

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
<i>The most recent publications appear first in this document. Publications added in the April 2023 update are highlighted in blue. We aim to publish updates every 3 months. The next update will occur in July 2023.</i>							
Anti-COVID-19 vaccination; anti-infectious molecules; breastfeeding; perinatal viral transmission; severe acute respiratory syndrome-coronavirus-2	21-Mar-23	Breastfeeding provides a protective hug and the benefits have outweighed the risks during the COVID-19 pandemic	Acta Paediatrica	Mini Review	This review addresses potential concerns about breastfeeding among mothers vaccinated against COVID-19 or previously infected with SARS-CoV-2. SARS-CoV-2 RNA has been detected in breastmilk in extremely low rates and there is no indication of SARS-CoV-2 transmission through breastmilk. Furthermore, SARS-CoV-2-specific IgG, IgM, and IgA have been detected in breastmilk. Although it is not yet clear whether these antibodies protect the breastfed infant against COVID-19, there is some evidence indicating passive protection. Maternal milk provides other proven health benefits for infants, including 47%, 63%, and 57% reduced mortality due to infectious disease, acute diarrhea, and respiratory infection, respectively. Lactoferrin is an abundant protein in breastmilk, especially in colostrum, and presents unique protective properties against viral infections; for these reasons, lactoferrin is currently undergoing trials as an antiviral agent against SARS-CoV-2. Although excluded from initial clinical trials, lactating women have presented similar safety and immune response to non-lactating women. COVID-19 vaccines induce anti-spike antibodies with neutralizing capacity in breastmilk which are transferred to the breastfed infant. However, the concentration of antibodies needed to protect infants and the duration of that protection are not yet known. Most drugs used for maternal COVID-19 infections are safe for breastfed infants. Remdesivir has shown no side effects in breastfed infants to date, but levels of excretion in breastmilk are unknown. Monoclonal antibodies are considered safe; hydroxychloroquine has low excretion in breastmilk and breastfeeding is recommended; ribavirin has unknown excretion in breastmilk, but it is safely administered to infants. Favipiravir has unknown extraction in breastmilk and it presents a potential risk of liver enzyme disorders; similarly, dexamethasone has unknown excretion in breastmilk and poses potential risk of hypertension, electrolyte disturbances, and growth disturbance and therefore its excretion should be monitored. The authors conclude that the clear benefits of breastfeeding to the neonate far outweigh the very low risk of SARS-CoV-2 transmission to the infant.	This review addresses potential concerns about breastfeeding among mothers vaccinated against COVID-19 or previously infected with SARS-CoV-2. Maternal milk protects neonates through its high biological value, immune factors, and anti-infectious molecules. SARS-CoV-2-specific antibodies with neutralizing capacity have been detected in breastmilk after infection and/or vaccination, with some evidence of providing passive protection to the breastfed infant. Most drugs used for maternal COVID-19 are considered safe for breastfed infants; safety evidence is presented for each treatment option. The authors conclude that the clear benefits of breastfeeding outweigh the low risk of SARS-CoV-2 transmission to the infant.	Briana DD, Malamitsi-Puchner A. Breastfeeding provides a protective hug and the benefits have outweighed the risks during the COVID-19 pandemic. Acta Paediatr. 2023;10.1111/ap.a.16769.
Breastfeeding education; self-efficacy; mother-infant bonding	21-Mar-23	Simulation for breastfeeding support during the COVID-19 pandemic in Turkey: A quasi-experimental study	Health Care for Women International	Original Research	This study evaluated a simulation-supported breastfeeding program given to pregnant women (≥18 yrs) in Turkey during the COVID-19 pandemic [dates not specified]. Outcomes included breastfeeding success, breastfeeding self-efficacy (BSE), and mother-infant attachment. 73 pregnant women (36 in intervention group; 37 in control group) were recruited by simple random sampling from an OB-GYN clinic. The Breast Simulation Model is an applied and wearable breast model that educators can use for interactive training. Participants in the intervention group (n=36; mean age 26 ± 4.01 yrs) received this simulation-supported program before delivery, followed by weekly messages by SMS or video until delivery, evaluation via LATCH (Latching, Audible swallowing, Type of nipple, Comfort, Hold/position) assessment tool within 24 hrs following birth, and follow-up messages and lactation counseling until 4 weeks after birth. The control group (n=37; mean age 28 ± 3.31 yrs) received standard care and breastfeeding counseling (verbal only) given by a hospital nurse. BSE post-tests were significantly higher in the intervention group and significantly lower in the control group compared to pre-tests (p<0.05 for both); the authors consider the latter result to be evidence that standard breastfeeding education was ineffective, potentially due to pandemic-related impacts. Intervention groups had significantly higher LATCH scores and mother-infant bonding than the control group after the	This study evaluated a simulation-supported breastfeeding program given to pregnant women in Turkey during the COVID-19 pandemic. The intervention group had significantly higher scores for breastfeeding self-efficacy, mother-infant attachment, and LATCH assessment (Latching, Audible swallowing, Type of nipple, Comfort, Hold/position) compared to standard care. Follow-up evaluations also showed the intervention group had significantly higher rates of exclusive breastfeeding at 6	Gürkan KP, Bektaş İ, Yücedağ M, Yılmaz Ö. Simulation for breastfeeding support during the COVID-19 pandemic in Turkey: A quasi-experimental study [published online ahead of print, 2023 Mar 21]. Health Care Women Int. 2023;1-18. doi:10.1080/073

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					education intervention ($p < 0.05$ for both). Follow-up evaluations also showed the intervention group to have significantly higher rates of exclusive breastfeeding at 6 months ($p < 0.05$), and continued breastfeeding after 8-9 months ($p = 0.002$) in comparison with the control group. Similar results have been shown in an evaluation of simulation-supported breastfeeding education in Indonesia. The authors recommend that breastfeeding education start in the antenatal period and continue in the postpartum period by a combination of methods. The present study shows that breastfeeding counseling can be effective even in a public health emergency and breastfeeding support services should continue under all circumstances. Programs such as this can help to continue breastfeeding education while reducing the number of in-person visits for breastfeeding education post-delivery.	months and continued breastfeeding after 8-9 months. The present study shows that breastfeeding counseling can be effective even in a public health emergency and breastfeeding support services should continue under all circumstances.	99332.2023.217 2410
Breastfeeding; Facilitators; Barriers; South Sudanese refugees; Uganda	17-Mar-23	Breastfeeding among South Sudanese refugees in protracted settlements in Adjumani district, Uganda: facilitators and barriers	International Breastfeeding Journal	Original Research	The South Sudanese refugee population is the third largest globally and represents the largest refugee crisis in Africa. Uganda hosts more South Sudanese refugees than any other country, with ~65% of refugees in Uganda having fled South Sudan. This study explored the facilitators and barriers to breastfeeding in three randomly selected protracted settlements (Agojo, Ayilo-I, and Nyumanzi) in Adjumani district, in the West Nile region in Uganda (Jul 2019). Participants were randomly selected and included mothers ($n=63$) and fathers ($n=32$) [from different households] of children <24 months of age from South Sudan who were living as refugees in the settlements. The mean age was 27.1 years for mothers and 39.7 years for fathers. 4 focus group discussions (FGDs) were conducted with mothers and 2 with fathers, each with 15-16 participants. FGDs were recorded, coded, and analyzed thematically. Facilitators to breastfeeding included (1) beliefs and knowledge about breastfeeding: child will be bright, child will grow well and strong, breastmilk is nutritious and protects from disease; (2) support from husband/father: providing food, providing emotional support, doing household chores; (3) support from community: grandmothers provide food, neighbors provide materials (e.g., water); and (4) support from NGOs: providing education and food. Barriers to breastfeeding included (1) physical barriers: mother is sick, mother has died, perceived milk insufficiency, breastfeeding difficulties; (2) socio-economic barriers: mother is working, educated mothers use other milk; (3) knowledge barriers: belief that breastfeeding should stop at 3 months, infants <6 months should eat and drink items other than breastmilk, sick infants need more than breastmilk; and (4) psychosocial barriers [only reported by fathers]: fighting with husband, fear of pain, or the mother has mental health issues. The authors recommended that interventions, policies, and further research to improve breastfeeding in protracted settlements should consider addressing physical, socio-economic, knowledge, and psychosocial barriers to breastfeeding.	This study used focus group discussions to explore the facilitators and barriers to breastfeeding amongst mothers and fathers of children <24 months who were from South Sudan and living as refugees in three protracted settlements in the West Nile region in Uganda. The study found facilitators to breastfeeding included beliefs and knowledge about breastfeeding and support from the husband/father, community, and NGOs. Barriers to breastfeeding were physical, socio-economic, knowledge-based, and psychosocial. Interventions, policies, and further research to improve breastfeeding in protracted settlements should consider addressing the identified barriers.	Walters CN, Rakotomanana H, Komakech JJ, et al. Breastfeeding among South Sudanese refugees in protracted settlements in Adjumani district, Uganda: facilitators and barriers. <i>Int Breastfeed J.</i> 2023;18(1):18. doi:10.1186/s13006-023-00549-1

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Breastfeeding self-efficacy; Bonding; Anxiety; Social support; COVID-19 pandemic	1-Mar-23	The COVID-19 pandemic's impact on breastfeeding self-efficacy: A path analysis	Enfermería Clínica	Original Research	Breastfeeding self-efficacy (BSE) is a mother's belief in her ability to breastfeed and is highly predictive of breastfeeding behaviors. This cross-sectional study in Bekasi, Indonesia aimed to measure how breastfeeding self-efficacy has been affected by COVID-19 pandemic-related factors (i.e., anxiety, bonding, and social support). Surveys were completed Jun-Jul 2021 by 118 mothers (mean age 28.72 yrs; range 17-41 yrs) with infants <6 months of age (mean age 3.68 months; range 1-5 months). Surveys collected demographic information and measured study variables using the Zung Self-rating Anxiety Scale, the Multidimensional Scale of Perceived Social Support, Postpartum Bonding Questionnaire, and the Breastfeeding Self-Efficacy Scale-Short Form. While anxiety had a negative effect on BSE, postpartum bonding and social support had a positive effect. Higher bonding scores were significantly linked to higher BSE ($\beta = 0.235$; $p = 0.039$). These effects on BSE were seen both directly and indirectly as anxiety negatively impacted bonding and social support positively impacted bonding, which is strongly correlated with BSE. However, anxiety had a stronger direct negative effect on BSE ($\beta = -0.239$; $p = 0.00$) than it did indirectly through its effect on bonding ($\beta = -0.076$; $p = 0.04$). Social support also had a more direct positive ($\beta = 0.248$; $p = 0.00$) than indirect effect ($\beta = 0.118$; $p = 0.046$). These results are consistent with previous studies conducted before the pandemic showing that anxiety negatively impacts BSE while social support and bonding positively affect BSE. The authors recommend health education and counseling to enhance mothers' competence and self-efficacy in breastfeeding their infants. Because of the potential for pandemics and other public health emergencies to increase anxiety among breastfeeding mothers, the authors stress the importance of interventions to reduce anxiety and increase social support during COVID-19 and future pandemics.	This cross-sectional study in Bekasi, Indonesia aimed to measure how breastfeeding self-efficacy (BSE) has been affected by COVID-19 pandemic-related factors. While anxiety had a negative effect on BSE, bonding and social support had a positive effect. These effects on BSE were seen both directly and indirectly as anxiety negatively impacted bonding and social support positively impacted bonding, which is strongly correlated with BSE. The authors recommend health education and counseling to boost BSE and stress the importance of interventions to reduce anxiety and increase social support in the context of a pandemic.	Samaria D, Marcelina LA, Florensia L. The COVID-19 pandemic's impact on breastfeeding self-efficacy: A path analysis. <i>Enferm Clin</i> . 2023;33:S17-S21. doi:10.1016/j.enfcli.2023.01.003
Australia; Breast milk; Bushfire; Environmental contaminants; Infant feeding; Landscape fire; Smoke	23-Feb-23	The impact of the 2019/2020 Australian landscape fires on infant feeding and contaminants in breast milk in women with asthma	International Breastfeeding Journal	Original Research	The 2019-2020 Australian landscape fires resulted in prolonged extreme air pollution, but little is known about their impacts on breastfeeding women and infants. To examine these impacts, 102 women with asthma who fed their infants (<2 yrs) during the fires were surveyed May – Dec 2020. 92 breast milk samples from 77 women were collected (obtained previously both during and outside of the fire period). 56 of these samples could be matched with fire exposure data and were then analyzed to determine levels of 16 polycyclic aromatic hydrocarbons (PAHs) and 20 elements. Concentrations of fire-related particulate matter and duration of exposure were estimated based on government air quality data, satellite imagery, and residential addresses. Mean age (SD) of survey participants was 33.6 (± 5.9) years; mean age of their infants during the fire period was 13.7 (± 6.4) months. Of the 102 women, 81% reported breastfeeding during the fires and only 4% reported that the fires influenced how they fed their infant. Of the samples collected during the fire period, 6 (21%) contained fluoranthene and 10 (34%) contained pyrene. Researchers estimated daily infant intake of these PAHs based on a 700g average daily intake of milk (4% milk fat content) by a 6-month-old weighing 5 kg. The resulting estimate for both PAHs was 400x below levels that could potentially cause harm. 13 of 20 elements were detected in milk samples; however, there was no significant difference in concentrations between samples collected during vs outside the fire period. Only copper and manganese were present in concentrations above the WHO limit but estimates of daily intake fell below levels expected to cause adverse health effects in a child. Although further research is warranted in more severely affected areas, the authors	This study examined the impacts of the 2019-2020 Australian landscape fires on breastfeeding women and their infants. Women with asthma who fed their infants during the fires were surveyed, and previously obtained breastmilk samples were analyzed for the presence of contaminants. Most women breastfed and few changed infant feeding practices during the fires. Fluoranthene and pyrene were detected in breastmilk samples from the fire period, but in concentrations too low to pose risk of harm to breastfed infants. Authors conclude that women should be supported to continue breastfeeding during extreme air pollution	Beyene T, Zosky GR, Gibson PG, et al. The impact of the 2019/2020 Australian landscape fires on infant feeding and contaminants in breast milk in women with asthma. <i>Int Breastfeed J</i> . 2023;18(1):13. Published 2023 Feb 23. doi:10.1186/s13006-023-00550-8

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Lebanon; Migration; Refugees; Reproductive health; Syrian refugees; Women's health	23-Feb-23	Reproductive health of Syrian refugee women in Lebanon: a descriptive analysis of the Sijilli electronic health records database	BMC Women's Health	Original Research	Lebanon hosts the greatest number of Syrian refugees per capita, yet its already overburdened healthcare system has struggled to meet the increased need for services. This study examined obstetric characteristics and pregnancy outcomes of Syrian refugee women in Lebanon in comparison to pre-displacement data from Syria. Records of 1,065 women ≥12 yrs old living in informal tented settlements between Jul 2018 - Jan 2020 were retrospectively analyzed for socio-demographics, obstetric history, pregnancy outcomes, complications, contraceptive use/types, and breastfeeding history/duration. Among the total sample (mean age 28.8 ± 13.77 yrs), 653 were ever-pregnant (mean age 36.3 ± 11.54 yrs at time of data collection) with 3,272 total pregnancies. Pregnancies were divided into 3 groups: pregnancy in Syria-only (n=1,254 pregnancies pre-displacement); pregnancy in Lebanon only (n=326 post-displacement); and pregnancies in both Syria and Lebanon (n=1,085 and n=607 before and after displacement, respectively). Data on breastfeeding history and duration were available for 2,536 and 2,926 pregnancies, respectively. A history of breastfeeding was significantly more prevalent in Syria-only pregnancies pre-displacement (74%) than in Lebanon-only pregnancies post-displacement (60.4%) (p<0.001); the same trend was observed for women who had pregnancies in both Syria and Lebanon (74.9% in Syria; 56.7% in Lebanon; p<0.001). Median breastfeeding duration was also shorter in the Lebanon-only group (15 months) than in the Syria-only group (12 months) (p<0.001) but was comparable for those who had pregnancies in both Syria (17 months) and Lebanon (16 months). Other differences included a higher prevalence of C-sections, abortions, and complications, younger age at pregnancy, less contraceptive use, and shorter mean spacing between pregnancies post-displacement (Lebanon-only) than pre-displacement (Syria-only) (p<0.001 for all). Decreased rates of breastfeeding post-displacement have been observed in other studies of Syrian refugees in Lebanon and Turkey, which is concerning due to the difficulty accessing clean water in refugee settlements for bottle-feeding. The authors emphasize the importance of supporting breastfeeding among Syrian refugees and prioritizing IYCF interventions in humanitarian contexts.	events to protect maternal and child health. This study examined obstetric characteristics and pregnancy outcomes of Syrian refugee women in Lebanon compared to pre-displacement data from Syria. A history of breastfeeding was significantly more prevalent in Syria-only pregnancies (pre-displacement) than in Lebanon-only pregnancies (post-displacement) with a similar trend observed for women who had pregnancies in both Syria and Lebanon. Median breastfeeding duration was also shorter in the Lebanon-only group than in the Syria-only group. These findings highlight the need for greater breastfeeding support for Syrian refugee women, and greater prioritization of IYCF interventions in humanitarian contexts.	AlArab N, Nabulsi D, El Arnaout N, et al. Reproductive health of Syrian refugee women in Lebanon: a descriptive analysis of the Sijilli electronic health records database. BMC Womens Health. 2023;23(1):81. Published 2023 Feb 23. doi:10.1186/s12905-023-02231-4

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Lactating mothers; Internally displaced people; Sekota, Ethiopia; Undernutrition	14-Feb-23	Undernutrition and associated factors among internally displaced lactating mothers in Sekota camps, northern Ethiopia: a cross-sectional study	Frontiers in Nutrition	Original Research	This cross-sectional study aimed to determine the prevalence of undernutrition and associated factors among lactating mothers displaced by civil war and residing in three Sekota town internally displaced persons (IDP) camps (Weleh, Mindikri, and Tsirki), in northern Ethiopia. Data were collected from June-July 2022 using (1) a structured questionnaire including questions on sociodemographics, maternal reproductive and healthcare, and minimum dietary diversity score (MDDS); and (2) anthropometric measurement of the mother's mid-upper arm circumference (MUAC). A total of 422 lactating mothers were selected to participate in the study, [Weleh (n=186), Mindikri (n=135) and Tsirki (n=101)], and 420 participated [no further detail provided]. The mean age of study participants was 26.5 years (SD: ±5) and 51.4% (n=216) of participants were between 25-34 years. The mean MUAC was 22.6 cm (SD: ±1.5). Of participants, 75.7% (n=318) reported breastfeeding <8 times per day, 54.8% (n=230; 95% CI: 49.9, 59.6) were undernourished [defined as MUAC <23 cm], and 42.4% had a low MDDS [defined as consuming <5 food out of 10 food groups based on 24-hour recall]. The study found that participants who were 15-24 years of age [adjusted odds ratio (AOR): 0.21, 95% CI: 0.07, 0.65; p= 0.006] or 25-34 years of age [AOR: 0.20; 95% CI: 0.07, 0.57; p=0.002] had decreased odds of undernutrition compared with participants who were ≥ 35 years of age. Participants with a family size ≥ 9 [AOR: 4.35; 95% CI: 1.32, 10.22; p=0.004] had increased odds of undernutrition compared with participants with a family size ≤4. Participants with a birth interval < 24 months [AOR: 4.85; 95% CI: 1.24, 10.00; p=0.012] had increased odds of undernutrition compared with participants with a birth interval ≥23 months. Participants with a daily meal frequency ≤2 meals [AOR: 2.54; 95% CI: 1.12, 5.75; p= 0.016] had increased odds of undernutrition compared with participants with daily meal frequency ≥ 3 meals. Participants with a low MDDS had increased odds of undernutrition compared with participants with adequate MDDS (p=0.019). The authors recommend governments and organizations involved in providing care and support to Sekota IDP camps should increase their efforts to improve the nutritional status of lactating mothers.	This cross-sectional study sought to determine the prevalence and investigate the factors associated with undernutrition among lactating mothers in three IDP camps in northern Ethiopia. The authors found 54.8% of participants were undernourished measured by MUAC and that age (15-34 years), family size ≥9, birth interval <24 months, daily maternal meal frequency ≤2 meals, and low minimum dietary diversity score were associated with undernutrition. The authors recommend augmenting governmental and organizational efforts to improve the nutritional status of lactating mothers in IDP camps.	Mengstie MA, Worke MD, Belay Y, et al. Undernutrition and associated factors among internally displaced lactating mothers in Sekota camps, northern Ethiopia: A cross-sectional study. <i>Front Nutr.</i> 2023;10:1108233. doi:10.3389/fnut.2023.1108233
COVID-19; SARS-CoV-2; Breastfeeding; Lactation; Vaccination; Therapeutics	13-Feb-23	Vaccination and treatment options for SARS-CoV2 infection affecting lactation and breastfeeding	Seminars in Fetal and Neonatal Medicine	Review Article	This review discusses options for COVID-19 vaccination and treatment among lactating women. Vaccination remains one of the most important strategies for preventing moderate to severe COVID-19 and is associated with protective benefits for lactating individuals and their breastfed infants with overall mild side effects. Side effects have included perceived increase or decrease in milk supply, breast engorgement, temporary lymphatic effects, and slight change in breastmilk color. There is evidence of greater antibody presence in breastmilk and infant serum if the 1st dose was given during pregnancy (vs after delivery), possibly due to placental transfer of antibodies. When deciding between mRNA or other vaccine options, mRNA vaccines given to lactating individuals have consistently demonstrated higher immunogenicity (IgA, IgG levels) in human milk than vector-based vaccines. The current recommendations for COVID-19 treatment in lactating individuals includes remdesivir and dexamethasone for hospitalized patients and Paxlovid (nirmatrelavir + ritonavir) for outpatient treatment of mild cases. Tocilizumab may be used with worsening respiratory status after 24-48 hr of remdesivir/dexamethasone; no adverse events have been reported in breastfed infants and it has minimal ability to pass into human milk. Baricitinib is likely to pass on to human milk and is not recommended in lactating patients due to a lack of research on its safety. The authors stress the importance of including lactating	This review discusses options for COVID-19 vaccination and treatment among lactating women. There is evidence of greater antibody presence if the 1st vaccination dose is given during pregnancy (vs after delivery) or if an mRNA vaccine is administered (vs vector-based). The current recommendations for COVID-19 treatment in lactating individuals includes remdesivir and dexamethasone for hospitalized patients and Paxlovid (nirmatrelavir + ritonavir) for outpatient treatment of mild cases.	Chen MJ, Cheema R, Hoyt-Austin A, et al. Vaccination and treatment options for SARS-CoV2 infection affecting lactation and breastfeeding. <i>Seminars in Fetal and Neonatal Medicine.</i> 2023;10:1425. doi: 10.1016/j.siny.2023.101425.

