. https://doi.org/10.3389/fsoc.2021.636029.Erratum.In:FrontSociol.2021May13;6:695303.
28 Greenfield M, Payne-Gifford S, McKenzie G. Between a rock and a hard place: considering "freebirth" during COVID-19. Front Glob Womens Health. 2021;2:603744. https://doi.org/10.3389/fgwh.2021.603744.
29. Homer CSE, Davies-Tuck M, Dahlen HG, Scarf VL. The impact of planning for COVID-19 on private practising midwives in Australia. Women Birth. 2021;34(1):e32–7. https://doi.org/10.1016/j.wombi.2020.09.013.
30. Verhoeven CJM, Boer J, Kok M, Nieuwenhuijze M, de Jonge A, Peters LL. More home births during the COVID-19 pandemic in the Netherlands. Birth. 2022. https://doi.org/10.1111/birt.12646.
31. Davis-Floyd R, Gutschow K, Schwartz DA. Pregnancy, birth and the COVID-19 pandemic in the United States. Med Anthropol. 2020;39(5):413–27. https://doi.org/10.1080/01459740.2020.1761804.
32. Premkumar A, Cassimatis I, Berhie SH, Jao J, Cohn SE, Sutton SH, Condron B, Levesque J, Garcia PM, Miller ES, Yee LM. Home birth in the era of COVID-19: counseling and preparation for pregnant persons living with HIV. Am J Perinatol. 2020;37(10):1038–43. https://doi.org/10.1055/s-0040-1712513.
33. Costa Abós S, Behaghel M. Parir en casa en tiempos de coronavirus. Musas. 2020;5(2):4–22. https://doi.org/10.1344/musas2020.vol5.num2.1.
34. Combellick JL, Basile Ibrahim B, Julien T, Scharer K, Jackson K, Powell KH. Birth during the Covid-19 pandemic: what childbearing people in the United States needed to achieve a positive birth experience. Birth. 2022;49(2):341–51. https://doi.org/10.1111/birt.12616.
35. Monteblanco AD. The COVID-19 pandemic: a focusing event to promote community midwifery policies in the United States. Soc Sci Humanit Open. 2021;3(1):100104. https://doi.org/10.1016/j.ssaho.2020.100104.
36.•• Sweet L. COVID-19 special issue - the impact of COVID-19 on women, babies, midwives, and midwifery care. Women Birth: J Aust Coll Midwives. 2022;35(3):211–2. https://doi.org/10.1016/j.wombi.2022.03.002. **The publication highlights the impact of the COVID-19 pandemic on childbirth and maternity care across the world. It includes 20 research studies from the USA, Canada, Brazil, South Africa, Turkey, Sweden, Italy, Spain, Ireland, New Zealand, and Australia.**
37. Asefa AS, Delvaux T, Huysmans E, Galle A, Sacks E, Bohren MA, Morgan A, Sadler M, Vedam S, Benova L. The impact of COVID-19 on the provision of respectful maternity care: findings from a global survey of health workers. Women Birth. 2022;35(4):378–86. https://doi.org/10.1016/j.wombi.2021.09.003.
38. WHO World Health Organization. Coronavirus disease (COVID-19): Pregnancy and childbirth. https://www.who.int/news-room/questions-and-answers/item/coronavirus-disease-covid-19-pregnancy-and-childbirth. Accessed 15 June 2022.
39. Lazzerini M, Covi B, Mariani I, Drglin Z, Arendt M, Nedberg IH, Elden H, Costa R, Drandić D, Radetić J, Otelea MR, Miani

C, Brigidi S, Rozée V, Ponikvar BM, Tasch B, Kongslien S, Linden K, Barata C, Kurbanović M, Ružičić J, Batram-Zantvoort S, Castañeda LM, Rochebrochard E, Bohinec A, Vik ES, Zaigham M, Santos T, Wandschneider L, Viver AC, Ćerimagić A, Sacks E, Valente EP. IMAgiNE EURO study group. Quality of facility-based maternal and newborn care around the time of childbirth during the COVID-19 pandemic: online survey investigating maternal perspectives in 12 countries of the WHO European Region. Lancet Reg Health Eur. 2022;13:100268. https://doi.org/10.1016/j.lanepe.2021.100268.
40. World Health Organization. Recommendations: intrapartum care for a positive childbirth experience. Geneve: WHO; 2018.
41. Stuebe A. Should infants be separated from mothers with COVID-19? First, do no harm. Breastfeed Med. 2020;15(5). https://doi.org/10.1089/bfm.2020.29153.