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Breastfeeding; Child feeding practices; commercial milk formula; policy	7-Feb-23	Marketing of commercial milk formula: a system to capture parents, communities, science, and policy	Lancet series	Original Research	<p>individuals in research to evaluate the safety and efficacy of COVID-19 treatment options, especially as the pandemic evolves with new variants.</p> <p>Despite the proven benefits of breastfeeding, fewer than half of infants and young children are breastfed globally according to WHO recommendations. Meanwhile, commercial milk formula (CMF) sales have increased to about US\$55 billion annually. Inappropriate CMF marketing has historically led to increased infant mortality in emergency settings where mothers do not have access to clean water to prepare infant formula. This series paper describes the CMF marketing playbook and its influence on families, health professionals, science, and policy processes. The study used national survey data, company reports, case studies, methodical scoping reviews, and multi-country research studies. The findings reveal that CMF companies target health professionals to influence purchasing behavior and IYCF practices by taking advantage of their role as trusted sources of information. CMF marketing is based on unsubstantiated health claims, yet it is not subject to the same oversight as medical interventions. International food standards (Codex Alimentarius) meant to provide this oversight are subject to CMF industry input and influence. To build brand credibility and influence, CMF engages and influences the scientific community through sponsorship of health organizations, conferences, and paid advertisements in scientific journals. While legal and regulatory standards exist, such as the Code, they are underpowered and underused to counter CMF industry's power and marketing strategies if they are not also incorporated into national legislation. Exploitative CMF marketing during the COVID-19 pandemic has underscored the need for stronger Code enforcement. The authors call for high-level political commitment, increased financial investment, and concerted support for mothers and families, guided by metrics in the Global Breastfeeding Scorecard. To protect policymaking and implementation from CMF industry influence, the authors recommend the following: 1) regulation of research and standards for CMF products with the same rigor as pharmaceuticals; 2) rejection of any funding or support from CMF industry by health providers, researchers, journals, and professional societies; 3) public disclosure of industry spending on CMF marketing; 4) full adoption of the Code into national law by all countries; 5) a comprehensive review of CMF marketing across all digital environments; and 6) concerted action to block CMF industry from undermining the Code through use of Codex Alimentarius Commission and the WTO (action steps are discussed further in the 3rd paper of this series).</p>	The series paper explored CMF marketing and its influence on families, health professionals, science, and policy processes. The study findings showed that CMF marketing targets health care professionals, arbitration of scientific evidence, and misrepresentation of research to build brand credibility and influence. Authors urge for high-level political commitment, increased financial investment, and support for mothers and families and an end to all CMF marketing and industry interference in national and international policy processes. The authors also recommend adopting a framework that protects policymaking and implementation from industry influence.	Rollins N, Piwoz E, Baker P, et al. Marketing of commercial milk formula: a system to capture parents, communities, science, and policy. Lancet. 2023;401(10375):486-502. doi:10.1016/S0140-6736(22)01931-6

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Gut microbiome;	1-Feb-23	The Gut Microbiome of Infants Who Were Exposed in Utero to Hurricane Maria in Puerto Rico	The Journal of Allergy and Clinical Immunology	Abstract	Due to climate change, extreme weather events have been more frequent and intense. Prenatal exposure to disasters is strongly associated with increased risks of chronic diseases, including asthma and allergies, for the infant later in life. Although the gut microbiota in early life has been suggested as a mechanism underlying this relationship, the gut microbiome of infants who are exposed in utero to an extreme weather event has not been studied. The researchers conducted a birth cohort study in the aftermath of Hurricane Maria in Puerto Rico (USA). The study recruited full-term infants aged 2-6 months (n=63), including (1) an exposure group: infants who were exposed in utero to Hurricane Maria (n=29) and (2) a control group: infants who were conceived at least five months after the Hurricane (n=34). The researchers performed shotgun metagenomic sequencing [technique used to sequence the genomes of entire microbial communities] on infant stool swab samples and compared the gut microbiome between the exposure group and control group. Infants who were exposed in utero to Hurricane Maria experienced a loss of microbial diversity and a decrease in commensals [a type of micro-organism that resides on the surface of the body and in the mucosa without harming human health], which are important in preventing colonization and invasion by pathogens. Exposed infants also showed altered gut metabolic potential. The influence of prenatal disaster exposure on the gut microbiome was the strongest in infants who were exclusively formula-fed and diminished in the context of breastfeeding. Authors conclude that prenatal exposure to a devastating hurricane is associated with alterations in microbial composition and metabolic potential in the infant gut. Breastmilk may diminish such effects.	This study explored the relationship between in utero exposure to Hurricane Maria in Puerto Rico and gut microbiomes in full-term infants aged 2-6 months. The researchers found (1) infants who were exposed in utero to Hurricane Maria experienced a loss of microbial diversity and a decrease in commensals and (2) the relationship was strongest in infants who were exclusively formula-fed and diminished in the context of breastfeeding.	Wang L, de Ángel Solá D, Flores MA, et al. The gut microbiome of infants who were exposed in utero to hurricane maria in puerto rico. <i>Journal of Allergy and Clinical Immunology</i> . 2023;151(2):AB118. doi:10.1016/j.jaci.2022.12.375
Refugee; Breastfeeding; Syria; Turkey	1-Feb-23	Breastfeeding status and determinants of current breastfeeding of Syrian refugee children in Turkey	International Breastfeeding Journal	Original Research	This study examined the association between breastfeeding status in children of Syrian refugee mothers in Turkey and socio-demographic determinants, including household, maternal, and antenatal, birth, and postnatal characteristics. From the Turkey Demographic and Health Survey-Syrian Migrant-2018 data, children <2 yrs born at a gestational duration greater than 32 weeks from a singleton pregnancy and living with the mother were included in the study (n=744). The dependent variable was breastfeeding status in the last 24 hours. The percentage of breastfeeding in children <2 yrs was 62.4%, and the total median breastfeeding duration was 14.6 months. Univariate logistic regression analysis revealed that breastfeeding rates were higher among those living in the southern and eastern regions of Turkey than the western region. Further, earlier immigration to Turkey was associated with higher breastfeeding rates. Multivariable logistic regression analysis revealed that breastfeeding status was associated with long preceding birth interval; delivery in a public hospital; absence of prelacteal feeding; and mother being non-pregnant. The authors recommend the continued integration of the Baby-Friendly approach and family planning services in refugee health centers to increase breastfeeding rates.	This study examined determinants of breastfeeding status in Syrian refugee children in Turkey. Breastfeeding was associated with long preceding birth interval; delivery in a public hospital; absence of prelacteal feeding; mother being non-pregnant; residing in the southern and eastern region; and earlier immigration to Turkey. The authors recommend the continued integration of Baby-Friendly approach and family planning services in refugee health centers.	Yalcin SS, Aydin Aksoy E, Yalcin S, Eryurt MA. Breastfeeding status and determinants of current breastfeeding of Syrian refugee children in Turkey. <i>Int Breastfeed J</i> . 2023;18(1):10. doi:10.1186/s13006-022-00538-w

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Breastfeeding; Breastmilk; COVID-19; Family-centred care; Mother-baby contact; Pandemic; Perinatal care; Rooming-in; SARS-CoV-2; Skin-to-skin care	1-Feb-23	Born into an isolating world: family-centred care for babies born to mothers with COVID-19	EClinicalMedicine	Original Research	This prospective study examined the implementation of family-centred care (FCC) practices for neonates born to mothers with perinatal SARS-CoV-2 infection during the COVID-19 pandemic. 692 neonates born to mothers with confirmed SARS-CoV-2 infection during pregnancy were identified from a multinational cohort (13 sites, 10 countries) 10 Mar 2020- 20 Oct 2021. 27 (5%) neonates were positive for SARS-CoV-2; of these, 14 (52%) were asymptomatic. 311 (46%) neonates roomed-in with their mother during the admission. Rooming-in increased over time from 23% in Mar–Jun 2020 to 74% in Jan–Mar 2021. 330 (93%) of the 369 separated neonates had no prior physical contact with their mother, and most (86%) had no symptoms of any illness (COVID-19 or otherwise). 354 (53%) neonates received maternal breastmilk, increasing from 23% to 70% between Mar–Jun 2020 and Jan–Mar 2021. Mothers with active COVID-19 at delivery, symptomatic COVID-19, C-section, pre-term delivery, and respiratory failure had significantly higher risk of separation from their newborn (p<0.0001 for all). These same factors (except respiratory failure) significantly reduced chances of neonates receiving maternal breastmilk (p<0.0001 for all). Similarly, feeding with maternal breastmilk was significantly associated with rooming in (p<0.0001). This is the largest report of global FCC practice during the COVID-19 pandemic to date. Authors conclude that the COVID-19 pandemic may have substantially impacted FCC practices despite low perinatal transmission rates. However, the fact that FCC practices improved as the COVID-19 pandemic progressed indicates commitment to improving FCC implementation. The effect of the pandemic on FCC implementation may differ in regions with high vaccination rates; therefore, future research should document maternal vaccination status.	This study examined the implementation of family-centred care (FCC) practices for 692 neonates born to mothers with SARS-CoV-2 infection across 10 countries. Less than half of neonates roomed-in with their mothers; most of these neonates had no prior physical contact with their mother. Rates of rooming-in and breastfeeding increased over time, indicating improvement in FCC implementation. Mothers with active COVID-19 at delivery, symptomatic COVID-19, C-section, pre-term delivery, and respiratory failure had higher risk of separation. Impacts on FCC practices may differ according to vaccination rates.	Dowse G, Perkins EJ, Stein HM, et al. Born into an isolating world: family-centred care for babies born to mothers with COVID-19. EClinicalMedicine. 2023;56:101822. doi:10.1016/j.eclinnm.2022.101822
Anemia; complementary feeding; children aged 6 to 23 months; iron supplementation; knowledge; attitudes and perceptions; mixed-methods; Syrian refugees; Lebanon	30-Jan-23	Anemia among Syrian Refugee Children Aged 6 to 23 Months Living in Greater Beirut, Lebanon, including the Voices of Mothers' and Local Healthcare Staff: A Mixed-Methods Study	Nutrients	Original Research	This cross-sectional, mixed-methods study examined the main determinants of anemia among Syrian refugee children in Lebanon aged 6-23 months. 215 children were included, along with their mothers [mean ages not provided]. 43 Syrian women (30 mothers; 13 family members) and 21 Lebanese healthcare staff and technical experts participated in the qualitative part of the study. 42% of the children and 20% of mothers were anemic. Children had significantly higher odds of anemia if their mothers also had anemia (p<0.05) or if the mothers did not know that fish/seafood is a source of iron (p<0.05). Odds of anemia were 2-3x higher among children who had not consumed iron-rich infant formula, fats/oils, or fruits in the previous 24 hrs (p<0.05 for all); intake of cow's milk and breastmilk did not show significant effects after adjusting for confounders. 2 in 5 (39.3%) children were breastfed <1 hr after birth, whereas most had breastfeeding delayed by up to 24 hrs (34.1%) or between 1-5 days (23.4%). Odds of moderate (p<0.05) and mild (p<0.01) anemia were lower among children breastfed within 1-24 hrs of birth, compared to those who initiated breastfeeding 1-5 days after birth, indicating that the timing of breastfeeding initiation may have a protective effect. Authors note that infant formula was frequently given to Syrian refugee children instead of breastmilk; approx. 1 in 3 aged 6-11 months; 1 in 2 aged 12-23 months. Despite its potential to prevent anemia, the relatively high use of infant formula (also noted in other recent studies from Lebanon) is of concern due to its negative impact on the duration of breastfeeding and burdensome cost for economically deprived populations. Interviews revealed Lebanese doctors gave appropriate dietary advice and prescribed iron supplements as treatment; however, mothers reported financial constraints in accessing iron-rich foods and supplements. The authors call for multisectoral interventions combining medical and financial	This study examined the determinants of anemia among Syrian refugee children in Lebanon (aged 6-23 months). Children had higher odds of anemia if their mothers also had anemia or did not know that fish/seafood is a source of iron. Odds of anemia were higher among children who had not consumed iron-rich infant formula, fats/oils, or fruits in the previous 24 hrs. The timing of breastfeeding initiation may have a protective effect. Authors note the relatively high use of infant formula is of concern due to its high cost and negative impact on breastfeeding duration. They call for multisectoral interventions combining medical and financial support	Jeremias T, Abou-Rizk J, Burgard L, et al. Anemia among Syrian Refugee Children Aged 6 to 23 Months Living in Greater Beirut, Lebanon, including the Voices of Mothers' and Local Healthcare Staff: A Mixed-Methods Study. Nutrients. 2023;15(3):700. Published 2023 Jan 30. doi:10.3390/nu15030700

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					support with nutrition counseling for mothers to reduce the high burden of anemia among young children.	with nutrition counseling for mothers.	
Breastfeeding; natural disaster; sociocultural influence; internally displace people; Pakistan; rural; ethnography	25-Jan-23	Sociocultural Factors Affecting Breastfeeding Practices of Mothers During Natural Disaster: A Critical Ethnography in Rural Pakistan	Global Qualitative Nursing Research (GQNS)	Original Research	This is a critical ethnographic study conducted in Chitral, Pakistan to better understand the sociocultural factors that influence breastfeeding practices among mothers in disaster relief camps due to the glacial lake outburst flood and subsequent earthquake in 2015. 18 internally displaced mothers with children aged <36 months were interviewed. Displaced mothers were eligible to participate in this study regardless of their breastfeeding practices. Researchers conducted field observations, reviewed documents, and held in-depth interviews in the local language, Urdu, and translated to English. Informal and formal support, cultural norms and spiritual beliefs were factors that facilitated breastfeeding practices. Lack of privacy, cultural beliefs, covert oppression due to gender inequality, and lack of healthcare support were barriers affecting the mothers' capacities to breastfeed. The authors noted that cultural norms and beliefs were both identified as a facilitator and a barrier. Gender equity in the household and equitable distribution of food were parts of cultural norms that facilitated breastfeeding. However, expectations to feed cow's milk and tea and food restrictions placed on breastfeeding mothers were cultural beliefs that prevented breastfeeding. The authors recommend system-level interventions that empower local people, establish dedicated camps to offer preventive services, create breastfeeding-friendly spaces, and provide safe and clean space for prayer. They also noted the importance of spiritual and religious leaders in promoting breastfeeding and providing support given the stressful nature of natural disasters. Privacy for breastfeeding women was also emphasized as well as awareness to combat oppression and gender inequality that affect the well-being of mothers and their capacities to breastfeed.	This study based in Pakistan examined the sociocultural barriers and facilitators of breastfeeding among displaced women in disaster relief camps. Informal and formal support, cultural norms, and spiritual beliefs were facilitating factors. Lack of privacy, cultural beliefs, covert oppression and lack of healthcare support were barriers affecting the mothers' capacities to breastfeed. System level interventions are recommended to support breastfeeding mothers during natural disasters.	Hirani SAA, Richter S, Salami B, Vallianatos H. Sociocultural Factors Affecting Breastfeeding Practices of Mothers During Natural Disasters: A Critical Ethnography in Rural Pakistan. Global Qualitative Nursing Research. 2023;10:233339 36221148810. doi:10.1177/2333936221148808
COVID-19; breastfeeding; complementary feeding; crisis; pandemic; knowledge	25-Jan-23	Investigating the midwives' knowledge on infant and young child feeding during the COVID-19 pandemic	E3S Web of Conferences	Original Research	This cross-sectional study examined midwives' knowledge of IYCF practices and COVID-19 transmission risk during the COVID-19 pandemic. The study collected data from 88 midwives in close contact with mothers and children (<2 years) across 10 community health centers in Banda Aceh City, Indonesia (Mar 2020-Jun 2021). Through an online survey, the midwives answered questions and received knowledge scores of "Good," "Moderate," "Poor," or "Very Poor" [criteria not defined] in the following areas: IYCF basic principles; COVID-19 transmission risk in breastfeeding dyads; health protocols for mothers with COVID-19; substitutes when breastfeeding is not possible; and preparing complementary foods during the COVID-19 pandemic. The survey found that only 17% of the midwives had 'good' basic knowledge of IYCF practices and 68% had received no previous IYCF training. Over 70% of respondents scored well on the knowledge of complementary food preparation and practices, which were well-established prior to the pandemic. However, few respondents (15%) had "good" knowledge of appropriate substitutes for when breastfeeding is not possible. The proximity of midwives to mothers and children makes them valuable resources and educators for communities, particularly during times of crisis. The authors emphasize the importance of training midwives and other healthcare workers on appropriate IYCF practices and health protocols with neonates born to mothers with COVID-19. Mothers with COVID-19 should be supported to breastfeed, and expressed breastmilk should be prioritized if the mother cannot breastfeed directly.	This study examined the IYCF knowledge of 88 midwives in Banda Aceh City, Indonesia during the COVID-19 pandemic. The survey found that only 17% of the midwives had 'good' basic knowledge of IYCF practices and most had received no prior IYCF training. The authors emphasize the importance of training midwives and other healthcare workers on appropriate IYCF practices and health protocols with neonates born to mothers with COVID-19.	Niswanto, Nuril & Nasaruddin, Nasaruddin & Marthoenis, Marthoenis. (2022). Investigating the midwives' knowledge on infant and young child feeding during the COVID-19 pandemic. E3S Web of Conferences. 340. 10.1051/e3sconf /202234005013.

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
COVID-19; SARS-CoV-2; skin-to-skin contact; newborn care; policy	17-Jan-23	First do no harm overlooked: Analysis of COVID-19 clinical guidance for maternal and newborn care from 101 countries shows breastfeeding widely undermined	Frontiers in Nutrition	Review	In March 2020 the WHO published clinical guidance for newborn care, recommending skin-to-skin contact (SSC), early initiation of breastfeeding (BF), and close proximity with the mother - even in the presence of maternal SARS-CoV-2 infection. However, many countries' guidance did not align with WHO recommendations early in the COVID-19 pandemic. This review assessed 183 COVID-19 guidance documents from 101 countries and 2 regional agencies (n=103; collected 15 Nov - 31 Dec 2020) to determine alignment with WHO recommendations in the following areas: 1) SSC; 2) early BF initiation; 3) rooming-in; 4) direct BF; 5) provision of expressed breastmilk; 6) donor human milk; 7) wet nursing; 8) breastmilk substitutes; 9) relactation; 10) psychological support for separated mothers; and 11) psychological support for separated infants. While nearly two thirds (61.2%) of countries/regional agencies recommended direct BF, far fewer recommended rooming-in (34%) and SSC (35%), which are key practices to facilitating BF. Less than 1 in 4 recommended all three practices of SSC, rooming-in, and direct BF. Nearly 1 in 5 countries (18.4%) recommended separating newborns from their mothers; the largest share of countries (37.9%) permitted rooming-in but only under specific circumstances. Over one third (37.9%) recommended psychological support for mothers separated from their infants, yet very few (8.7%) offered guidance for supporting separated infants. Most countries (73.8%) recommended providing expressed breastmilk in case of separation or if the mother was too ill for direct BF. However, few countries (10.7%) recommended relactation to help re-establish breastfeeding after separation or offered appropriate alternatives, such as donor human milk (22.3%) or wet nursing (4.9%). Although WHO guidance proved to be influential (cited by 40% of country guidance) the US CDC was just as influential globally (cited by 39%) and early recommendations for isolating infants from their mothers persisted. The authors urge the US CDC to consider the international influence of their recommendations and recommend greater coordination between the US CDC and WHO in the event of a pandemic.	This review assessed COVID-19 guidance documents from 101 countries and 2 regional agencies published in 2020 to determine alignment with WHO clinical guidance for the care of newborns of mothers with COVID-19. Less than one-quarter of country guidance recommended all 3 key breastfeeding facilitation practices of skin-to-skin contact, rooming-in, and direct breastfeeding. Once recommendations were made for separation or against breastfeeding, they were difficult to reverse. Authors advice against making recommendations against breastfeeding in a disease epidemic in the absence of quality evidence demonstrating that such recommendations are needed.	Gribble K, Cashin J, Marinelli K, Vu DH, Mathisen R. First do no harm overlooked: Analysis of COVID-19 clinical guidance for maternal and newborn care from 101 countries shows breastfeeding widely undermined. Front Nutr. 2023;9:1049610. Published 2023 Jan 17. doi:10.3389/fnut.2022.1049610
COVID-19; breastfeeding; children; climate change; complementary feeding; food system; obesity; socioeconomic inequalities; sustainable nutrition; undernutrition	13-Jan-23	Interlinkages between Climate Change and Food Systems: The Impact on Child Malnutrition— Narrative Review	Nutrients	Review	The pandemics of obesity, undernutrition, and climate change share common underlying drivers and represent severe threats to infant and child health. This article reviews key issues concerning child diet and nutritional status and how these interact with climate change and food systems. Rates of exclusive breastfeeding remain low among infants <6 months of age (42% globally in 2019), and complementary feeding is often nutritionally inadequate with only 29% of children 6-23 months meeting minimum dietary diversity. This leads to a double burden of malnutrition, whereby undernutrition (i.e., stunting, wasting, and deficiencies in micronutrients) co-exist with overweight and obesity, as well as to harmful effects on climate. The impacts of climate change and the COVID-19 pandemic are worsening child malnutrition, impacting the main underlying causes (i.e., household food security, dietary diversity, nutrient quality, and access to maternal and child health), as well as the social, economic, and political factors determining food security and nutrition (livelihoods, income, infrastructure resources, and political context). In the context of the climate change's impact on food systems (and vice versa), the authors highlight the sustainability of breastfeeding, which has zero environmental footprint or food waste. The authors recommend multisectoral strategies to provide effective support during pregnancy, create optimal environments for IYCF, while counteracting the marketing of breast milk substitutes. These include: 1) increased funding for breastfeeding	This article reviews key issues concerning child diet and nutritional status and how these interact with climate change and food systems. The impacts of climate change and the COVID-19 pandemic are worsening child malnutrition by impacting the main underlying causes as well as the social, economic, and political factors determining food security and nutrition. The authors recommend multisectoral strategies to provide effective support during pregnancy, create optimal environments for IYCF, while counteracting the	Agostoni C, Baglioni M, La Vecchia A, Molari G, Berti C. Interlinkages between Climate Change and Food Systems: The Impact on Child Malnutrition— Narrative Review. Nutrients. 2023;15(2):416. Published 2023 Jan 13. doi:10.3390/nu15020416

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					interventions; 2) improved family leave and workplace policies; 3) improved quality of maternity facilities and access to skilled lactation counseling; 4) strengthened community networks; and 5) a robust monitoring system to track the progress of policies, multilateral programs, and funding. Climate adaptation measures in agriculture, livestock production, and fisheries to promote food nutrition and security, increase livelihoods, and lessen the impacts of climate change on food systems are also discussed.	marketing of breast milk substitutes.	
Breastfeeding; breastfeeding difficulties; breastfeeding support; complementary feeding; infant and young children feeding; mental health; refugees; Ukraine; wartime emergencies	13-Jan-23	Lactation Newsmakers: Documenting our History–The Current State of Breastfeeding in Ukraine: An Interview With Lidiia Romanenko and Olha Shlemkevych	Journal of Human Lactation (JHL)	Original Research	This article features an interview with 2 Ukrainian medical doctors, Olha Shlemkevych (OS) and Lidiia Romanenko (LR) who work with the implementation of the Baby-Friendly Hospital Initiative (BFHI) in Ukraine. BFHI was actively implemented in Ukraine until the start of the war with Russia in 2022. Before the war, about 30% of healthcare facilities for mothers and children were BFHI accredited, and 92% of newborns started breastfeeding in the 1st hour after birth. According to LR, national statistics estimated that 56% of infants were exclusively breastfed up to 6 months, in stark contrast with the 2012 estimate of 19.7%. LR recommends another independent study be conducted after the war to examine its impact. OS tells about the experiences of regional perinatal centers in 5 different parts of Ukraine that were impacted by the war. During active military action in northern and eastern Ukraine, doctors delivered infants and performed caesarean sections in bomb shelters, and hospital basements were used to provide breastfeeding education and protect mothers and their newborns. When there are no sirens or active military actions, many perinatal centers in Western Ukraine are still able to operate as usual to provide antenatal breastfeeding education and postnatal lactation counseling. OS mentions there are some websites and Facebook groups for breastfeeding counselling for Ukrainian mothers impacted by the war, including resources for locating language-specific healthcare providers outside of Ukraine. LR notes that mothers particularly appreciated breastfeeding because during active military conflicts breastmilk was often the only available food for infants. Both doctors recount experiences of uncontrolled donations and distributions of infant formula provided to mothers by the Ukrainian government and international charities as humanitarian aid. In response, UNICEF and the Global Nutrition Cluster are assisting with the planning and management of artificial feeding options for when breastfeeding is not possible.	This article features an interview with 2 Ukrainian medical doctors who are specialists in breastfeeding and Baby-Friendly Hospital Initiative implementation in Ukraine. The interview provides insights on providing breastfeeding education and support during conflict and shares experiences of perinatal centers in different regions of the country. Online tools, resources, and Facebook groups to support breastfeeding mothers are also provided, including language-specific resources for mothers displaced outside of Ukraine.	Romanenko L, Shlemkevych O, Arendt M. Lactation Newsmakers: Documenting our History–The Current State of Breastfeeding in Ukraine: An Interview With Lidiia Romanenko and Olha Shlemkevych. Journal of Human Lactation. 2023;39(1):15-21. doi:10.1177/08903344221136477

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Child feeding practices; childhood diarrhea; hygiene; immunization; precipitation	9-Jan-23	Uncovering social and environmental factors that increase the burden of climate-sensitive diarrheal infections on children	Proceedings of the National Academy of Sciences (PNAS)	Original Research	Diarrhea is among the leading causes of death among children <5 yrs globally, disproportionately affects populations in LMIC countries, and is strongly associated with climatic factors. Undernutrition and micronutrient deficiencies are risk factors for diarrheal disease in infants and young children. This study explored the relationship between precipitation shocks (drought and heavy precipitation events), diarrheal disease in young children (within 2 weeks of the survey), and other modifying factors, such as child feeding practices. Researchers used (1) Demographic Health Survey data for 51 LMICs between 2000 and 2019 for children <3 years (n=611,154 total), including data on child feeding practices for children 6-24 months (n=385,958), and (2) climate data from the Climate Hazards Group InfraRed Precipitation with Station database. In tropical savanna regions, exposure to severe dry abnormal events (drought conditions) accumulated over a 2-week period is significantly associated with an increased risk of diarrhea among children who did not receive adequate diet (aOR = 1.07; 95% CI: 1.01 to 1.14), whereas no association was found among children who received adequate diet (aOR = 0.94; 95% CI: 0.82 to 1.09) [authors report p=0.1 for heterogeneity]. Adequate diet was defined as meeting minimum dietary diversity and minimum meal frequency, which differed slightly between breastfed and non-breastfed children [see supplementary Table S2]. The study showed that stool disposal practices, young child feeding practices, and immunizing against the rotavirus modified the association between drought and diarrhea in the tropical savanna regions. In the humid subtropical regions feeding practices were not related as household's source of water and water disinfection practices modified the association between heavy precipitation and diarrhea. The authors emphasize the need to reach food insecure households, integrate minimum nutrition standards in food aid programs targeting young children, and improve knowledge about healthy feeding practices to reduce diarrheal disease.	This study explored the relationship between precipitation shocks, diarrheal disease, and modifying factors such as child feeding practices (children aged 6 to 24 months). In tropical savanna regions, exposure to drought conditions accumulated over a 2-week period is associated with an increased risk of diarrhea among children who do not receive adequate diet. Public health interventions reducing diarrheal disease should reach food insecure households, integrate minimum nutrition standards in food aid programs, and improve knowledge about healthy feeding practices.	Dimitrova A, Gershunov A, Levy MC, et al. Uncovering social and environmental factors that increase the burden of climate-sensitive diarrheal infections on children. <i>Proc Natl Acad Sci U S A</i> . 2023;120(3):e2119409120. doi:10.1073/pnas.2119409120
Infant; young child; diet; nutrition; minimum dietary diversity	20-Dec-22	Minimum dietary diversity and associated factors among children aged 6-23 months in Enebsie Sar Midir Woreda, East Gojjam, North West Ethiopia	BMC nutrition	Original Research	This cross-sectional study assessed minimum dietary diversity (MDD) and its associated factors among children aged 6-23 months in Enebsie Sar Midir Woreda, Ethiopia (Jan-Feb 2020). MDD is defined as the consumption of ≥4 of the 7 food groups: grains, roots and tubers; legumes and nuts; dairy products; flesh foods (meat, fish, poultry and organ meats); eggs; vitamin-A rich fruits and vegetables; and other fruits and vegetables. 512 mothers/caregivers with children 6-23 months old participated in a structured interview questionnaire. The mean (+SD) age of mothers/caregivers was 32(± 6.1) years, with over half (55.7%) between the age of 25–34 years. Results showed grain, roots and tubers were the most commonly consumed food items by children 24 h prior to the survey (94.7% or 485/512), followed by eggs (36.5% or 187/512). The consumption of vitamin A rich fruits and vegetables was lowest of the 7 food groups (17.8% or 91/512). Overall, only 18.2% (95% CI: 14.8, 21.7) of children were reported to have consumed ≥4 of the 7 food groups, which the authors note is low compared to other studies done in Addis Ababa (Ethiopia), Ghana, Indonesia, and Myanmar. Cow milk availability within the household (adjusted odds ratio (AOR)=17.27; 95% CI: 6.73, 44.44), owning farmland (AOR=10.15, 95%CI: 1.78, 57.93), and cultivating vegetables (AOR=3.2; 95% CI: 1.05, 9.8) were all significantly associated with children meeting MDD. Those with >5 animals were more likely to meet MDD than those who owned 0-5, even after controlling for other sociodemographic and household factors (AOR=6.46; 95% CI: 1.97, 21.12 for 6-10 animals; AOR=15.12; 95% CI: 4.31, 53.05 for >10 animals). Authors	A cross-sectional study among children aged 6– 23 months in Enebsie Sar Midir Woreda, Ethiopia found that only 18.2% met the criteria for minimum dietary diversity (MDD; consuming ≥4 of 7 specific food groups). Availability of cow's milk in the household, cultivating vegetables, availability of farmland, and owning >5 animals were significantly associated with MDD among the children of this age group. The authors recommend the Federal Ministry of Health to educate mothers/caregivers in IYCF and nutrition and farmers should be encouraged to cultivate a variety of foods on their land.	Assefa, D., Belachew, T. Minimum dietary diversity and associated factors among children aged 6-23 months in Enebsie Sar Midir Woreda, East Gojjam, North West Ethiopia. <i>BMC Nutr</i> 8, 149 (2022). https://doi.org/10.1186/s40795-022-00644-2

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					recommend that the Federal Ministry of Health provide nutrition guidance on IYCF for mothers or caregivers and that farmers are educated on how to use their land to cultivate a variety of commodities, such as fruits and vegetables.		
COVID-19; coronavirus; breastfeeding; separation	8-Dec-22	Barriers and enablers of breastfeeding in mother–newborn dyads in institutional settings during the COVID-19 pandemic: A qualitative study across seven government hospitals of Delhi, India	Frontiers in Nutrition	Original Research	This study explored the barriers and enablers for newborn care and breastfeeding practices in 7 hospitals in Delhi, India during the first wave of the COVID-19 pandemic in 2020. The study was based on in-depth interviews with Heads of the Pediatric and Obstetrics Departments (n=19), resident doctors (n=14), lactation counselors and nurses (n=13), and recently delivered mothers (RDMs) (n=45) along with their caregiving family members (n=39). RDMs who had delivered between 7-10 days before the date of the interview across 3 profiles were also interviewed: 1) COVID-19 negative RDM with a healthy newborn, 2) COVID-19 positive RDM with a healthy newborn, and 3) COVID-19 positive RDM with a sick newborn. A prominent barrier of breastfeeding was RDM-newborn separation at birth. Confusion and stress among healthcare providers and breastfeeding RDMs regarding the safety of breastfeeding in RDMs with SARS-COV-2 infection was another barrier to optimal breastfeeding practices. Formula feeding and early discharge of the infant while the mother was still admitted became common practices. Family-centered practices such as counseling on breastfeeding and regular telephone or video call-based updates of separated infants led to better compliance with breastfeeding practices and overall satisfaction. Included is an analytic framework depicting the factors impacting optimal breastfeeding practices during the COVID-19 pandemic and a detailed summary table recording suggestions for improvements. Study authors concluded that separation of the newborn from the mother should be avoided unless robust evidence exists in favor of the separation.	This study explored the barriers and enablers for newborn care and breastfeeding practices in hospitals in Delhi, India for recently delivered mother-newborn dyads during the first wave of the COVID-19 pandemic in 2020. Study authors concluded that separation of the newborn from the mother should be avoided in public health emergencies unless robust evidence exists in favor of the separation. Routine institutional practices should be adapted and remain family-centered to promote optimal breastfeeding practices.	Maria A, Mukherjee R, Upadhyay S, et al. Barriers and enablers of breastfeeding in mother-newborn dyads in institutional settings during the COVID-19 pandemic: A qualitative study across seven government hospitals of Delhi, India. <i>Front Nutr.</i> 2022;9:1052340. doi:10.3389/fnut.2022.1052340
Severe acute malnutrition; Infants supplementary suckling outcome; Armed conflict; Yemen	21-Nov-22	Supplementary suckling technique in infants less than 6 months of age with uncomplicated severe acute malnutrition: a prospective hospital-based study in armed conflict Yemen	BMC Pediatrics	Original Research	In Yemen, 11.5% of infants <6 months had severe acute malnutrition (SAM) during the armed conflict in the last 7 years. Supplementary suckling technique (SST) provides SAM affected infants <6 months with therapeutic formula supplementation at the breast. This is done to increase weight gain and re-establish exclusive breastfeeding through promoting relactation via stimulation of the breast. This prospective hospital-based study aimed to determine the outcome of using SST in treatment of uncomplicated SAM infants in a conflict-affected community in Aden, Yemen. 108 infants <6 months of age with SAM (clinically wasted and weight-for-length Z (WLZ) score <-3) due to lactation failure were enrolled in the study between Jan 2018 - Apr 2020. 98.2% (n=105) infants without oedema received Diluted F100 feeding (DF100), a high protein and energy therapeutic formula, and 2.8% (n=3) infants with bilateral lower limb oedema received F75, a lower energy and protein therapeutic formula. Differences in infant outcomes based on therapeutic formula type were not studied. All mothers received training on therapeutic formula use and breastfeeding attachment and positioning counseling. Discharge criteria was gaining adequate weight on isolated breastfeeding with follow-up at nutritional units at health centers. Discharge criteria were adhered to in the study, but mothers demanded early discharge because they had to take care of other children in a conflict setting and endangered homes. The infants' median (IQR) age was 4.0 (2.5-5) months. Of enrolled infants (n=108), 80.6% gained adequate weight on breastfeeding at the time of discharge, 12% dropped out of the study, 5.6% died, and 1.9% did not respond to treatment. 60.2% of infants' WLZ score remained at <-3 at the time of discharge (including those that died) and 38.8% gained weight with a WLZ score >-3 and ≤+1 at	This study (n=108) assessed the use of supplementary suckling technique (SST) in treatment of infants <6 months of age with severe acute malnutrition (SAM) in a conflict-afflicted community in Aden, Yemen. SST is a therapeutic formula supplementation at the breast to increase weight gain and reestablish exclusive breastfeeding through relactation. The study found longer duration of SST treatment (>10 days) (p<0.001) to be associated with better odds of recovery.	Baazab MSM, Bilal JA, Ba-Saddik IA, et al. Supplementary suckling technique in infants less than 6 months of age with uncomplicated severe acute malnutrition: a prospective hospital-based study in armed conflict Yemen. <i>BMC Pediatr.</i> 2022;22(1):671. doi:10.1186/s12887-022-03745-w

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					the time of discharge. Between admission and discharge, SST increased median weight (p<0.001) and median weight-for-age Z score (p<0.001), but not median length (p<0.32). Longer duration of SST treatment (>10 days) (OR=1.71, 95% CI=0.05-0.62, p<0.001) showed greater odds of recovery [gaining weight at time of discharge; see methods]. [Note: younger age is reported in the abstract as a predictor of recovery, but results are nonsignificant: p=0.519]. The authors note the study would have yielded better conclusions if a controlled group with infants feeding on responsive feeding therapy was included in the study design. Breastmilk intake by the infant and maternal breastmilk supply were not reported. SST may be an effective method to treat SAM for infants <6 months in armed conflict settings but warrants further research.		
Breastfeeding; disasters; humanitarian; infant nutrition; child nutrition; flooding; supplemental feeding; disease outbreak; health impact	9-Nov-22	Neonatal and child health crises due to recent floods in Pakistan	Annals of Medicine and Surgery	Commentary	This commentary discusses the recent floods in Pakistan (Jun – Oct 2022) and the health and nutritional impacts on infants and children. Flooding increases morbidity and mortality, with neonates and children suffering more malnutrition and disease due to limited access to clean water and hygiene. Breastfeeding is often interrupted due to inadequate shelter, lack of privacy, and stress experienced by the mother. Supply challenges, especially for food and supplemental feeding options, contribute to this further. Pakistan ranked 14th of 163 nations / regions in the Children’s Climate Risk Index due to the combination of climate and environmental risks with already high underlying child health vulnerability. The 2022 flooding in Pakistan has led to infrastructure breakdown, displacement, disease outbreaks, and significant disruption to daily life. More than 33 million Pakistanis—and over 16 million Pakistani children—have been affected this year. The authors suggest that humanitarian aid—in the form of free, purified water, in particular—be provided to children and nursing mothers. They also suggest that tap water be frequently disinfected with chlorine and iodine to kill disease-causing organisms and prevent water-borne illnesses. Surveillance, monitoring, and vaccination programs should be implemented alongside to address food shortages, nutritional needs, and disease outbreaks.	This commentary discusses the 2022 floods in Pakistan and the health and nutritional impacts on infants and children in particular. Due to a lack of hygiene, access to clean water, and food supply issues, humanitarian aid should be directed toward provision of purified water, disinfection of tap water, vaccination programs, and surveillance and monitoring of food shortages, nutritional needs, and disease outbreaks.	Ochani S, Aaqil SI, Nazir A, Athar FB, Ullah K. Neonatal and child health crises due to recent floods in Pakistan. <i>Ann Med Surg (Lond)</i> . 2022;84:104837. Published 2022 Nov 9. doi:10.1016/j.am su.2022.104837
Refugee women; Caseload midwifery; Midwifery group practice; Continuity of midwifery care; High-income country	4-Nov-22	Effect of an Australian community-based caseload midwifery group practice service on maternal and neonatal outcomes for women from a refugee background	Women and Birth	Original Research	Researchers conducted a retrospective cohort study from 2016-2019 to evaluate the efficacy of a specialized refugee midwifery group practice in Brisbane, Australia. The authors implemented inverse probability of treatment weighting to compare the perinatal outcomes of 625 refugee women (mean age 28.9 years) who received care at the Refugee Midwifery Group Practice (RMGP) to 634 refugee women (mean age 30.7 years) who received standard care through the same hospital. RMGP provides group antenatal care (according to language groups) once every 2 weeks and 24-hour phone access to a primary or backup midwife that the woman has previously met. Whenever possible, women work with the same interpreter and RMGP midwives coordinate care with primary and tertiary health services. Primary outcomes included attending ≥5 prenatal appointments, spontaneous labor, receiving an epidural in the first stage of labor, preterm birth (<37 weeks' gestation), normal birth (at-term, spontaneous, vertex, no episiotomy), and exclusive breastfeeding (EBF) at discharge. Secondary antenatal, intrapartum, and neonatal outcomes included low birthweight, skin-to-skin contact (SSC) ≥60 min, and timing of first prenatal visit, among others. Women who received care from RMGP had significantly higher odds of spontaneous labor (adjusted odds ratio (aOR)=2.20, 95% CI: 1.71-282) and normal birth (aOR=1.55, 95% CI: 1.23–1.95) compared to those receiving standard care. They were less likely to have preterm birth (aOR=0.60, 95% CI: 0.36-0.99), low infant birthweight (aOR=0.54,	This retrospective cohort study evaluated the efficacy of a specialized Refugee Midwifery Group Practice (RMGP) on the perinatal outcomes of settled refugees in Brisbane, Australia from 2016-2019. RMGP participants showed improved perinatal outcomes compared with refugee women receiving standard care, including significantly higher odds of normal birth and significantly lower odds of low infant birthweight. However, there were no differences in breastfeeding at discharge. Authors recommend specialized refugee care such	Dube M, Gao Y, Steel M, Bromley A, Ireland S, Kildea S. Effect of an Australian community-based caseload midwifery group practice service on maternal and neonatal outcomes for women from a refugee background [published online ahead of print, 2022 Nov 4]. <i>Women Birth</i> .