42. Tomori C, Gribble K, Palmquist AEL. et al. When separation is not the answer: breastfeeding mothers and infants affected by COVID-19. Matern Child Nutr. 2020;16(4). https://doi.org/10.1111/mcn.13033.
43. Human Rights in Childbirth. Rights violations in pregnancy, birth and postpartum during the COVID-19 pandemic. New York: Human Rights in Childbirth; 2020.
44. World Health Organization. Addressing human rights as key to the COVID-19 response. Geneve: WHO; 2020.
45. MacDorman MF, Declercq E. Trends and state variations in out-of-hospital births in the United States, 2004–2017. Birth. 2019;46(2):279–88. https://doi.org/10.1111/birt.12411.
46. Quattrocchi P. 'Seguridad' y 'respeto' durante el parto y el nacimiento. El aporte de las mujeres y de las comadronas españolas e italianas desde un modelo de atención no medicalizado, Con-textos. Revista d'Antropologia i Investigació social. 2022;10(1):13–33.
47. Sjöblom I, Idvall E, Lindgren H. Nordic Homebirth Research Group. Creating a safe haven-women's experiences of the midwife's professional skills during planned home birth in four Nordic countries. Birth. 2014;41(1):100–7. https://doi.org/10.1111/birt.12092.
48. Lindgren H, Erlandsson K. Women's experiences of empowerment in a planned home birth: a Swedish population-based study. Birth. 2010;37(4):309–17. https://doi.org/10.1111/j.1523-536X.2010.00426.x.
49. Jouhki MR. Choosing homebirth–the women's perspective. Women Birth : J Aust Coll Midwives. 2012;25(4):e56–61. https://doi.org/10.1016/j.wombi.2011.10.002.
50. Bowser D, Hill K. Exploring evidence for disrespect and abuse in facility-based childbirth. Report of a landscape analysis. Washington, DC.: Harvard School of Public Healthand Univ Res. 2010.
51. Bohren MA, Vogel JP, Hunter EC, Lutsiv O, Makh SK, Souza JP, Aguiar C, Saraiva Coneglian F, Diniz AL, Tunçalp Ö, Javadi D, Oladapo OT, Khosla R, Hindin MJ. Gülmezoglu AM The mistreatment of women during childbirth in health facilities globally: a mixed-methods systematic review. PLoS Med. 2015;12(6):e1001847. https://doi.org/10.1371/journal.pmed.1001847.
52. Sadler M, Santos MJ, Ruíz Bardun L, Leiva Rojas G, Skoko E, Gillen P, Clausen JA. Moving beyond disrespect and abuse: addressing the structural dimensions of obstetric violence. Reprod Health Matters. 2016;24(47):47–55.
53. Savage S, Castro A. Measuring mistreatment of women during childbirth: a review of terminology and methodological approaches. Reprod Health. 2017;14:138–65.
54. Quattrocchi P, Magnone Alemán N. (eds.).Violencia Obstétrica en América Latina: conceptualización, experiencias, medición y estrategias. Argentina: Ediciones EdUNLA. 2020.
55. Pickles C, Herring J. Childbirth, vulnerability and law. Exploring issues of violence and control. London: Routledge; 2020.
56. Sadler M, Leiva G, Olza I. COVID-19 as a risk factor for obstetric violence. Sex Reprod Health Matters. 2020;28(1):1785379. https://doi.org/10.1080/26410397.2020.1785379.
57. World Health Organization. The prevention and elimination of disrespect and abuse during facility-based childbirth. Geneve: WHO. 2014.
58. Blondin M. Obstetrical and gynaecological violence. Committee on Equality and Non-Discrimination Rapporteur, Council of Europe. 2019. Blondin M. Obstetrical and gynaecological violence. Committee on Equality and Non-Discrimination Rapporteur, Council of Europe. 2019. https://assembly.coe.int/LifeRay/EGA/Pdf/TextesProvisoires/2019/20190912-ObstetricalViolence-EN.pdf. Accessed 15 June 2022.
59. Simonovic D. A human rights-based approach to mistreatment and violence against women in reproductive health services with a focus on childbirth and obstetric violence, United Nation General Assembly, Human Rights Council. Special Rapporteur on Violence against Women and girls. Its Causes and Consecuenses, A/C.3/74/SR.7. 2019. https://digitallibrary.un.org/record/3823698. Accessed 15 June 2022.
60. Dahlen HG. Is it time to ask whether facility based birth is safe for low risk women and their babies? EClinicalMedicine. 2019;14:9–10. https://doi.org/10.1016/j.eclinm.2019.08.003.