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					95% CI: 0.33-0.89), or receive an epidural (aOR=0.67, 95% CI: 0.50-0.89). There were no significant differences between groups for EBF at discharge (62.6% standard vs 66.2% RMGP), SSC ≥60 min (35.8% standard vs 37.6% RMGP), or attending ≥5 prenatal visits (90.4% standard vs 92.3% RMGP). The authors encourage the use of similar, specialized services in other high-income countries with refugees, and recommend further research into cost-effectiveness and feasibility to ensure diverse groups can receive care in their preferred language.	as RMGP be implemented in other high-income countries with refugee populations, as well as further research on cost-effectiveness and feasibility.	2022;S1871-5192(22)00345-6. doi:10.1016/j.wombi.2022.10.004
Flooding; stunting; wasting; underweight; malnutrition; nutritional assessment	31-Oct-22	How does flooding affect the nutritional status of children in floodplain regions? A cross-sectional study from Assam, India [free access to abstract only]	Proceedings of the Indian National Science Academy	Original Research	Floods pose serious challenges for IYCF due to resulting lack of hygiene and sanitation, poor food intake, and increased rates of diarrhea and respiratory diseases. Existing studies have found children exposed to floods during the first year of life have higher levels of chronic malnutrition. This population-based cross-sectional study was conducted in Assam, India to assess the nutritional status of children (0-12 yrs) 9 months after severe flooding in 2012 (Jun-Jul 2013). Surveys were conducted across 35 villages in the 3 worst-affected districts of lower Assam: Nalbari, Barpeta, and Morigaon. All children (n=7512) had their height, weight, and birth weight recorded, along with episodes of diarrhea or fever within the previous 2 weeks. Children 6-59 months had their Mid Upper Arm Circumference recorded and were assessed for the presence of bipedal pitting oedema and acute respiratory infection. Among children <24 months, infants 0-5 months had the highest prevalence of severe underweight status in all districts (19.5% Nalbari, 25.3% Barpeta, 16.3% Morigaon), with large proportions of moderately underweight (32.5%, 35.2%, 36.7%). Stunting was highest among children 12-23 months, in both the severe (24.8% Nalbari, 25.8% Barpeta, 27.4% Morigaon) and moderate categories (48.6%, 46.5%, 54%). Severe wasting was highest among infants 0-5 months old in Nalbari (12.5%) and Barpeta (11.8%); however, Morigaon saw the highest prevalence of severe wasting at 12-23 months (26%). Similarly, moderate wasting was most prevalent among children 12-23 months in Barpeta (21.8%) and Morigaon (51.2%). The high prevalence of wasting in Morigaon might be linked to higher morbidity markers observed in the same district [age-specific results not provided]. Frequencies of underweight, stunting, and wasting for children <5 yrs were higher in study districts than in baseline national estimates and were comparable to estimates from other flood-affected communities of Orissa, India. Authors recommend region-specific interventions aided by rapid nutritional assessment during emergencies. Specifically, they call for policy-level decisions to incorporate child nutritional and health assessments into mandatory plans of action prepared by local authorities.	This study explored the relationship between flooding exposure and nutritional status of children 0-12 yrs old in Assam, India 9 months later. Among children <24 months, infants 0-5 months had the highest prevalence of severe underweight status in all districts, and severe wasting in Nalbari and Barpeta. Morigaon saw the highest prevalence of wasting at 12-23 months. Stunting was highest among children 12-23 months in all districts. Underweight, stunting, and wasting among children <5 yrs were higher than national estimates and comparable to other flood-affected communities. Authors recommend child nutritional and health assessments be incorporated into mandatory plans of action prepared by local authorities.	Choudhury M, Randhawa, S, Mohanty R, et al. How does flooding affect the nutritional status of children in floodplain regions? A cross-sectional study from Assam, India. 2022. Proc. Indian Natl. Sci. Acad. 88, 765–777. 10.1007/s43538-022-00128-8

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Human milk banking; breastfeeding; wet nursing; mixed-methods	27-Oct-22	Attitudes towards human milk banking among native Turkish and refugee women residing in a rural region of Turkey: a mixed-methods approach	International Breastfeeding Journal	Original Research	This cross-sectional, mixed methods study sought to identify opinions, knowledge, and attitudes of native Turkish and refugee women (from Afghanistan, Iraq, and Syria) living in Çeştepe, Turkey about human milk banks (HMBs). The researchers used a 27 multiple choice questionnaire, with 271 women who were aged ≥18 years and had given birth within the last 5 years, between Feb-Mar 2022 and semi-structured in-depth interviews, with 33 women, between Dec 2021-Jan 2022. Of the women who completed the questionnaire (n=271), 57.9% were willing to donate breastmilk, 27.7% were willing to use donor milk for their infants, 74.9% had never heard of an HMB, and 53.1% would prefer to have a HMB in Turkey. Of the 41% (n=111) of women who reported positive opinions about HMBs, the reasons were: 72% (n=80) cited infants who could not be breastfed could access breastmilk; 65.8% (n=73) trusted breast milk; 58.6% (n=65) gave religious reasons; and 40.5% (n=45) trusted healthcare professionals/the ministry of health. Of the 59% (n=160) of women who reported negative opinions about HMBs, 76.3% (n=122) gave religious concerns; 52.5% (n=84) feared infectious diseases; 42.5% (n=68) reported that they did not trust people to donate; 22.5% (n=36) cited infant formulas today as alternatives to breast milk; 17.5% (n=28) feared allergies; 6.9% (n=11) wanted their infants to be breastfed only by them; and 5.6% (n=9) feared spoiled milk. Most refugee women who reported negative attitudes towards HMBs cited “distrust in people they do not know” and no refugee women cited “fear of infectious diseases” as the reason. When planning an HMB, adapting to religious and cultural values and considering the safety of breastmilk regarding infectious diseases could increase acceptability by the public.	This mixed methods study assessed opinions, knowledge, and attitudes of native Turkish and refugee women regarding HMBs. The authors found that positive attitudes towards HMBs included religious reasons, trust in breastmilk, and trust in HCPs/ MoH. Negative attitudes towards HMBs included religious concerns, fear of infectious diseases, and not trusting people to donate. The findings of this study could aid HMB initiatives to increase acceptance by the public.	Varer Akpınar C, Mandiracioglu A, Ozvurmaz S, et. al. Attitudes towards human milk banking among native Turkish and refugee women residing in a rural region of Turkey: a mixed-methods approach. Int Breastfeed J. 2022;17(1):74. doi:10.1186/s13006-022-00516-2
Breast milk feeding; Infants; SARS-CoV-2; Pregnant and postpartum	26-Oct-22	Breast Milk Feeding of Infants at Birth Among People With Confirmed SARS-CoV-2 Infection in Pregnancy: SET-NET, 5 States, March 29, 2020–December 31, 2020	American Journal of Public Health (AJPH)	Original Research	This retrospective cohort study examined the prevalence of breast milk feeding (BMF) among people with confirmed SARS-CoV-2 infection during pregnancy in 5 US states (Massachusetts, Minnesota, Nebraska, Pennsylvania, and Tennessee) Mar 29 - Dec 31, 2020. Authors investigated characteristics associated with BMF during hospitalization, timing of maternal infection, and rooming-in status. 4618 mother-infant pairs comprised the sample; samples from Massachusetts and Tennessee were weighted to account for selection probability and nonresponse, resulting in 11,114 mother-infant pairs. Most mothers (39.8%) were aged 25-29 years [mean not reported]. Among infants, 69.3% were born via vaginal birth, 91.7% had a gestational age ≥37 weeks, and 14.6% had been admitted to the neonatal ICU (NICU). Most maternal infections were identified in the 3rd trimester (42.1%) with 18.1% testing positive ≤14 days before delivery. 86.5% of mothers fed breast milk to their infants during birth hospitalization, and 76.3% roomed-in with their infants. The prevalence of BMF was significantly higher (p<0.001) among mothers who roomed-in (89.4%) than those who did not (77.6%). Among those who roomed-in, there was no association between BMF and timing of maternal infection before delivery. However, among mothers who did not room-in, those with SARS-CoV-2 infection ≤14 days before delivery had significantly lower BMF prevalence than those with SARS-CoV-2 >14 days before delivery (Adjusted prevalence ratio=0.77). Mothers who were non-Hispanic Black, had less education, used Medicaid, or whose infants were born preterm/admitted to NICU had a lower prevalence of BMF relative to their counterparts. The authors recommend counseling and support from health facilities and health care providers to all pregnant mothers on the benefits of BMF and rooming-in, low risks of SARS-CoV-2 transmission from mothers to infants, and safe use of breast milk for those with SARS-CoV-2 infection.	This study described the prevalence of breast milk feeding (BMF) among people with SARS-CoV-2 during pregnancy in 5 US states. Most mothers fed breast milk to their infants and practiced rooming-in. Those who roomed-in had a significantly higher prevalence of BMF during hospitalization. There was a lower prevalence of BMF initiation among people with SARS-CoV-2 ≤2 weeks before delivery. However, the timing of infection before delivery had less of an effect on BMF for mothers who roomed-in with their infants. Authors recommend BMF counseling and support from health facilities and healthcare providers to all pregnant mothers, including those with SARS-CoV-2.	Lewis EL, Smoots AN, Woodworth KR, et al. Breast Milk Feeding of Infants at Birth Among People With Confirmed SARS-CoV-2 Infection in Pregnancy: SET-NET, 5 States, March 29, 2020-December 31, 2020. Am J Public Health. 2022;112(S8):S787-S796. doi:10.2105/AJPH.2022.307023

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Refugees; Lebanon; Syria	23-Oct-22	Infant Feeding Practices, Nutrition, and Associated Health Factors during the First Six Months of Life among Syrian Refugees in Greater Beirut, Lebanon: A Mixed Methods Study	Nutrients	Original Research	This study described feeding practices for infants among Syrian refugee populations living in Greater Beirut, Lebanon. 114 Syrian refugee mothers (aged 15-49 years) with infants <6 months were interviewed between Jul-Oct 2018; additional focus groups were also conducted with 30 selected mothers and 13 female relatives. All participants were recruited in primary healthcare centers. The study found that suboptimal IYCF practices were prevalent, with rates of exclusive breastfeeding and early initiation of breastfeeding at 24.6% and 30.1% respectively. These rates were found to be comparable to those found in Syria, among Syrian refugees in Lebanon, and in Lebanon in general, but lower than those found in Syrian refugee populations in other countries. 62.5% of infants were fed pre-lacteal feeds, with breastmilk substitute (BMS), sugary water, and herbal infusions being most common. Qualitative analyses found that primary enablers of early and exclusive breastfeeding included adequate knowledge on key IYCF and maternal nutrition practices, as well as support from healthcare professionals, spouses, and female relatives. Conversely, major barriers to exclusive breastfeeding included widespread positive attitudes towards pre-lacteal feeding, feeding liquids, and early introduction of complementary foods. Mothers also identified other barriers, such as perceived insufficient milk supply, poor quality in maternal diets, and mental health challenges. In addition, recommendations to use BMS from healthcare professionals and NGOs influenced mothers' decisions to discontinue exclusive breastfeeding. Study authors recommend promoting greater awareness on IYCF and maternal nutrition practices as well as providing more psychosocial support services. In addition, they recommend supporting the enforcement of the Code and implementation of the Baby-Friendly Hospital Initiative.	This study found that suboptimal IYCF practices were common for children <6 months old among Syrian refugees in Lebanon. Rates of exclusive and early breastfeeding were low, and rates of pre-lacteal feeding were high. Study authors recommend promoting greater awareness of IYCF and maternal nutrition practices, providing psychosocial support services, and reinforcing policies related to Code enforcement and Baby-Friendly Hospital Initiative implementation.	Abou-Rizk J, Jeremias T, Nasreddine L, et al. Infant Feeding Practices, Nutrition, and Associated Health Factors during the First Six Months of Life among Syrian Refugees in Greater Beirut, Lebanon: A Mixed Methods Study. <i>Nutrients</i> . 2022;14(21):4459.
Malnutrition; internally displaced; over-nutrition; under-nutrition; breastfeeding; vaccines; deworming	13-Oct-22	Magnitude and predictors of malnutrition among internally displaced persons' children 6 - 59 months in Bamenda Health District of Cameroon: A community-based cross-sectional study	Nutrition and Health	Original Research	This community-based cross-sectional study investigated the prevalence of malnutrition and associated risk factors among internally displaced children (6–59 months) in the Bamenda Health District (Cameroon). Between April - June 2021, researchers used multistage cluster sampling to select mothers/caregivers and gathered sociodemographic information, environmental characteristics, health-related factors and anthropometric measurements. Out of 395 children between the ages of 6–59 months (mean 38.4 ±17.7 months), 52% of children were malnourished; 22.1% stunted, 4.8% wasted, 6.3% underweight, and 35.4% overweight. The risk of stunting was higher in children who had been displaced >4 times (Adjusted Odds Ratio (AOR)=3.78, 95% CI: 1.25 – 11.38) compared to children living in a household that had been displaced 1-2 times. Children exclusively breastfed ≤ 6 months (AOR=3.3, 95% CI: 1.1–9.6), children who were not fully vaccinated (AOR: 2.3, 95% CI: 1.4 –3.8), and children not dewormed (AOR=2.9, 95% CI: 1.3–6.3) were all more likely to be malnourished than their counterparts (children exclusively breastfed >6 months; fully vaccinated; dewormed every 3 months). Caregivers' age was independently associated with childhood malnutrition even as children of caregivers between the ages of 35 – 55 years old (AOR=8.02; 95% CI=2.00 – 32.12) were more likely to be malnourished compared to children of older caregivers (>55 years). This effect was nonsignificant for children of caregivers less than 35 years old (AOR=2.92; 95% CI=0.78 – 10.92). Overall, empowering internally displaced households through vaccination and deworming campaigns, as well as nutritional and educational intervention programmes was recommended for the reduction of child malnutrition in internally displaced communities.	This study found that approximately half of the internally displaced children between 6-59 months living in the Bamenda Health District of Cameroon were malnourished. After further exploration, it was found that children whose mothers/caregivers were between 35 and 55 years of age, children who had not taken all their vaccines, children who were not dewormed every 3 months, and children who were breastfed exclusively for only ≤6 months were more likely to be malnourished. Implementation of child nutrition education programs as well as vaccination and deworming campaigns were recommended.	Akeh ML, Tendongfor N, Nchung AJ, et al. Magnitude and predictors of malnutrition among internally displaced persons' children 6 – 59 months in Bamenda Health District of Cameroon: A community-based cross-sectional study. <i>Nutrition and Health</i> . 2022;0(0). doi:10.1177/02601060221132134

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Newborn; cyclone; health assessment; neonatal mortality rate	13-Oct-22	Assessment of Health Status of Newborns Discharged From Sick Newborn Care Units of the Five Cyclone Fani Affected Districts of Odisha, India	Disaster Medicine and Public Health Preparedness	Original Research	This cross-sectional study assessed the health status of infants discharged from Sick Newborn Care Units (SNCUs) in 5 districts of Odisha, India that were affected by Cyclone Fani on May 3, 2019. The conditions in the aftermath of the cyclone exposed the discharged newborns to hazardous environmental conditions. Considering the newborns' vulnerability, it was decided that all infants discharged from the SNCUs should be followed up to understand their current health status and to find out the barriers to the utilization of health services. Data were collected Aug-Oct 2019 through telephonic interviews of the parents. Out of 1840 infants admitted between Jan-May 2019, the parents of only 48% (n=875) of infants could be contacted for interviews. 5.9% (52/875) had died by the time of the interviews. 689 (78.7%) were born full term, 177 (20.3%) preterm, and 9 (1%) post-term. The most common reasons for SNCU admission before the cyclone were neonatal jaundice (25.6%), birth asphyxia (24.2%), and refusal to feed (13.6%). Only 31.7% of infants received Kangaroo Mother Care in the period between discharge and interview and 14.1% of infants were not breastfed after discharge. Only 32% of the discharged infants were completely immunized; however, 88.9% were appropriately immunized by 14 weeks. 35.7% of the infants were underweight (z-score <-2SD) and 17.0% were severely underweight (z-score <-3SD). Health issues were reported among 111 (12.7%) infants at follow-up; acute respiratory infections (42%) were the most common, followed by diarrhea (13%). Parents of 10 infants did not seek health care for their ill infants, in part due to distance and time constraints. The authors recommend improving facility-based and home-based newborn care, creating awareness about newborn care among the community, strengthening health systems, and properly utilizing existing infrastructure.	This study assessed the health status of newborns discharged from Sick Newborn Care Units in Odisha, India who became more vulnerable after Cyclone Fani on May 2019. Out of 1840 infants, parents of only 875 (n) infants could be contacted for follow-up (Aug-Oct 2019). Authors reported poor breastfeeding, Kangaroo Mother Care, and immunization practices after discharge. 1 in 7 infants had 1 or more illnesses at the time of interviews and over half were either underweight or severely underweight. The authors suggest improving home-based and facility-based newborn care, strengthening health systems and creating awareness about newborn care among the community.	Bhatia V, Sahu DP, Singh AK, Patro BK, Sahoo DP, Kamble RU. Assessment of Health Status of Newborns Discharged From Sick Newborn Care Units of the Five Cyclone Fani Affected Districts of Odisha, India [published online ahead of print, 2022 Oct 13]. Disaster Med Public Health Prep. 2022;1-6. doi:10.1017/dmp.2022.169
Breastfeeding; disasters; humanitarian; infant nutrition; relactation; support; WHO	12-Oct-22	Interventions to support the re-establishment of breastfeeding and their application in humanitarian settings: A systematic review	Maternal & Child Nutrition	Systematic Review	For this systematic review, the authors identified 16 studies examining relactation interventions for non-breastfeeding mothers with infants <6 months. The review included studies published 1998-2020 in English and Spanish. It focused on factors and outcome measures outlined in the 1998 WHO recommendations for relactation support. In 13 of the 16 studies, over 80% of mothers restarted breastfeeding after receiving lactation support. Younger infant age, shorter lactation gap, greater personal motivation, and stronger family support were important indicators to relactation success. While most were observational studies conducted in MICs, only one focused on relactation in humanitarian settings where health services and access to nutritional support are most lacking and often disrupted; the authors suggest that this research gap should be prioritized. While the authors used the WHO recommendations to guide their review, they noted that only a few operational or contextual considerations are provided to achieve practical support for relactation. This requires intensive skilled support for mothers and their infants, which can be difficult both during emergencies and for populations with low baseline breastfeeding rates. The authors suggest that further, targeted research on the feasibility and effectiveness of this support in these situations is required to collect valuable data for appropriate, impactful humanitarian response. They offer a conceptual model to aid in the design of more rigorous, controlled studies on the effectiveness of different relactation approaches in varying contexts. This model puts evidence-based healthcare at its center and details the factors influencing design, implementation, and adoption of relactation interventions. It also incorporates the variables of context, time, and monitoring /evaluation follow up.	This review of the outcomes of relactation interventions for non-breastfeeding mothers of infants <6 months found lactation support to be key to successful relactation. Enabling factors included family support, motivation, younger age, and shorter lactation gap. While this is encouraging, the authors discovered a gap in the research during humanitarian crises, when health services and access to support are most challenging to supply. Therefore, more directed research is needed to examine the interventions' effectiveness, and the acceptability of relactation support in humanitarian settings.	Amat Camacho N, von Schreeb J, Della Corte F, Kolokotroni O. Interventions to support the re-establishment of breastfeeding and their application in humanitarian settings: A systematic review [published online ahead of print, 2022 Oct 12]. <i>Matern Child Nutr.</i> 2022;e13440. doi:10.1111/mcn.13440

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Nutritional status; infant and young child feeding; malnutrition; under five years children; Eastern Mediterranean Region	9-Oct-22	Breastfeeding Practices, Infant Formula Use, Complementary Feeding and Childhood Malnutrition: An Updated Overview of the Eastern Mediterranean Landscape	Nutrients	Review	This review examined the infant and young child feeding (IYCF) practices and malnutrition among under five years children in 22 Eastern Mediterranean Region (EMR) countries [of which various are affected by conflict or natural disasters]. The authors pooled data from national studies, WHO, UNICEF, and the Global Nutrition Report, which included 326,299 children aged 0-2 years for the analysis of the IYCF practices and 476,928 children aged 0-5 years for the analysis of malnutrition parameters. The regional average prevalence of feeding practices among children aged 0-2 years was as follows: ever-breastfed (84.3%), exclusive breastfeeding (EBF)(30.9%), mixed milk feeding (42.9%), continued breastfeeding (41.5%), bottle feeding (32.1%), the introduction of solid, semi-solid, or soft foods (69.3%). The estimated weighted regional averages among children aged 0-5 years for stunting, wasting, and underweight were 20.3%, 8.9%, and 13.1%, respectively. As for overweight and obesity among children aged 0-5 years, the average prevalence was reported to be 8.9% and 3%, respectively. The prevalence of feeding practices and malnutrition in each of the 22 countries was also reported in this review. The authors noted a decline in the EBF rate in Iran, Iraq, Libya, and Palestine. Of concern is the increasing prevalence of stunting in Libya. Lebanon, Pakistan, Saudi Arabia, and the United Arab Emirates were seen to introduce food early to the child, at between 4–6 months of age. Overall, the EMR regional average prevalence of EBF is lower than the global average (30.9% vs 44%). Regional prevalence of wasting and underweight are higher than the global averages (8.9% vs. 6.7%, 13.1% vs. 12.6%, resp.). This review found suboptimal IYCF patterns and a double burden of malnutrition in the EMR.	This review reported the prevalence of infant and young child feeding practices among children between 0-2 years and malnutrition among children 0-5 years in 22 Eastern Mediterranean Region countries. Overall, the authors found suboptimal infant and young child feeding practices, and a rising rate of undernutrition and obesity in the region. The authors urged prioritization of measures to improve children’s nutrition.	Ibrahim C, Bookari K, Sacre Y, Hanna-Wakim L, Hoteit M. Breastfeeding Practices, Infant Formula Use, Complementary Feeding and Childhood Malnutrition: An Updated Overview of the Eastern Mediterranean Landscape. <i>Nutrients</i> . 2022; 14(19):4201. https://doi.org/10.3390/nu14194201
COVID-19; coronavirus; breastfeeding; counselling; separation; skin-to-skin	6-Oct-22	Impact of the COVID-19 Pandemic on Breastfeeding Support Services and Women’s Experiences of Breastfeeding: A Review	International Journal of Women’s Health	Review	This systematic review sought to evaluate the impacts of the COVID-19 pandemic on breastfeeding support services (BSS) and breastfeeding rates and experiences. The review included studies published in English between Jan 2020 and May 2022 that addressed the pandemic’s impact on BSS of any kind (institutional or peer-to-peer). Most articles were from high-income countries, which authors identified as a key weakness of the study. The 15 included studies reported heterogenous findings on the impact of the pandemic on optimal breastfeeding practices, with studies finding both higher and lower rates of breastfeeding during the pandemic (compared to previously) in different contexts. BSS were impacted in multiple ways during the pandemic, including frequent separation from both infants and birth companions in neonatal units, lack of support for skin-to-skin contact, closure of baby clinics, inability to attend breastfeeding support groups, challenges of providing support while wearing PPE, and early hospital discharge. These developments as well as additional challenges faced by mothers related to stress and social isolation were found to be negatively associated with breastfeeding rates. Conversely, some studies found that visitor restrictions, greater partner support, and increased time with infants were positively associated with increased breastfeeding rates and better experiences for mothers. Mothers and BSS providers had mixed perspectives on online breastfeeding support. Though both groups noted that online services were more accessible, there were also concerns about effectiveness and quality of care. The authors of this study recommend avoiding separation of mother-infant dyads and continuing to provide high-quality in-person breastfeeding support where possible.	This review of studies published Jan 2020 – May 2022 found that the COVID-19 pandemic had diverse impacts on rates and experiences of breastfeeding. The pandemic negatively affected the provision of breastfeeding support services within and outside hospital settings. Virtual alternatives had mixed feedback from providers and patients. Study authors recommend that the practice of separation of mothers and infants should not be continued, and that high-quality in-person breastfeeding support is provided where possible.	Lubbe W, Niela-Vilén H, Thomson G, Botha E. Impact of the COVID-19 Pandemic on Breastfeeding Support Services and Women’s Experiences of Breastfeeding: A Review. <i>International Journal of Women’s Health</i> . 2022;14:1447-1457.

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Breastfeeding; infant feeding; resilience; vulnerability; disasters; spatial analysis; inequity	20-Sep-22	Breastfeeding, Community Vulnerability, Resilience, and Disasters: A Snapshot of the United States Gulf Coast	International Journal of Environmental Research and Public Health	Original Research	This retrospective, spatial data analysis study aimed to determine the effects of social vulnerability and community resilience on breastfeeding initiation in 3 Gulf Coast states (Louisiana, Mississippi, and Alabama) in the United States—all of which are disproportionately affected by natural hazard events. The study sample included 213 counties: 67 in Alabama, 82 in Mississippi, and 64 in Louisiana. To conduct the analysis, the authors used (1) a geographic database from the Environmental Systems Research Institute, (2) breastfeeding initiation rates for each county from the CDC, (3) county-level risk data from the Federal Emergency Management Administration (FEMA) National Risk Index for 18 hazard types, (4) a social vulnerability index [SOVI], and (5) a community resilience index [BRIC] to produce a final risk score for each county, representing a community's risk relative to all other counties in the United States. The study found that social vulnerability had a statistically significant (defined as $p < 0.05$) negative effect on breastfeeding initiation ($p < 0.001$) and community resilience had a statistically significant positive effect on breastfeeding initiation ($p = 0.004$). While many metropolitan areas benefitted from high breastfeeding initiation rates, they were also the most at risk for annual economic loss from disasters. Conversely, many rural communities faced less risk for extreme events but exhibited more social vulnerability and less resilience should a disaster strike. Education programs, additional Baby-Friendly hospitals, or community-based efforts to enhance the local breastfeeding support structure could help mitigate impacts of disasters, especially within communities with low levels of breastfeeding initiation yet moderate level of risk for disasters.	This study focused on the effects of social vulnerability and community resilience on breastfeeding initiation in 3 Gulf Coast states in the United States. The study found metropolitan areas are the most at risk for annual economic losses from disasters while rural communities experience more social vulnerability and less resilience if a disaster occurs. Programs to mitigate risks to breastfeeding initiation should a disaster occur include breastfeeding educational programs, addition of Baby-Friendly hospitals, and community-based support.	Grubestic TH, Durbin KM. Breastfeeding, Community Vulnerability, Resilience, and Disasters: A Snapshot of the United States Gulf Coast. <i>International Journal of Environmental Research and Public Health</i> . 2022; 19(19):11847. https://doi.org/10.3390/ijerph191911847
Qualitative methods; refugees; breastfeeding; Turkey	20-Sep-22	Syrian refugee women's breastfeeding behaviors and use of contraceptive methods: a qualitative study	Women & Health	Original Research	This study sought to understand whether experiences of migration and contraceptive method choice affected breastfeeding practices in Syrian refugee women in Turkey using qualitative research methods. 15 women between 15-49 years of age who had been discharged from a state hospital in Ankara after delivering a full-term, healthy infant between 2018-2019 were included in the study. Study authors analyzed recorded audio interviews and used content analysis techniques to identify and interpret relevant themes. Most women initiated breastfeeding either in the delivery room or in their own hospital rooms depending on delivery method. Respondents reported a range of traditional practices related to improving breastfeeding, including consumption of a butter-like food called semin arabi to improve milk production. Though most of the respondents indicated that they would wait until after the infant was 6 months to begin weaning with complementary foods, some of the respondents reported interest in beginning weaning earlier. Most women reported not using medical contraceptive methods, though all reported that they did not intend to have further children. Study authors concluded that knowledge and use of contraceptive methods and breastfeeding by Syrian women in Turkey were insufficient and recommended additional training to mothers in this demographic and supplementing existing services with translation services.	This study sought to understand whether experiences of migration and contraceptive method choice affected breastfeeding practices in Syrian refugee women in Turkey. The authors argue that the refugee women have insufficient knowledge and use of contraceptive methods and optimal breastfeeding. Further support is needed in this area to overcome barriers to optimal reproductive and nutrition outcomes.	Demirhan İ, Peksoy Kaya S, Sahin S, Kaplan S. Syrian refugee women's breastfeeding behaviors and use of contraceptive methods: a qualitative study. <i>Women & Health</i> . 2022:1-9.

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Climate change; hot weather; exclusive breastfeeding; Low and middle income countries	6-Sep-22	A systematic review of hot weather impacts on infant feeding practices in low- and middle-income countries	Frontiers in Pediatrics	Review	This systematic review examined how hot weather conditions due to climate change may impact infant feeding practices in LMICs. The authors investigated (1) the association between EBF and ambient temperature and/or humidity on infant hydration, and (2) how factors relating to the weather/season affect infant feeding practices. Hot weather was defined as air temperatures of ≥ 30 °C and high humidity was defined as $\geq 60\%$ relative humidity. Comprehensive searches of 4 medical sciences databases identified 18 studies published 1978-2012 for inclusion. The last search was conducted on July 11, 2020. All studies investigating hydration in EBF infants reported that even under hot conditions, EBF infants can maintain normal hydration levels without concentrating urine to maximal levels and concluded that supplementary water is not necessary. This conclusion aligns with WHO and UNICEF guidelines. Studies investigating how factors relating to the weather affect infant feeding practices reported a variety of findings: mothers supplemented breastfeeding due to the belief that their infants were dehydrated; healthcare workers and/or relatives advised water supplementation; and confounding variables existed for some associations between weather and infant feeding - i.e. levels of social support, participation in agricultural labor, and school holidays varied seasonally and impacted feeding practices. With increasing global average temperatures, the authors recommend prioritizing interventions that inform families and healthcare providers that EBF is recommended even in hot weather, and to discourage supplementing infants with water.	This review study concluded that even in hot conditions, EBF infants <6 months are able to maintain normal hydration levels without supplementary water intake. However, mothers reported supplementing breastfed infants with water due to the perception that their infants were dehydrated and healthcare workers and/or relatives were found to advise water supplementation in some LMICs. The authors recommend informing families and healthcare providers that EBF is recommended even in hot weather, and to discourage supplementing infants with water.	Edney JM, Kovats S, Filippi V, Nakstad B. A systematic review of hot weather impacts on infant feeding practices in low- and middle-income countries. <i>Front Pediatr</i> . 2022;10:930348. doi:10.3389/fped.2022.930348
Maternal and child health; breastfeeding; commercially-prepared formula; complimentary food; marketing	1-Sep-22	Effect of baby food marketing exposure on infant and young child feeding regimes in Bangkok, Thailand	International Breastfeeding Journal	Original Research	This study examined the links between exposure to baby food marketing and infant feeding practices in Bangkok, Thailand. The authors surveyed 330 mothers of infants and young children (<2 yrs of age) attending 33 health facilities throughout 25 of the 50 districts in Bangkok, Thailand. Data were collected between Mar-Aug 2020. Surveys of attitudes/opinions, marketing variables related to feeding decision influence (free samples, coupons, maternal groups hosted by breast milk substitute (BMS) companies), and key demographics (age, marital status, education, etc.) were collected and analyzed using univariate and multivariate regression. The study found that advice from others, particularly health professionals, is very important in leading mothers to have positive attitudes toward formula. Nearly 90% of the mothers received advice or at least one type of baby food marketing. While mothers were predominantly neutral toward advice and marketing from most sources, attitudes towards baby food companies tended to be more positive; 32.4% (12 of 37) had 'quite favourable' opinions of groups sponsored by baby food companies and 42.8% (6 of 14) had 'extremely favourable' opinions about events sponsored by baby food companies. Multivariate analyses showed single mothers were more likely to have positive opinions towards formula ($p=0.04$) than mothers who lived with their partners, but there were no significant differences in feeding behaviors. Mothers who were formally employed were 6x more likely to use formula than those who were unemployed ($aOR=6.37$; $p=0.01$), and those who experienced marketing at health facilities were over 4x more likely to use formula than those who did not ($aOR=4.44$; $p=0.03$). These findings indicate that marketing exposure strongly influences mothers' opinions and feeding decisions. The authors recommend that the Code and breastfeeding policies (the Act) in health facilities and employment be fully implemented and enforced.	The study found that marketing exposure of mothers is associated with favorable opinions to complimentary feeding and commercial baby food products. Marketing at health facilities and being in formal employment were most strongly related to a higher likelihood of mothers feeding formula. It suggests prioritizing an urgent need to address the problem of marketing in the environments well suited to promote breastfeeding and best feeding practices, such as health facilities, particularly through health professional education and training and through policy and implementation.	Cetthakrikul N, Kelly M, Baker P, Banwell C, Smith J. Effect of baby food marketing exposure on infant and young child feeding regimes in Bangkok, Thailand. <i>Int Breastfeed J</i> . 2022;17(1):64. Published 2022 Sep 1. doi:10.1186/s13006-022-00503-7

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Maternal and child health; breastfeeding; formula milk supplementation; LMIC; HIC; research ethics; IRB; international health	1-Sep-22	Questioning the ethics of international research on formula milk supplementation in low-income African countries	BMJ Global Health	Commentary	In this commentary, the author questioned the ethics of a currently ongoing randomized controlled trial (RCT) on Mother-Infant dyads in Uganda and Guinea-Bissau. The RCT aimed to compare the growth of low birth weight infants (birth weight 2000 – 2500 g) who were breastfed with additional formula for 30 days to those who were exclusively breastfed (EBF) for 6 months. In this study, infants in the intervention group were supplied with premixed liquid formula in individual bottles with teats within the first day of birth. No additional formula would be supplied to mothers in the intervention group after the 30-day study period. The authors outlined ways in which the trial violates basic ethical principles, human rights, and existing national nutrition guidelines in both countries. The design of the trial hinders the establishment of maternal breastmilk supply, reinforces the myth that formula milk is necessary, and that breast milk is inadequate for infant nutrition. The intervention is also not scalable locally. The author calls for LMIC institutional review boards, researchers, funding agencies and governments to carefully consider potential maleficence and exercise their responsibility to protect their citizens from unethical international health research.	This commentary critiques the ethics of a currently ongoing RCT investigating the effect of breastmilk supplementation in Uganda and Guinea-Bissau. Liquid formula was given to infants in the intervention group within the first day of birth. The author outlined ways in which the trial is not scalable, negatively impacts breastfeeding practice and violates ethical principles as well as local nutrition guidelines.	Doherty T, Engebretsen IMS, Tylleskär T, et al. Questioning the ethics of international research on formula milk supplementation in low-income African countries. <i>BMJ Glob Health</i> . 2022;7(5):e009181.
Refugee; migrant; child and family health; integrated care model; Australia	30-Aug-22	Study protocol for a real-world evaluation of an integrated child and family health hub for migrant and refugee women	British Medical Journal (BMJ) Open	Study Protocol	This article describes a study protocol aimed to examine the impact of an integrated model of health and social care for migrant and refugee women and their infants in Australia. This model, called First 2000 Days Care Connect (FDCC), provides standard child and family health checks, psychosocial support services from NGOs, and care navigators at the same physical location which reduces access barriers and facilitates continuity of care. Some examples of psychosocial support services from NGOs include playgroups, domestic violence support, mental health support, early childhood education, and family support. The study will evaluate the impact, implementation, and cost-effectiveness of FDCC. The study will take place in New South Wales, Australia and plans to recruit 240 women across 3 sites. As a non-randomized study, half of the qualified participants will be allocated to the intervention arm (FDCC Hub) and half to the control arm (standard care). Some anticipated outcome measures include attendance at child and family health nurse services and completion of routine child and family checks, child growth, and development surveillance among children up to 12 months of age, breastfeeding rates, ER visits, and maternal well-being. Implementation of the FDCC will also be evaluated to inform future programming. Lastly, cost-effectiveness of the FDCC will be assessed in comparison to standard care in Australia.	The authors describe a study protocol that will examine the impact, implementation process, and cost-effectiveness of an integrated model of health and social care for migrant and refugee women and their infants. This integrated model looks to reduce access barriers and increase engagement by integrating multiple services to one physical location and providing care navigators to assist participating women and their families.	Hodgins M, Ostojic K, Hu N, et al. Study protocol for a real-world evaluation of an integrated child and family health hub for migrant and refugee women. <i>BMJ Open</i> . 2022;12(8):e061002. doi:10.1136/bmjopen-2022-061002

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Breastfeeding; Lactation; Lockdowns; COVID-19; Newborns; Mothers	26-Aug-22	Impact of the COVID-19 pandemic on breastfeeding in Israel: a cross-sectional, observational survey	International Breastfeeding Journal	Original Research	<p>This cross-sectional study examined the effect of the COVID-19 pandemic on breastfeeding patterns among Israeli mothers of infants up to 6.5 months. Data were collected anonymously using an online survey through Facebook between 27 Apr-11 May 2020. A total of 580 women participated in the study. 81.5% were married, and 65% were multiparous and on maternity leave, with a mean age of 32.5 years. The authors found that 78% of women did not change their breastfeeding behavior. Among the 22% of women who changed their breastfeeding plans due to COVID-19, 15% extended their breastfeeding period while 7% shortened it. The study highlighted 4 main reasons for extended breastfeeding periods: belief that breastfeeding relaxes the mother (33%), protects against infection (70%), availability of the mother (66%), and economic reasons (14%). Those who shortened their breastfeeding period cited a lack of time due to other children at home (65%), lack of breastfeeding counseling (7%), stress and fear (34%), and mood changes (27%). Out of 51 participants exposed to or infected with SARS-CoV-2, <1% reported separation from their infant. The study found no correlation between rooming-in and the length of breastfeeding ($p=0.687$). Most women reported support from partners, mothers/mothers-in-law, and friends. Women also reported receiving lactation counseling support during their hospital stay (67.8%) or after discharge (45.0%), with only 37.2% receiving lactation counseling both at the hospital and after discharge. Women who returned to work later (vs. as expected) were 2.38 (95% CI 1.46,3.87) times more likely to breastfeed longer than expected. Most women believed that longer maternity leave (96%), options to work from home (86.0%), lactation counseling at home (93.5%) and/or in the hospital (92%), and watching breastfeeding videos (81.0%) encouraged breastfeeding. For most women, the COVID-19 pandemic did not affect breastfeeding duration. Among the few women whose breastfeeding plans changed, the majority prolonged their breastfeeding period, while a small minority shortened it. The authors recommend that future emergencies consider the findings of this study, especially challenges associated with breastfeeding.</p>	The authors described the effect of the COVID-19 pandemic on breastfeeding patterns in Israel. The authors found that majority of women did not change their breastfeeding behavior. Of the few that changed, most of them extended their breastfeeding period. Results also showed that some women experienced difficulties with breastfeeding during the nationwide lockdown. In light of these findings, the authors call for future emergency planning to consider challenges in maintaining breastfeeding during emergencies.	Magnazi MB, Sartena G, Goldberg M, et al. Impact of the COVID-19 pandemic on breastfeeding in Israel: a cross-sectional, observational survey. Int Breastfeed J. 2022;17(1):61. Published 2022 Aug 26. doi:10.1186/s13006-022-00505-5

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Birth outcomes; childbearing women; infant feeding; wildfire disasters	18-Aug-22	Birth Outcomes, Health, and Health Care Needs of Childbearing Women following Wildfire Disasters: An Integrative, State-of-the-Science Review	Environmental Health Perspectives	Review	This review examined the effect of wildfire exposure on birth, health outcomes, and health care needs of childbearing women—i.e., women who are pregnant, soon to be pregnant, or have recently given birth—and their infants. A wildfire is defined as an unplanned, uncontrolled fire in areas of vegetation. Comprehensive searches of SCOPUS (including MEDLINE and Embase), CINAHL, PubMed, and Google Scholar identified 16 studies for inclusion. Prior to inclusion, studies were independently appraised by two reviewers using the Crowe Critical Appraisal Tool (CCAT). The CCAT is used to compare and appraise evidence quality in a standardized way across a range of research designs, including quantitative and qualitative studies. The 16 included studies were 13 quantitative studies (10 retrospective cohort studies, 1 case–control, 1 time-stratified case–crossover, 1 longitudinal), 2 mixed methods studies, and 1 qualitative study. This review found that exposure to wildfire disaster may result in differences in birth weight and length of gestation, with the weight of evidence toward lower birthweight (controlled for gestational age) and birth at earlier gestational age associated with wildfire exposure. Only 1 study focused on infant feeding and found that during and after the evacuation breastfeeding rates declined, and substitute feeding increased. Many women perceived their breastmilk supply was adversely affected by exposure to the wildfires and the uncertainty of evacuation. Breastfeeding women reported that there was no access to lactation support and a lack of safe and private places in which to feed their infant or use a breast pump, and some reported pressure from family members to wean their infant or introduce solids. However, many women reported that breastfeeding was a source of comfort and support and assisted to soothe their infants during the evacuation. Public health interventions that promote social connectedness, foster personal resilience, and include prompt referral to supportive health care, including midwifery-led continuity of care and mental health programs, should be developed in areas prone to wildfire disasters and implemented following wildfire disaster exposure.	This review study focused on childbearing women within 4 countries found that wildfire exposure was associated with adverse health outcomes, such as low birthweight, earlier gestational age, and reduction of breastfeeding during and after evacuation. To better support childbearing women exposed to wildfire disasters, public health interventions that support access to maternity and child health services, reproductive and family planning services, and mental health support following wildfire disasters are crucial.	Evans J, Bansal A, Schoenaker DAJM, et al. Birth Outcomes, Health, and Health Care Needs of Childbearing Women following Wildfire Disasters: An Integrative, State-of-the-Science Review. Environ Health Perspect. 2022;130(8):860-01. doi:10.1289/EHP.10544

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Maternal and child health; pregnancy; COVID-19; post-COVID recovery; lactation; breastfeeding; immune system; passive immunity; protective factors; breast milk	11-Aug-22	Antibodies in the breastmilk of COVID-19 recovered women	BMC Pregnancy Childbirth	Original Research	The authors sought to answer questions about passive immunity and breast milk antibodies protecting newborns / infants from COVID-19. During the third pandemic wave (15 Feb–1 May 2021), the study investigated 72 non-vaccinated lactating mothers in Wroclaw, Poland, with a history of COVID-19 (54 in various stages of post-COVID recovery, 18 with active COVID-19) and used 17 non-vaccinated lactating mothers with no history of COVID-19 as a control group. The overall health of both mothers and infants was recorded, including pre-existing conditions, pregnancy related pathologies, and APGAR scores. All subjects were discharged for home recovery, with 1 mother admitted to ICU with COVID-19 related pneumonia prior to discharge and 2 newborns testing positive for SARS-CoV-2 at birth. To test the protective factors of potential passive immunity, the concentration levels of SARS-CoV-2 IgG and IgA in human milk and serum were studied using enzyme-linked immunosorbent assay of blood serum and milk from the mothers. Of the 72 newborns in the study group, 41 (56.9%) were exclusively breastfed and 31 (43.1%) received supplemental feeding with either formula or donor milk from the human milk bank. All mothers expressed milk with a clean, electric breast pump into sterile, plastic containers after feeding their infants. Concentrations of IgA and IgG antibodies in the breast milk were higher in the study group vs the control group ($p < 0.001$ for both), with high levels of antibodies in milk correlating to high levels of antibodies in serum ($p < 0.001$). No relation was observed between these levels and the trimester of pregnancy in which the women tested positive for SARS-CoV-2. Further, the study found that antibodies were present and persisting up to 8 months post-infection, providing protection to breastfed newborns and infants from contracting the SARS-CoV-2 virus. This protection may relate to lessened severity of infection as well as an increase in viral immunity. Additional study was suggested to verify this immunity.	The study focused on the protective capabilities of breast milk from post-infection COVID-19 mothers. It found that antibodies were present and persisting up to 8 months post-infection, providing protection to breastfed newborns and infants from contracting the SARS-CoV-2 virus. This supports the findings in previous studies. The presence of antibodies may be related to viral immunity to SARS-CoV-2, which can be passed on to breastfeeding infants and serve as a protection against COVID-19 and/or severity of the disease.	Szczygiół P, Łukianowski B, Kościelska-Kasprzak K, et al. Antibodies in the breastmilk of COVID-19 recovered women. BMC Pregnancy Childbirth. 2022;22(1):635. Published 2022 Aug 11. doi:10.1186/s12884-022-04945-z
Child health; Health policy; Health systems; Maternal health; Public Health; Commercial Milk Formula; CMF; Breastfeeding; Conflicts of Interest; COI; Croatia	4-Aug-22	Babies before business: protecting the integrity of health professionals from institutional conflict of interest	British Medical Journal (BMJ) Global Health	Commentary	The authors discuss the conflicts of interest (COI) that prevail between the commercial milk formula (CMF) industry's duty to maximise their profit and the health system's duty to protect health and to support breastfeeding. To protect infants, young children, health workers, health systems and academic institutions from this harmful marketing that creates COI, the International Code of Marketing of Breast-milk Substitutes (the Code), World Health Assembly (WHA) resolutions guidelines, and the Baby Friendly Hospital Initiative have been implemented. A recent review documenting evidence of Code violations from 1981 to August 2021 states that 28 out of 153 studies documented practices involving COI. These 28 studies reported COI most frequently in hospitals and in non-hospital health facilities, and then in medical schools or universities. The products marketed included infant formula, 'follow-on' and 'growing up' milks and complementary foods, as well as bottles, teats and pacifiers or marketing using a brand name. Thematic analysis of the 28 studies identified 6 major themes on types of COI involving CMF companies: financial or material support, funding research, sponsorship of professional events, advertising in journals, sponsorship of breastfeeding activities and partnerships with governments. A recent example from 2022 is the sponsorship of the British Journal of Midwifery conference by two major CMF companies. Another example involved funding infant nutrition research by another CMF manufacturer. The authors highlight the obligation to protect the health system from the marketing of CMF by urging governments to adopt all COI safeguards in the Code and WHA resolutions and calling on associations	Marketing has a positive effect on the commercial milk formula (CMF) industry's sales but causes a reduction in breastfeeding. A recent review documented marketing practices by the CMF companies under 6 major themes: financial or material support, funding research, sponsorship of professional events, advertising in journals, sponsorship of breastfeeding activities and partnerships with governments. These approaches create conflicts for the health system and health workers towards their duty to promote breastfeeding. The authors urge the governments to adopt all the conflicts of	Becker GE, Ching C, Nguyen TT, Cashin J, Zambrano P, Mathisen R. Babies before business: protecting the integrity of health professionals from institutional conflict of interest. BMJ Glob Health. 2022;7(8):e009640. doi:10.1136/bmjgh-2022-009640

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					of health professionals and education bodies, to formally reject all forms of industry support.	interest safeguarded in The Code.	
Breastfeeding; Europe; Global Strategy; infant and young child feeding; monitoring; policies; World Breastfeeding Trends initiative	21-Jul-22	Infant feeding policies and monitoring systems: A qualitative study of European Countries	Maternal & Child Nutrition	Original Research	This qualitative study describes the development and implementation of national IYCF policies and monitoring systems in Europe. Qualitative methods were used to analyze open text responses from participants in 6 European countries (Croatia, Germany, Lithuania, Spain, Turkey, and Ukraine). Countries were selected based on their World Breastfeeding Trends Initiative scores on national policy and monitoring systems. The 33-item online questionnaire was distributed to country representatives and completed by country teams. The analysis was focused on identifying enablers and obstacles to implementation of IYCF policies and monitoring systems. Key enablers and strengths included strong and continuous government commitment to IYCF, an operational national breastfeeding authority, a national and active monitoring and evaluation system, implementation of the International Code of Marketing of Breastmilk Substitutes in national legislation, integration of skilled breastfeeding supporters, implementation of the Baby-Friendly Hospital Initiative, and positive cultural norms and traditions supporting optimal IYCF. In some countries, UNICEF played a key role in funding and designing policies and monitoring systems. Government commitment, funding, and protection of optimal IYCF are essential to the implementation of strong national policies and monitoring systems. Gaps in the national legislation of the International Code were a major obstacle for the development and implementation of IYCF policies and programs in all of the study's participating countries. Therefore, the authors urge EU countries to update EU regulations including all the provisions of the International Code and subsequent relevant solutions and prevent and control conflicts of interest that threaten policy setting and program implementation regarding health professional education.	This qualitative study among 6 European countries found that strong government commitment and actions are essential to implementation of strong national IYCF policies and monitoring. Effective policy making, policy implementation, and investment in legislation protecting breastfeeding are needed.	Gray H, Zakarija-Grković I, Cattaneo A, et al. Infant feeding policies and monitoring systems: A qualitative study of European countries. Maternal & Child Nutrition. July 2022;1-12. doi:10.1111/mcn.13425

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Climate change; neonatal health; Africa region; extreme heat	18-Jul-22	How Climate Change May Threaten Progress in Neonatal Health in the African Region	Neonatology	Discussion article	This article discussed potential detrimental impacts of climate change on neonatal health through heat stress, climate-sensitive infections, health service delivery, and nutrition and breastfeeding. For nutrition specifically, the article highlighted potential adverse effects through greater household food insecurity, changes in breastfeeding practices, and reduced water quality/quantity. The authors suggested that infants may not feed often or for extended periods of time during periods of high heat. Additionally, there is evidence that different temperatures (39 vs. 41 degrees Celsius) and length of exposure can lead to either increased or reduced lactation capacity due to changes in signaling pathways and quantity of milk-producing cells. The authors proposed that dehydration may be one of the main impacts of heat on neonatal infants as uncompensated loss of body fluid is a risk factor for heat illness, though there is presently no evidence a) for the association between temperature and neonatal admissions for hyperthermia/dehydration and b) to support supplementation with water for exclusively breastfed infants. Additionally, extreme heat may impact general water quality and quantity, which in turn can pose risks to maternal and neonatal health. Potential interventions to mitigate against these impacts include cooling spaces for infants, support for breastfeeding, and informing mothers, caregivers and healthcare workers on the risks, identification and management of dehydration and heat illness. Extreme heat may also impact neonatal health through detrimental impacts on health service delivery, heat stress in infants, and increasing rates of infections associated with higher temperatures. Evidence suggests that high temperatures are associated with poor birth outcomes (pre-term birth, low birthweight and stillbirth). The authors called for further research investigating mechanisms by which extreme heat may affect neonatal health and identification of cost-effective interventions.	This paper discusses how extreme heat may impact neonatal health through a range of pathways, including heat stress, food insecurity, insufficient breastmilk intake, and reduced water quality/quantity. Reduced fluid intake by infants from reduced breastmilk intake can lead to heat illness. Further research on the potential impacts of heat on neonatal health is needed.	Nakstad B, Filippi V, Lusambili A, et al. How Climate Change May Threaten Progress in Neonatal Health in the African Region. Neonatology. doi:10.1159/000525573

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Newborn health	1-Jul-22	A systematic review of newborn health interventions in humanitarian settings	BMJ Global Health	Systematic Review	This systematic review aimed to assess the evidence for current newborn health interventions in humanitarian settings, with a focus on their effect on health outcomes and strategies to increase their utilization. The review searched for peer-reviewed and grey literature published in four languages (English, French, Spanish and Portuguese) between 1 Jan 1990 and 15 Nov 2021. The population of interest was newborns (0-28 days after birth) born in humanitarian settings. Any intervention that was aimed at improving newborn health as defined by the Minimum Initial Service Package (also known as the MISP) and the “Newborn Health in Humanitarian Settings: Field Guide” were accepted. The interventions relevant to IYCF were feeding support, which included skin-to-skin contact, support for exclusive and immediate breastfeeding and not discarding colostrum. The studies included in the review (n=35) found that the level of provision of feeding support between and within study sites varied significantly. Included studies found a significant impact of training CHWs, TBAs, and other community-based providers on newborn feeding practices. One study reported increased early breastfeeding initiation rates following a cash program with nutritional messaging. The most frequently studied strategies to increase utilization of newborn health interventions were training facility-based healthcare providers and community health workers, providing financial incentives, and providing supplies and equipment. All these were found to have an impact on the utilization of newborn health interventions, but lack of a clear control group or pre- and post-test comparisons were identified as methodological limitations. Study authors noted that the review was limited by widespread heterogeneity between studies on study location, on list of newborn care interventions considered essential in each case, and on the stakeholder providing these services (NGOs, local governments, etc.). In general, study authors noted that they found limited quality and quantity of relevant studies and called for more research on the provision and efficacy of newborn health interventions in humanitarian contexts.	This systematic review aimed to assess the evidence around current newborn health interventions in humanitarian settings. Included studies found varying levels of feeding support provided as part of an essential newborn care health package. In addition, training of community-based providers on feeding support was found by some studies to improve feeding practices. Study authors recommend more research in the field of newborn health in humanitarian settings.	Rodo M, Duclos D, DeJong J, Akik C, Singh NS. A systematic review of newborn health interventions in humanitarian settings. BMJ Glob Health. 2022;7(7):e009082. doi:10.1136/bmjgh-2022-009082

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Antenatal treatment; breast feeding; Borno State; hygiene; post-natal treatment; pregnant women; vaccination	30-Jun-22	Conduct of Integrated Health Services in Real Hard-to-Reach/Under-Served Communities to Address Maternal/Child Health Problems, 2016–2018 in Borno State Nigeria	Texila International Journal of Public Health	Original Research	This study describes the operational management and outcomes of an integrated maternal and child health services program serving (1) hard-to-reach communities and (2) underserved in Borno State, Nigeria, from 2014-2018. A community was considered hard-to-reach if it was difficult to access due to poor roads, difficult terrain, scattered households, nomadic populations, or without a clinic <10 km away and underserved if it was a newly liberated and/or internally displaced community. As part of the WHO Global Vaccine Action Plan, vaccination programs were implemented 2014-2015 across 17 Local Government Areas (LGAs). House-to-house outbreak response data were then used to expand their outreach to identify 1,712 communities across 25 Local Government Areas for WASH services and mobile prevention and treatment programs implemented from 2016-2018. Data related to immunization, antenatal/post-natal health, treatment of minor ailments, nutritional screening, vitamin A supplements, deworming, HIV testing counseling and referrals, and gender-based violence were reported by certified trained health workers. GIS (geographic information systems) and the Open Data Kit mobile application were used for real-time data collection and geo-location reporting by trained health workers and analyzed monthly. Community engagement with local and traditional leaders was vital to planning, outreach, and community mobilization. The authors reference a hard-to-reach training package developed 2014-2015 for all involved health personnel, including community mobilizers. According to study results, nutritional status screenings showed improvement: 98% of screenings [population not specified; total n=542,408] were “green” in 2018 [indicating adequate nutrition according to mid-upper arm circumference] compared with 78% and 79% “green” in 2016 for males and females respectively (total n=71,214) [individual counts for infants <1 yr, children <5 years, pregnant women, and women of childbearing age not available]. Concerning IYCF, 88,421 pregnant mothers received educational information on exclusive breastfeeding and complementary feeding [outcomes on IYCF education vs. adoption of IYCF practices not clearly reported; see Figure 5]. The authors of this study concluded that using mobile teams to conduct an integrated health service approach can effectively improve the health status of children, women of childbearing age, and pregnant mothers in hard-to-reach and underserved communities.	This study describes the operational management and outcomes of an integrated maternal and child health services program serving hard-to-reach and underserved (i.e., newly-liberated and/or internally displaced) communities across Borno State, Nigeria (2014-2018). The authors describe the planning, implementation, and monitoring activities necessary for identifying and engaging hard-to-reach communities and overcoming logistical challenges related to implementation. The authors report outcomes in 2018 (including nutritional screenings, vitamin A supplementation, deworming, and IYCF education) compared to baseline assessments from 2016. They reference a hard-to-reach training package and encourage its adaptation for similar maternal and child health interventions focused on hard-to-reach and underserved communities.	Ngoshe IM. Conduct of integrated health services in real hard-to-reach/underserved communities to address maternal/child health problems, 2016–2018 in borno state nigeria. <i>TEXILA INTERNATIONAL JOURNAL OF PUBLIC HEALTH</i> . 2022;10(2):62-73. doi: 10.21522/TIJPH.2013.10.02.Art006.

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Breastfeeding; Indonesia; COVID-19; pandemic; maternal affection; community; coping;	28-Jun-22	<u>Breastfeeding Experience During COVID-19 Pandemic in Indonesia: Strengthening and Weakening Elements</u>	The Malaysian Journal of Medical Sciences	Original Research	This exploratory qualitative study investigated the encouraging factors and barriers for lactating mothers in Indonesia to breastfeed during the COVID-19 pandemic. Breastfeeding is not only a great source of infant nutrition, but a protective source as well: a formidable IgA SARS-CoV-2 immune response is found in the breastmilk of 80% of previously infected lactating mothers. Even so, Indonesia reports that only 54.3% of children <6 months are exclusively breastfed, 25% lower than the national target. Researchers recruited 9 postpartum and lactating mothers from Yogyakarta Special Region Province, Indonesia who were impacted by the COVID-19 pandemic and were not breastfeeding at the time of data collection. Nine 45-60 minute in-person interviews were conducted in Nov- Dec 2020. Participants were asked about their breastfeeding experience during the pandemic. Data was sorted through 6 stages of thematic analysis: i) data introduction; ii) initial codes generation; iii) theme search; iv) theme study; v) theme definition and naming, and vi) reporting. Then, analytic themes were discussed and further developed by the primary researchers. Breastfeeding supporting elements identified include maternal affection, support system from family and community, and having adaptive coping strategies. Breastfeeding barriers include impaired comfort, insufficient milk supply, financial problems, parenting problems, and an indifferent husband. The authors recommend that fathers actively support and instill confidence in the mothers; professional guidance is made readily available after birth to help with proper attachment and positioning of the infant; and mothers are made comfortable to optimize effective milk drainage. Despite the weakening elements, participants continued to breastfeed during the pandemic.	A 2020 study conducted in Yogyakarta Special Region Province, Indonesia interviewed 9 postpartum and lactating mothers about their breastfeeding experience during the COVID-19 pandemic. From these interviews, breastfeeding barriers and supporting factors were identified. Breastfeeding supporting elements identified include maternal affection, support system from family and community, and having adaptive coping strategies. Breastfeeding barriers include impaired comfort, insufficient milk supply, financial problems, parenting problems, and an indifferent husband.	Okinarum GY, Rochdiat W. Breastfeeding Experience During COVID-19 Pandemic in Indonesia: Strengthening and Weakening Elements. Malays J Med Sci. 2022;29(3):110-121. doi:10.21315/mjms2022.29.3.11

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
Breastfeeding; Italy Earthquake; Social Support; Breast Milk Substitutes; Displacement; Infant Feeding;	15-Jun-22	Breastfeeding and humanitarian emergencies: the experiences of pregnant and lactating women during the earthquake in Abruzzo, Italy	International Breastfeeding Journal	Original Research	In this qualitative descriptive study, pregnant and lactating women surviving the April 6th, 2009, L'Aquila earthquake were interviewed regarding their experiences with pregnancy, childbirth, and infant formula or complementary feeding during and after the emergency. The earthquake displaced 66,000 people, damaged over 100,000 buildings, and caused 1600 casualties and 309 deaths. It has been recommended that during such humanitarian emergencies, breastfeeding should be prioritized along with other optimal IYCF practices. Following the earthquake, the Alimentazione Infantile Nelle Emergenze – Infant Feeding in Emergencies working group interviewed pregnant women who were affected by the earthquake. The semi-structured interviews consisted of questions relating to pregnancy, childbirth, breastfeeding, breast milk substitutions, essential needs, customary life, and health care provision. Socio-demographic information was also obtained on supplementary forms. The authors re-analyzed the interviews and realized the following concerns: displacement and insecure housing, inadequate emergency housing, psychological distress, a need for increased social support, improper formula prescription and distribution as well as early disruption of breastfeeding. Essential needs and care were categorized into the following themes: “Essential needs, basic services and security,” “Community, partner and family support,” “Mother-Infant focused, non-specialized support,” and “Specialized Maternal and Infant health care.” The results suggest that if adequate breastfeeding practices are maintained in standard settings, then they will also be maintained under emergency circumstances. The authors recommend the following: (1) promotion of social support and family networks (2) creation of peer groups consisting of affected mothers and their children (3) identification of people who require more focused psychosocial interventions (4) prescription of infant formula only under limited conditions (5) increased management of infant foods and feeding equipment donations (6) Installing disaster planning, policies and procedures that provide sensitization, communication, and training.	This study focuses on the needs of mothers and their children during and after the 2009 L'Aquila earthquake. Secondary analysis of semi-structured interviews conducted during and after the emergency revealed that improved infant formula management, formidable community support, and emergency preparedness specific to IYCF should be prioritized for the protection of maternal and infant health. If proper planning and evidence-based feeding practices are carried out under non-emergent conditions, then such practices are more likely to be implemented during humanitarian crises.	Giusti A, Marchetti F, Zambri F, Pro E, Brillo E, & Colaceci S (2022, June 15). Breastfeeding and humanitarian emergencies: The experiences of pregnant and lactating women during the earthquake in Abruzzo, Italy - International Breastfeeding Journal. BioMed Central. doi.org/10.1186/s13006-022-00483-8
Natural disasters; nutrition; infants; children; feeding; complementary food fulfillment; complementary food; local wisdom; local knowledge; food safety; mutual cooperation; breastfeeding; responsive eating; Indonesia	31-May-22	Local Wisdom Enriching Complementary Feeding Practices during Disaster Situations in Indonesia	National Public Health Journal	Original Research	This case study analyzed complementary food fulfillment (CFF) for infants and children during natural disasters. It was conducted from Oct 2020 to July 2021 at landslide evacuation sites in the Sumedang District of Indonesia. Data was collected using observations, focus group discussions, and in-depth interviews with 17 participants (NGO workers, volunteers, caregivers of children, and health workers). The results showed that 5 CFF themes for best practice awareness in delivery and nutrition of CFF emerged: 1) local wisdom-based home-cooked complementary foods from the local community can maintain adequate and safe nutrition for infants and children 2) domination or overuse of manufactured foods (instant sweet porridge, formula milk, juice, etc.) leads to inadequate CFF, 3) limited resources hinder the management of complementary feeding programs, 4) good sanitation and food safety management must be maintained, from an organizational level to personal household level, and 5) CFF should include consistent support for breastfeeding and responsive feeding. The authors found that the involvement of the local communities with their knowledge of specialty/comfort foods specific to the region played a significant role in the success of complementary feeding programs initiated by NGOs. Although local foods were preferable to manufactured complementary foods, they did not meet the requirements for the minimum dietary diversity or lacked the variable textures. The results suggested that adequate and safe nutrition can be maintained during a disaster with mutual cooperation that targets home-based complementary foods	This case study conducted in landslide evacuation sites in the Sumedang District, Indonesia found that the involvement of the local communities played a significant role in the success of complementary feeding programs initiated by NGOs. The study found that adequate and safe nutrition can be maintained post-disaster via the donation of home-cooked complementary foods based on local wisdom from the local community. Reliance on manufactured foods and limited resources to manage complementary feeding programs, however, can both	Astuti A, Hayati H, Waluyanti FT, Wanda D. Local wisdom enriching complementary feeding practices during disaster situations in Indonesia. Kesmas: Jurnal Kesehatan Masyarakat Nasional (National Public Health Journal). 2022;17(2). https://journal.fkm.ui.ac.id/kesmas/article/view/5452.

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
					based on local wisdom. However, health workers must guide and supervise this process to avoid adverse outcomes and to encourage both responsive feeding and appropriate food distribution amongst the children. It is noted that children aged 6-12 months were not represented in the study; the authors suggest that further study to assess complementary feeding with local wisdom for this age group.	lead to inadequate complementary feeding practices and adverse health outcomes for children.	doi:10.21109/kesmas.v17i2.5452
Maternal stress; social support; infant feeding; hurricane; disaster; evacuation	26-May-22	Maternal stress and social support during Hurricane Florence Access to abstract only	Health Care for Women International	Original Research	This cross-sectional mixed-methods prospective study examined maternal stress during Hurricane Florence in the United States in September 2019. Participants included women who were (a) evacuated from Virginia, North Carolina, or South Carolina and (b) pregnant and/or had children under two years. This survey was a 54-item survey that included questions on resources, infant and child feeding, social support, and parenting. The survey included quantitative Likert scale data and open-ended qualitative data. A total of 112 participants completed the survey aged 17 to 62 years (mean=33.37 years, SD=8.56). Results showed that higher social support was associated with lower stress, and decreased access to resources was associated with increased stress. Evacuation status and pregnancy status were not significant predictors of stress. Results from the open-ended-component of the survey identified 5 themes: concerns about infant feeding, evacuation logistics, general stress, family roles, and 'other' issues. The responses coded as infant feeding included the loss of routine or loss of frozen breast milk because of the interruptions from the storm, worry about ability to maintain breastfeeding, and separation from the infant resulting in the need to pump milk. One participant associated infant feeding with positive emotions and as a source of potential coping during the hurricane. The study concluded by recommending the need for (1) long-term recovery resources and support for families impacted by disaster, (2) protocols providing support services for caregivers, infants, and children, (3) health specialists for pregnant and postpartum families in emergency shelters, and (4) disaster and pandemic recovery program design that centers access to resources for families.	This prospective study after a major hurricane in the USA found that higher social support was associated with lower stress and decreased access to resources was associated with increased maternal stress. Evacuation status and pregnancy status were not significant predictors of stress. Mothers reported many concerns about infant feeding. The authors suggest the need for make specific recommendations for centering impacted families' access to resources in disaster and pandemic recovery program design.	DeYoung SE, Jackson V, Callands TA. Maternal stress and social support during Hurricane Florence [published online ahead of print, 2022 May 26]. Health Care Women Int. 2022;1-18. doi:10.1080/07399332.2022.2046750
Pakistan; South Punjab; barriers; breastfeeding; feeding practices	19-May-22	Determinants of Infant Young Child Feeding Among Mothers of Malnourished Children in South Punjab, Pakistan: A Qualitative Study	Frontiers in Public Health	Original Research	This study aimed to identify breastfeeding barriers through open-ended semi-structured interviews with 20 lactating mothers of severely malnourished children in South Punjab, Pakistan (Feb-May 2017). District Rajanpur was selected because of its high prevalence of maternal-child malnutrition compared with nearby districts. Mothers' ages ranged from 16 to 40 years [child ages not reported]. Interviews revealed that breastfeeding was often delayed due to birthing difficulties, prelacteal feeding traditions, and advice from elder women and midwives to discard colostrum prior to breastfeeding. Local customs around giving solid foods to young infants (as early as 2 months of age) and a lack of support and guidance for new mothers in healthcare settings were also discussed as barriers to exclusive breastfeeding. The frequency and duration of breastfeeding were influenced by low income, high work burden, gender of the infant (males were breastfed longer), and the use of breastmilk substitutes by other caregivers while the mother is at work. Other barriers included maternal stress, repeated pregnancies, maternal diet and illness, perceptions of low quantity/quality of breastmilk, and supernatural beliefs that breastfeeding can be harmful to the infant under certain circumstances. In light of these findings, the authors advise against relying on behavior change strategies alone without addressing the social determinants of breastfeeding in resource-poor settings. While the authors recommend working to fill vacancies for lady health workers (LHWs) in remote and rural areas, they also note that LHWs often face barriers meeting or speaking with	Researchers conducted interviews with 20 lactating mothers of severely malnourished children in South Punjab, Pakistan (Feb-May 2017) to identify barriers to breastfeeding. Mothers identified multiple cultural, religious, and economic factors influencing the early initiation, frequency, and duration of breastfeeding. Barriers are reinforced by lack of counseling related to IYCF in healthcare settings and the increasing use of breastmilk substitutes. The authors call for more clear ownership of IYCF policy, multi-sectoral collaboration, and investment	Ahmed F, Malik NI, Shahzad M, et al. Determinants of Infant Young Child Feeding Among Mothers of Malnourished Children in South Punjab, Pakistan: A Qualitative Study. Front Public Health. 2022;10:834089. Published 2022 May 19. doi:10.3389/fpubh.2022.834089

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					women of the household due to distrust and cultural disapproval. The authors call for more clear ownership of IYCF policy in Pakistan and multi-sectoral collaboration across the areas of health services, education, population health, and women's health. Long-term investment is needed for IYCF programming to be sustainable beyond solely UNICEF and WHO support.	in sustainable IYCF programming in Pakistan.	
Breastfeeding; complementary feeding; fragile setting; infant feeding; Lebanon; Syria; Host communities; Refugees	14-May-22	Breastfeeding and complementary feeding in fragile settings: the case of Syrian refugees and their host communities in North Lebanon	International Breastfeeding Journal	Original Research	This study is a cross-sectional survey conducted in Akkar, Lebanon in Apr-Nov 2019 to examine breastfeeding and complementary feeding practices among Syrian refugees and their Lebanese host communities. Information about breastfeeding and complementary feeding practices, 24-h infant dietary recalls, and socio-demographic characteristics for 189 Syrian refugees and 182 Lebanese host community households were collected and analyzed. Among the whole study population (n=371), the majority of children (90%) were ever-breastfed, only 64.8% initiated breastfeeding early (within 1 hour of birth). 49.6% and 36% of children were exclusively breastfed (EBF) at 4 and 6 months, respectively. 1 in 4 children was introduced to solid food <6 months of age, and only 29.5% was given iron-fortified baby cereals as the first complementary foods. Syrian refugees had significantly higher rates of EBF (4 months: 64.2% Syrian vs 34.5% Lebanese; 6 months: 50.8% Syrian vs 20.7% Lebanese). Significantly more mothers from Lebanese host communities introduced solid or semi-solid foods to their child <6 months compared with Syrian refugee mothers. In terms of dietary quality, only 17.9% of Syrian refugees' children met minimum dietary diversity compared to 30.9% of Lebanese host community children (p<0.05). Among refugees, children were more likely to be exclusively breastfed at 4 months if their father had a higher education level and was employed. A husband's employment provided stable income for the entire family and supported the mother to breastfeed without putting additional pressure on her to find work. As for Lebanese households, female children were less likely to be exclusively breastfed at 4 and 6 months, while children delivered vaginally were more likely to be exclusively breastfed at 6 months. The authors highlighted the need to 1) adjust current breastfeeding education campaigns targeting Syrian refugee communities; 2) initiate programs and campaigns among the Lebanese host communities to increase the awareness of the benefits of breastfeeding and address barriers to breastfeeding; 3) develop specific educational programs to teach mothers when to introduce solid foods and what food items to initiate.	The authors conducted a cross-sectional survey in Lebanon on breastfeeding and complementary feeding practices of Syrian refugees and Lebanese host community. Breastfeeding and complementary feeding practices are suboptimal among children of Syrian refugees and their Lebanese host communities with higher rates of exclusive breastfeeding at 4 and 6 months in children of Syrian refugees. The authors identified some barriers to breastfeeding and emphasized the need for targeted breastfeeding/ complementary feeding education campaigns for both communities	Daher S, Ziade F, Nasreddine L, Baroudi M, Naja F. Breastfeeding and complementary feeding in fragile settings: The case of Syrian refugees and their host communities in North Lebanon. International breastfeeding journal. 2022;17(1):1-37. doi: 10.1186/s13006-022-00480-x.
Nigeria; complementary feeding; breastfeeding; child malnutrition; determinants of ICYF	15-Apr-22	Complementary feeding pattern and its determinants among mothers in selected primary health centers in the urban metropolis of Ekiti State, Nigeria	Scientific Reports	Original Research	This study sought to assess the complementary feeding patterns among mothers of children aged 0-2 years in selected primary health centers in Ado Ekiti, Ekiti State, Nigeria. Secondary objectives of this study were: to identify the age of introduction of complementary feeding and timing of introduction of different food items to children in the study; investigate the complementary feeding practices of mothers and factors associated with age of introduction of complementary feeding. 135 women with children aged 0-2 years were interviewed using a semi-structured adapted questionnaire, across two primary care centers. Topics covered in the interview questionnaire included frequency of breastfeeding, thickness of a child's food and feeding a sick child, feeding utensils and hygiene, and timing and justification of timing of introducing water and other foods. 88.9% of mothers had introduced their infants of water and other foods; 62.5% of these infants were introduced to other foods at 3-5 months old, and 43.3% of infants were introduced to water at 3 months old. The two primary reasons mothers gave complementary foods at a certain age were that they felt the child was old enough (40%), and that mothers had to return to work after	This study identifies the patterns of complementary feeding and the introduction of complementary foods among infants in Ado-Ekiti, Ekiti province, Nigeria. 62.5% of participating mothers had initiated complementary feeding with their infants between 3-5 months, while 43.3% of mothers introduced water to their infants at 3 months. These findings reflect the need for grassroots interventions emphasizing the	Esan DT, Adegbilero-Iwari OE, Hussaini A, Adetunji AJ. Complementary feeding pattern and its determinants among mothers in selected primary health centers in the urban metropolis of Ekiti State, Nigeria. <i>Scientific</i>

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					maternity leave (18.3%). This study concluded interventions targeting nutrition for children aged 0-2 years must develop mother's knowledge of the need for exclusive breastfeeding for the first 6 months of life and the ideal age of introduction of complementary feeding (6-24 months) at a grassroots level.	need for exclusive breastfeeding for the first 6 months of life and the appropriate age to introduce complementary feeding.	<i>reports</i> , 12(1), 6252. 2022. doi.org/10.1038/s41598-022-10308-7
IYCF; malnutrition; Afghanistan; public health; maternal and child health	5-Apr-22	Review of Humanitarian Guidelines to Ensure the Health and Well-being of Afghan Refugees on U.S. Military Bases	Military Medicine	Review	In Jul-Aug 2021, 55,000 Afghans were temporarily housed at U.S. military bases around the world during Operation Allies Welcome (OAW). However, current U.S. Department of Defense (DoD) displaced population guidelines provide little health guidance, do not always follow humanitarian guidelines, and are irrelevant to U.S. military base housing of refugees. This review provides recommendations for ensuring that the humanitarian needs of Afghan refugees on U.S. military bases are met according to international standards. The author examined literature from PubMed published Jan 1, 1980 – Feb 1, 2021 along with Afghanistan Ministry of Health documents, U.S. Agency for International Development reports, gray literature, donor reports, DoD after-action reviews, and guidance from previous refugee airlifts. The Needs Assessment for Refugee Emergencies (NARE) checklist was used to structure this review, covering the following areas: protection issues, water, sanitation, and hygiene, camp coordination and management, settlement development, shelter, core relief items, food security and nutrition, public health and nutrition, and education. For each section of the NARE checklist the author summarized background evidence from Afghanistan in order to understand the context prior to evacuation. Existing guidelines and issues specific to housing refugees were also discussed for each section, followed by recommendations based on international standards for humanitarian response. With regard to IYCF, the author cites evidence of a decline in early initiation and exclusive breastfeeding in Afghanistan from 2013 to 2018. More than half of infants received pre-lacteal feedings (2014-2016)—some at health facilities in Afghanistan just after birth. The author recommended that U.S. military bases housing Afghan refugees 1) adhere to international standards for breastfeeding; 2) ensure donated breast milk substitutes are handled and distributed by healthcare providers so as not to discourage breastfeeding; 3) incorporate nutritionists into OAW. Medical records should also be standardized across U.S. military bases and copies be given to refugees for resettlement.	This review discussed issues impacting Afghan refugees on U.S. military bases in the context of Operation Allies Welcome (OAW) and provided a framework for ensuring the health and well-being of refugees based on international standards and guidelines for humanitarian response. Based on background evidence from Afghanistan prior to OAW and issues from previous U.S. operations, the author recommended that U.S. military bases housing Afghan refugees 1) adhere to international standards for breastfeeding; 2) ensure donated breast milk substitutes are handled and distributed by healthcare providers; and 3) incorporate nutritionists into OAW.	Lieberman Lawry L. Review of Humanitarian Guidelines to Ensure the Health and Well-being of Afghan Refugees on U.S. Military Bases. Mil Med. 2022;187(11-12):1299-1309. doi:10.1093/milmed/usac086
El Niño; Ethiopia; child malnutrition; complementary feeding practices; maternal time use	25-Mar-22	Maternal Time Use Drives Suboptimal Complementary Feeding Practices in the El Niño-Affected Eastern Ethiopia Community	International Journal of Environmental Research and Public Health	Research Article	This exploratory qualitative study explored how the El Niño (a climatic event which causes precipitation anomalies leading to either drought or heavy rain) influenced complementary feeding practices in the eastern Ethiopia community from Mar-Sep 2016. The study site was Gale Mirga kebele of Kersa district of eastern Ethiopia. There were 11 focus group discussions with a total of 76 people, including 3 with mothers, 3 with Health Development Army (HDA) leaders, 2 with fathers, 2 with traditional birth attendants, and 1 with religious leaders. The analysis resulted in 3 main factors that affected complementary feeding practices due to the El Niño: 1. Reduced food access (due to failed crops and loss of livestock), 2. Altered livelihoods (due to rural-urban migration, off-farm activities like petty trading and daily labor) and coping strategies (like reducing food consumption, skipping meals, selling assets, government assistance), and 3. Altered care giving practices (due to mother's suboptimal time allocation, low fathers' involvement, and unavailable community health services). Central to young children's suboptimal complementary feeding practices was the mothers' reduced time allocation for childcare and feeding. Mothers working away	El Niño resulted in failed crops and loss of livestock, resulting in reduced dietary diversity and meal frequency. Subsequently, this resulted in suboptimal complementary feeding practices by reducing food access and altering livelihood and coping strategies, reducing the time mothers allocated to child feeding, keeping them away from home, and stressing community health services. The maternal suboptimal time	Irenso AA, Letta S, Chemedaa AS, et al. Maternal Time Use Drives Suboptimal Complementary Feeding Practices in the El Niño-Affected Eastern Ethiopia Community. Int J Environ Res Public Health. 2022;19(7):3937. Published 2022

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					from home and short birth spacing reduced the time mothers spent with their young child. Maternal absence from home was also a barrier to participation in community-based nutrition and health educational activities. There was a low level of fatherly involvement in the childcare. Thus, the women should be supported with climate-resilient livelihood options in their villages, allowing them to be close to their children and feed them optimally and attend education sessions with HDA leaders.	allocation is central to the poor complementary feeding practices.	Mar 25. doi:10.3390/ijerp h19073937
Breastmilk substitutes; International Code; marketing; formula; complementary feeding;	21-Mar-22	Global evidence of persistent violations of the International Code of Marketing of Breast-milk Substitutes: A systematic scoping review	Maternal & Child Nutrition	Systematic Review	This systematic scoping review assessed the evidence base on violations of the International Code of Marketing of Breast-milk Substitutes (BMS). The review included studies published between the adoption by the World Health Assembly (WHA) of the Code between 1981-2021 that focused on Code violations, with no restrictions on location, language, or target group. Included were 153 studies (mostly published after 2010) covering a broad range of countries and contexts. 113 studies identified Code violations occurring in emergency programs or within government or NGO programs. The most studied products were infant formula (including “specialized” formula), follow-up formula, “growing-up” or “toddler” milk, complementary foods for children 6–36 months, and feeding bottles and teats. Studies reporting inappropriate marketing of “growing-up” and “toddler milk” which bypass Code restrictions have increased notably in the last decade. The most common violations reported were advertisement and promotion on different platforms (e.g., print/social media), inappropriate labeling and packaging, samples and gifts, promotion in shops, promotion via health workers and the health system and through nutrition and health benefit claims. Studies identified mothers, healthcare workers and affiliates, and professional associations as the main marketing targets. There was a notable increase in studies identifying violations on digital media from 2000 onwards as well as studies focused on cross-promotion (either across BMS products or indirect promotion through cross-branding with complementary foods). Study authors argued that reporting of Code violations remains relevant, particularly due to increasing prominence of digital media in inappropriate marketing and the emergence of products designed to bypass the Code. A centralized database of resources relevant to Code violations and updated WHA resolutions can benefit the continued monitoring, implementation, and enforcement of the Code.	This systematic review found 153 studies related to violations of the International Code of Marketing of Breastmilk Substitutes between 1981-2021. Violations of the Code have continued through diversifying tactics, communication channels, and products, with digital media playing an increasingly prominent role in the last decade. New products such as “growing-up” or “toddler” milk have emerged to bypass existing Code restrictions. The authors recommend the creation of a centralized database of resources relevant to Code violations and updated WHA resolutions to benefit continued monitoring, implementation, and enforcement.	Becker GE, Zambrano P, Ching C, et al. Global evidence of persistent violations of the International Code of Marketing of Breast-milk Substitutes: A systematic scoping review. Maternal & Child Nutrition. 2022. doi.org/10.1111/mcn.13335
Women; breast milk; environmental contaminants; bushfire; Australia.	16-Mar-22	Environmental contaminants in breast milk during the 2019/2020 bushfire period. (look for TO 059)	Respirology	Poster	This study measured and compared levels of 15 polycyclic aromatic hydrocarbons (PAHs) in breastmilk before, during, and after the 2019/2020 Australian bushfires. 77 women gave breast milk samples from 2018-2020. 62 women gave 1 sample, and 15 women gave 2 (n=92). The authors measured levels of the 15 PAHs in the samples using gas chromatography with mass spectrometry and inductively coupled plasma-mass spectrometry (elements). Home addresses were used to estimate particulate matter (PM 2.5) exposure from the bushfires. Fluoranthene and pyrene were the only PAHs measured that had detectable levels. 34% of samples contained fluoranthene and pyrene during the bushfire compared to 2% outside the bushfire period. The highest levels detected were 0.021 mg/kg fluoranthene and 0.020 mg/kg pyrene which were below the limit of concern for health effects. Women exposed to higher levels of bushfire attributable PM 2.5 and more bushfire days had significantly higher exposures to fluoranthene and pyrene. While bushfire exposure was associated with greater PAHs levels in the sampled breastmilk, the levels detected were not at concerning levels. As such, the authors stressed breastfeeding should continue during bushfires.	The authors measured levels of 15 polycyclic aromatic hydrocarbons in breastmilk before, during, and after the Australian bushfires of 2019-2020. While fluoranthene and pyrene were detected in one-third of samples taken during the bushfire period, they were not at high enough levels to warrant health concerns. As such, the authors recommend continued breastfeeding during bushfires.	Beyene T, Zosky G, Gibson P, et al. Environmental contaminants in breast milk during the 2019/2020 bushfire period. <i>Respirology</i> . 2022 ;27(Suppl. 1):20–87. Published 16 2022 March. doi/10.1111/res p.14216

Key Terms	Date Published	Title	Journal / Source	Type of Publication	Summary & Key Points	Specific Observations	Full Citation
EVD; Ebola; Sierra Leone; Guinea; Systematic Review; attitudes; practices; transmission risk;	10-Mar-22	Qualitative evidence syntheses of attitudes and preferences to inform guidelines on infant feeding in the context of Ebola Virus Disease (EVD) transmission risk	PLOS Neglected Tropical Diseases	Systematic Review	This review article describes factors influencing infant feeding and associated attitudes of different stakeholders (mothers, family members, healthcare providers, etc.) in contexts where there is a risk of Mother-to-Child transmission of Ebola Virus Disease (EVD). Qualitative studies published from 2000 to 2019 which evaluated infant feeding in the context of the risk of transmission of EVD in LMICs were included. Out of 8 full-text articles screened for eligibility, 5 studies from 2 contexts (Guinea and Sierra Leone) met inclusion criteria. The review found that EVD had a significant impact on beliefs and attitudes around infant feeding and resulted in disruptions to optimal infant feeding practices in nutritionally at-risk populations. Healthcare workers and caregivers found guidance around breastfeeding to be unclear, inconsistent, or contradictory and recommendations of separation of mothers from infants were culturally challenging. Disruptions to the health system and mistrust by communities hindered the identification of malnourished infants and led to suspicions that BMS and complementary foods provided by health staff contained EVD. The review also found that IYCF was generally not prioritized during the response in Sierra Leone and Guinea, which was characterized as disorganized and poorly coordinated. The success of interventions targeting infant feeding practices was highly influenced by the community acceptability of these interventions. The authors argue that their findings highlight a) the need for clearer guidance for affected populations and healthcare workers on how infant feeding practices should be adapted in the context of EVD transmission; b) the importance of engagement with affected communities to ensure the success of appropriate interventions; and c) the importance of coordinated support to families who assume caring responsibilities of infants.	This review found 5 studies which investigated infant feeding in the context of the risk of Ebola Virus Disease (EVD) transmission. Study authors argue that clearer guidance to and engagement with affected communities are necessary to promote optimal infant feeding behaviors during an EVD epidemic.	Campbell F, Booth A, Carroll C, Lee A, Relton C. Qualitative evidence syntheses of attitudes and preferences to inform guidelines on infant feeding in the context of Ebola Virus Disease (EVD) transmission risk. PLOS Neglected Tropical Diseases. 2022;16(3):e0010080. doi.org/10.1371/journal.pntd.0010080
Earthquake; anxiety; maternal mental health; breastfeeding; covid-19; pandemic	7-Mar-22	Mothers' Anxiety to Aggravated Acute Fear of Earthquakes in the City of Zagreb in the COVID-19 Pandemic	Psychiatra Danubina	Original Research	The authors investigated fear of COVID-19 infection aggravated by earthquake-induced stress among 16 puerperal women in Zagreb (women who are up to 6 weeks post-partum). All participants gave birth during the COVID-19 pandemic and experienced a 5.5-magnitude earthquake in Zagreb on 22 March 2020. The participants were interviewed on the exact day of the earthquake (within 4 hours of the main hit) and 6 months later in October. Participants were also questioned about breastfeeding. The participants provided written informed consent and were interviewed using the Generalized Anxiety Disorder 7-item (GAD-7) scale for evaluation of generalized anxiety disorder. 37.5% of participants exhibited some degree of anxiety (either mild, moderate, or severe) immediately after the earthquake. This was measured by each participant's individual score on the GAD-7 scale from 0 to 21, where scoring 5-9 represented mild anxiety, 10-14 represented moderate anxiety, and 15-21 represented severe anxiety. At the second time point during COVID-19 pandemic, 18.75% of participants exhibited mild or moderate anxiety, with 2 scoring between 5-9 and 1 scoring between 10-14 (none exhibited severe anxiety). At the time of the earthquake, 13 participants were breastfeeding (81.3%), while 3 were not due to personal reasons. Six months after the earthquake, only 7 mothers were breastfeeding (43.8%), while 9 of the participants were feeding their children with adapted milk (56%). The main reason for breastfeeding discontinuation was the stop of milk secretion in the 6-month period after the delivery. The authors concluded that the combination of the COVID-19 pandemic and the earthquake created significant, synergistic, and multidimensional stressogenic factors in puerperal women. The authors also concluded that continuous short- and long-term prevention of acute mental disturbances and post-traumatic stress disorder	More than a third of the puerperal women (women who were up to 6 weeks post-partum) interviewed exhibited some degree of anxiety immediately after the earthquake. At the time of the earthquake, more than 80% were breastfeeding. Six months after the earthquake, less than 50% were breastfeeding.	Tikvica Luetic A, Habek D, Spoljar P, et al. Mothers' anxiety to aggravated acute fear of earthquakes in the city of Zagreb in the Covid 19 pandemic. PSYCHIATRIA DANUBINA. 2022;34(2):370-373. doi:10.24869/psyd.2022.370

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					is a necessity. Additionally, the authors remarked that hospital personnel (doctors, midwives) and primary care providers and health visitors stayed in contact with mothers after they left the hospital following the earthquake; this greatly helped them manage anxiety and breastfeeding continuance.		
Child development; nutrition rehabilitation; complementary feeding	28-Feb-22	Effectiveness of an Integrated Nutrition Rehabilitation on Growth and Development of Children under Five Post 2018 Earthquake in East Lombok, Indonesia	International Journal of Environmental Research and Public Health	Article	This study examined the impact of a comprehensive nutrition disaster rehabilitation intervention on maternal stress, child morbidity, dietary diversity, weight for age Z-scores, and social emotional score among mothers and children 6-49 months old after a devastating earthquake hit Indonesia in 2018. The study was conducted in Feb-Sep 2019. A total of 480 mothers with children 6-49 months of age were randomized into either the intervention group (n=240) or the control group (n=240). Children in the intervention group were 10-42 months old with a median age of 30 months. Children in the control group were 9 to 38 months old with a median age of 27 months. The community-based intervention consisted of parenting classes, shredded fish, liver, or anchovy distribution, and complementary feeding recommendations while the control group received standard existing healthcare services. At the conclusion of the intervention, the authors found that overall maternal stress (p<0.001) and coughing (p<0.003) were lower in the intervention group. Dietary diversity among children 6-23 months of age was higher in the intervention group (p<0.003) as well. For children ≥ 24 months, weight-for-age z-score (p<0.024) and social emotional score (p<0.01) were also higher in the intervention group. The study suggests that an integrated holistic intervention to nutrition rehabilitation after natural disaster improved nutritional status among children <49 months and maternal well-being.	The authors focused on both the nutritional status of children <49 months of age and maternal well-being after a natural disaster in low- and middle-income settings. Their integrated approach to early childhood development to improve nutrition and well-being after disaster and in emergency settings serve as an example for future emergency preparations and programming.	Fahmida U, Hidayat AT, Oka AASI et al. Effectiveness of an Integrated Nutrition Rehabilitation on Growth and Development of Children under Five Post 2018 Earthquake in East Lombok, Indonesia. Int J Environ Res Public Health. 2022;19(5):2814.
Disaster Relief; Mitigation; Disaster Response; Disaster Preparedness	23-Feb-22	Pediatrician's Leadership Role: Evaluation of the Needs of Children and Mitigation After Disasters	Pediatrics	Abstract	The Puerto Rico Chapter of the American Academy of Pediatrics (PRAAP) designed and implemented activities to evaluate and address the needs of Puerto Rican infants, children, and their families in the recent wake of multiple natural disasters and the COVID-19 pandemic. The reason for this work stems from PRAAP pediatricians' unique role supporting the health and well-being of children and their families in disaster preparedness, response, and mitigation settings. Activities in response to disasters included e.g., providing healthcare services in pediatric clinics, interviewing families for needs assessment, visiting impacted communities including shelters, providing educational materials on best practices to protect children's health in disaster settings, organizing donations, and collaborating with government and local response organizations. The educational materials addressed, among others, infection control particularly in overcrowded conditions, safe sleep, infant feeding, injury prevention, proper use of sunscreen and insect repellent, asthma management and mental health. PRAAP reported their services reached all areas of the island. Ultimately, PRAAP state that pediatricians have the unique opportunity, skills, and experience to advocate for children's needs in disaster and pandemic contexts.	This abstract lists implemented activities and educational materials from the Puerto Rico Chapter of the American Academy of Pediatrics to evaluate and address the needs of Puerto Rican infants, children, and their families in the recent wake of multiple natural disasters and the COVID-19 pandemic. The authors argue pediatricians have a unique role to support the health and well-being of children in disaster settings.	Calderon C, Pedrego Y, Huerta-Montañez G, et al. Pediatrician's Leadership Role: Evaluation of the Needs of Children and Mitigation After Disasters. Pediatrics Feb 2022; 149 (Meeting Abstracts Feb 2022): 23.
Breastfeeding; Lactation; Infant Feeding; Hurricane disasters; Natural disasters; Disaster relief;	23-Feb-22	Breastfeeding, a Vital Response in Emergencies	Pediatrics	Abstract	In this meeting abstract, the American Academy of Pediatrics (AAP) - Puerto Rico Chapter implemented a breastfeeding initiative as a vital response to threatened safe infant feeding after the 2017 Hurricanes Irma and Maria. The intervention aimed to train first responders on the importance of preserving breastfeeding during emergencies and provide strategies to support, protect and promote safe routines from pregnancy, labor and infancy. Participants included health professionals, childcare workers, teachers, and allied personnel in charge of shelters. Participants were identified through a basic survey, and pre and post-test evaluations were conducted. Activities were conducted through full-day workshops and seminars and	This meeting abstract described activities implemented in Puerto Rico during a breastfeeding intervention in response to the 2017 Hurricanes Irma and Maria. A pre and post-evaluation was conducted, and the results showed that	Piovanetti Y, Calderon C, Budet Z, et al. 2022. Breastfeeding, a Vital Response in Emergencies. Pediatrics.

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Disaster response; Emergencies; Puerto Rico					included: (1) an introductory prenatal breastfeeding course, a review of reference tools, (2) a demonstration of basic breastfeeding techniques and checklists for essential equipment, (3) distribution of documents on optimal disaster management of safe infant feeding, infant feeding during disasters, and pamphlets on parents and health professionals. The training resulted in the design and distribution of protocols, checklists to be used during natural disasters, and independent lactation stations for maternal-infant feeding. Participants understood the role of caretakers and health advisors in safe infant feeding. The authors concluded that preparedness and organization are critical for families to identify and protect their efforts to preserve safe infant feeding during emergencies.	caretakers and health advisors gained knowledge about safe infant feeding during emergencies. According to the authors, preparedness and organization are critical for families to identify and protect breastfeeding efforts during emergencies	
Breastfeeding; chest feeding; child nutrition; infant feeding; refugees; displaced peoples; Turkey; Syria	14-Feb-22	Breastfeeding practices among Syrian refugees in Turkey	International Breastfeeding Journal	Original Research	This study sought to assess the opinions of Turkish and Syrian healthcare workers, and perceptions and attitudes of Syrian, others, and family members on age-appropriate breastfeeding, to identify specific cultural characteristics of Syrian refugees on infant feeding and effects of migration. It also aimed to collect suggestions of healthcare workers and Syrian family members on how to improve breastfeeding practices among Syrian refugees. 46 structured focus group discussions involving 335 individuals were conducted online and in-person, across 4 provinces in Turkey between Sept-Oct 2020. Primary cultural characteristics identified in focus groups as contributing to short breastfeeding duration include the belief that breastfeeding has a negative effect on the mother, utilization of anise or herbal teas to calm infants for sleep, being unable to breastfeed during Ramadan, wanting to prioritize the husband or other children, strict or overreaching social support during the early neonatal period, and wanting to pause breastfeeding while pregnant or trying for another child. These cultural characteristics then promote limited interaction between mother and child, reduced frequency of breastfeeding, and milk insufficiency. Researchers also found that migration increased instances of teen marriage and adolescent pregnancy, increased instances of poverty, and decreased family social support. This study concluded that breastfeeding programming must be considerate of these cultural norms of Syrian healthcare workers and families.	The primary contributions of this research to existing literature are: (1) the identification of gaps in knowledge and practice on breastfeeding, lactation, and neonatal nutrition among Syrian refugee mothers, families, and Turkish and Syrian healthcare workers, (2) increased documentation and analysis of the cultural practices and beliefs that shape breastfeeding practices among Syrian mothers and families, and (3) documented linkages between migration and increased teen marriage and decreased level of girls' education.	Yalçın SS, Erat Nergiz M, Elci ÖC, et al. Breastfeeding practices among Syrian refugees in Turkey. <i>Int Breastfeed J.</i> 2022;17(1):10. Published 2022 Feb 14. doi:10.1186/s13006-022-00450-3
MICS; SDGs; targets; Middle East; indicators	6-Feb-22	Iraq Is Moving Forward to Achieve Global Targets in Nutrition	Children	Original Research	This study compared Iraq's nutrition indicators to the Global Nutrition Targets and Sustainable Development Goals via nationally representative surveys from 1996 to 2018. Multiple Indicator Cluster Surveys (MICS) conducted approximately every 5 years during this period showed steadily declining rates of stunting, wasting and underweight, with the most recent 2018 survey finding rates of 9.9%, 2.9% and 2.5% respectively, among children <5 years. Additionally, anemia in non-pregnant women decreased from 35.5% in 2006 to 19.9%, in 2013, closer to the World Health Assembly (WHA) 2025 target of 15%. The most notable deteriorating indicator was the percentage of infants with low birth weight (LBW), which increased from 13.4% to 25.2% between the 2011 and 2019 MICS. The authors also noted continued low rates of exclusive breastfeeding (EBF) as an area of limited progress. EBF rates were only 26% in 2018, though this represented an increase from the 18.6% found in the 2011 MICS. In addition, study authors highlighted that despite reductions in the rate of childhood obesity (10.9% in 2011 and 6.6% in 2018), this figure remains higher than the global averages. The WHA 2025 target for childhood obesity is for prevalence not to increase beyond 2012 levels (estimated at 6% globally). The authors point to Iraq's ability to achieve the WHA 2025 target for childhood obesity is at risk. Overall, study	This study reviewed changes in key nutrition indicators in Iraq between 1996 and 2018 and compared them against Global Nutrition Targets and Sustainable Development Goals. Low rates of exclusive breastfeeding, increasing rates of overnutrition and low birthweight were identified as priority issues. The authors called for policy interventions related to promoting healthy diets and increased attention to LBW. In addition, improving breastfeeding rates requires comprehensive improvements	Sabeeh HK, Ali SH, Al-Jawaldeh A. Iraq Is Moving Forward to Achieve Global Targets in Nutrition. <i>Children.</i> 2022;9(2):215. doi.org/10.3390/children9020215

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					authors stressed the need for increased data on dietary intake patterns and the causes of micronutrient deficiencies. In terms of policies, they recommended greater efforts to promote healthy diets and increased attention to the underlying causes of LBW. They further argued that improvements in EBF require strengthened regulatory systems around breastmilk substitutes, improving the capacity of the healthcare sector to promote and protect breastfeeding, and providing community-based services post-partum to support breastfeeding mothers.	in the regulatory environment, healthcare sector capacity and provision of community-based services.	
Acute gastroenteriti; Rotavirus; ELISA; antigen test; children; Abakaliki; Nigeria	1-Feb-22	Prevalence and risk factors of acute gastroenteritis caused by Rotavirus among children in tertiary hospitals, southeastern Nigeria	African Journal of Clinical and Experimental Microbiology (AJCEM)	Journal Article, Short Communication	This cross-sectional study aimed at determining the prevalence and associated risk factors of acute gastroenteritis due to rotavirus infection among children <5 years of age across 2 hospitals in Ebonyi State, south-eastern Nigeria. 275 children <5 years of age who presented with acute watery stools with or without blood or fever at the participating hospitals Jan-Apr 2019 were included. A structured questionnaire was used to collect socio-demographic information and selected risk factors. Stool samples were also collected. The prevalence of rotavirus diarrhea among children <5 years of age was 26.5% (73/275). The rotavirus prevalence of 25.7% (39/152) in children between 1-11 months of age was not significantly different (p=0.784) from the rotavirus prevalence of 27.6% (34/123) in children between 12-59 months of age. However, the prevalence of rotavirus was significantly higher (p=0.008) in children whose mothers had secondary level of education (33.8%, 49/145) or no education/only primary school certificate level of education (20.0%, 11/55) as compared to mothers who had higher level (University and Polytechnic) of education (17.3%, 13/75). Although the prevalence of rotavirus diarrhea was lower with the use of maize gruel (pap) as weaning feed (26.3%, 71/270) in comparison to the use of other types of complementary feeds (40%, 2/5) like 'Cerelac' [fortified baby cereal] and 'NAN' [infant formula milk powder], this association did not reach a significant level (p=0.6110). The prevalence of rotavirus diarrhea was higher in those who were not exclusively breastfed (29.2%, 28/96) as compared to those who were exclusively breast fed (25.1%, 45/179), but this was also not significant (p=0.4772). The authors suggest improving child feeding hygiene by parents/guardians for addressing the high prevalence of rotavirus diarrhea in children in Ebonyi State, Nigeria.	This cross-sectional study (n=275) showed 26.5% of the children <5 years of age tested across two Nigerian hospitals were positive for rotavirus diarrhea. The only socio-demographic factor significantly associated with prevalence of rotavirus diarrhea was educational level of the mothers. None of the selected risk factors such as the complementary feeding and exclusive breastfeeding were significantly associated with prevalence of rotavirus diarrhea.	Igwe D, Oshun P, Osuagwu C, Efunshile A, Oduyebo O. Prevalence and risk factors of acute gastroenteritis caused by Rotavirus among children in tertiary hospitals, southeastern Nigeria. African Journal of Clinical and Experimental Microbiology. 2022;23(1):83-88. doi:10.4314/ajcem.v23i1.11.
Scoping review; disasters; child health; policy	1-Feb-22	Child Nutrition in Disaster: A Scoping Review	The Tohoku Journal of Experimental Medicine / TJEM	Scoping Review	This scoping review aimed to identify 1. effects of disaster on child nutrition and health; 2. specific issues including, allergies, breast-feeding practices, and socio-cultural aspects; and 3. achievements and gaps of food security, policy, and ethics related to child nutrition during and immediately after disaster. The search covered PubMed resources between 1946-2020 and grey literature from UN sources which were related to child nutrition or food security. There were no geographic restrictions and only English language publications were included. Overall, 103 studies were included in the review, the majority of which were published after 1990. Studies evaluated the adverse outcomes of disaster contexts on child physical and mental health through communicable disease, poor hygiene contexts, and sub-optimal infant feeding practices and dietary patterns. Deficiencies in macro- and micro-nutrients were a particularly challenging outcome of disaster contexts. The authors identified food allergies, risks to continued breastfeeding and socio-cultural factors affected the acceptability of food assistance in emergency contexts throughout the literature. The review found the international community made significant achievements in the field of infant feeding primarily through adherence to International Code of Marketing of Breastmilk Substitutes and the creation of various operational guidelines and	This scoping review evaluated the existing knowledge regarding child nutrition in disaster contexts. Study authors found that while progress has been made in many areas related to addressing malnutrition in disasters, they identified the need to ensure comprehensive packages to address malnutrition, including plans, policies, nutrition education, and nutritional assessment of children. Findings identified more significant gaps in relation to information on food	Adeoya AA, Sasaki H, Fuda M, Okamoto T, Egawa S. Child Nutrition in Disaster: A Scoping Review. The Tohoku Journal of Experimental Medicine. 2022;256(2):103-118. doi.org/10.1620/tjem.256.103

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					guidance. Remaining challenges to child nutrition in disaster contexts are pre-disaster malnutrition, gaps in the availability, accessibility and quality of food and administrative hurdles. The authors recommend improvement on preparedness, advocacy, development/updating of policies, and education of children, family, and relief aid workers on nutrition. They also stressed the importance of frequent nutritional assessment of children, nutritional support in disaster by designated IYCF authority, and education and participation of the general population.	allergies, child mental health related to nutritional outcomes.	
Children and Stunting; Dietary diversity; Food insecurity	26-Jan-22	Stunting and associated factors among 6-23-month-old children in drought vulnerable kebeles of Demba Gofa district, southern Ethiopia	BMC Nutrition	Original Research	This community-based cross-sectional study examined the magnitude and associated factors of stunting among children aged 6-23 months in “drought-vulnerable” kebeles (small administrative units) in southern Ethiopia, between Feb-Mar 2021. The data was collected from 362 pairs of mothers/caregivers, and their children by using pretested questionnaires. The authors collected primary data on sociodemographic, maternal and child health, environmental characteristics, household dietary diversity and anthropometric measurements, and secondary data related to childcare practices (breastfeeding, complementary feeding), maternal characteristics and facilities (drinking water). Out of the 362 children, 226 (62.5%) were 12 to 23 months old, and 194 (53.6%) were males. As measured by height-for-age <2 standard errors, 21.8% of children were stunted, with its magnitude more prominent in males (62%) than females. Household dietary diversity significantly influenced a child’s height/length $p<0.001$ ($\beta=0.217$, 95% CI, 0.093–0.342). The majority of stunted children (72.2%) came from households that scored low on dietary diversity. A significant positive association ($p<0.000$) was observed between early introduction of complementary foods (<6 months of age) and stunting ($\beta=0.444$, 95%CI, 0.344–0.543). Of all children who had started complementary feeding before 6 months of age (93.3%), 100% were stunted. Breastfeeding frequency within 24h showed a positive association ($p<0.000$) with height/length-for-age ($\beta=0.217$, 95% CI, 0.179–0.263). Children who did not consume animal-sourced foods as part of a complementary diet were more likely to be stunted $p<0.000$ ($\beta=0.351$, 95% CI, 0.196–0.506). Although stunting was less prevalent in the study area compared to the national average, 1 in 5 children were still stunted. The authors highlighted that low household dietary diversity, early initiation of complementary feeding (<6 months of age), low breastfeeding frequency within 24h, and not consuming animal source foods significantly influence a child’s height/length-for-age. The authors recommend continuous education on infant and young child feeding practices in drought prone areas.	This study assessed the prevalence and associated factors of stunting among children aged 6-23 months old in a drought-vulnerable district. The study findings show that a low household dietary diversity, early initiation of complementary feeding (<6 months of age), low breastfeeding frequency within 24h, and not consuming animal source foods significantly influence a child’s height/length-for-age. To tackle the problem of stunting, the authors advise to provide continuous health education to the mothers on infant and young child feeding practices.	Tadele TT, Gebremedhin CC, Markos MU, & Fitsum EL. (2022). Stunting and associated factors among 6-23-month-old children in drought vulnerable kebeles of Demba Gofa district, southern Ethiopia. BMC Nutrition, 8 (1), 9. doi: 10.1186/s40795-022-00501-2
Food security; Food insecurity; refugees; intervention; displaced people; asylum seekers; scoping review	25-Jan-22	Food Security Interventions among Refugees around the Globe: A Scoping Review	Nutrients	Scoping Review	This scoping review aimed to assess current research on food security interventions for refugees and displaced peoples, and to identify existing gaps in knowledge. The search covered 5 online databases (PubMed, Ovid MEDLINE, Global Health, Public Health Databases, SCOPUS and CABI Abstracts Global Health from Web of Science) and included all articles available in English, published after 2010, and all articles that were not exploratory studies, protocol or framework papers, reviews, or conference abstracts. A total of 57 articles were eligible for review. The identified articles were analyzed across 3 categories: a) Intervention types across geographic locations (separated areas of refugee crisis then destination countries); b) Considerations for the most vulnerable; c) Assessing food security. Interventions included providing cash vouchers or food transfers, urban agriculture, gardening, animal husbandry and gardening, nutrition education, and IYCF. This scoping review found food security was directly measured in 39% of studies, but only 52% of that group utilized the UN Food	This study reviews current food security interventions targeting refugee and displaced populations. This review found that despite numerous existing interventions, food insecurity is very high among refugees and due to the lack of a universal evaluation tool, the efficacy of current interventions remains in question. The authors	Nisbet C, Lestrat KE, Vatanparast H. Food Security Interventions among Refugees around the Globe: A Scoping Review. <i>Nutrients</i> . 2022;14(3):522. Published 2022 Jan 25.

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					Consumption Score and the Diet Diversity Score or Coping Strategies Index, indicating the need for a universal validated measurement tool to analyze food security across contexts. 12% of articles reviewed specifically incorporated IYCF activities into studied interventions. This review found that despite numerous existing interventions, food insecurity is very high among refugees and due to the lack of a universal evaluation tool, the efficacy of current interventions remains in question. This review noted that further efforts to work with governments in destination countries is needed to affect policy change on the rights of marginalized populations including IYCF, children over 5 years, women, and pregnant and post-partum women.	concluded that there is high need for a validated, universally applicable tool for measuring food insecurity in order to fully evaluate the effectiveness of current food insecurity interventions.	doi:10.3390/nu14030522
Seasonality; landslides; natural disasters; stunting	18-Jan-22	Malnutrition and Associated Risk Factors among Children 6-59 Months Old in the Landslide-Prone Bududa District, Eastern Uganda: A Cohort Study	Current Developments in Nutrition (CDN)	Original Research	This prospective cohort study assessed the prevalence of malnutrition and the impact of seasonal variations and associated factors among children aged 6–59 months in Bududa District, eastern Uganda, in 2019-2020. Anthropometric measurements and household-level characteristics were collected from the same children during the food-plenty season (May-August 2019) and the food-poor season (January – March 2020). Responses were collected from 392 children in the food-plenty season and 366 children in the food-poor season. The main risk factor of interest was landslide exposure at the sub-county level and the main dependent outcome of interest was child stunting. Other covariate factors included were child sex, age, breastfeeding status, age of introduction of solid and semi-solid food, parents' education status, and household size. The prevalence of stunting, underweight, wasting, and overweight were 37.7%, 13.3%, 3.6%, and 4.3% respectively in the food-plenty season and 42.6%, 14.2%, 2.1%, and 2.7%, respectively in the food-poor season. Residing in a landslide-affected sub-county increased the odds for stunting (aOR: 1.68; 95% CI: 1.08, 2.59; p=0.025) in only the food-plenty season. Not breastfeeding was significantly associated with stunting in the food-plenty season (aOR: 2.16; 95% CI: 1.01, 4.60; p=0.042) but not the food-poor season. Age of introduction of solid and semi-solid foods was not significantly associated with stunting in either season. Authors concluded that there is a need to address seasonal factors in nutrition interventions targeting children <5 years in landslide-prone areas. Study authors argue that drivers of malnutrition in children should be integrated in disaster management based on the increased risk for landslide-affected children, and the differences in risk factors between food-plenty and food-poor seasons.	This cohort study among children aged 6–59 months in the landslide-affected households in Bududa District, eastern Uganda was associated with a greater risk of stunting during the food-plenty season but not during the food-poor season. Not breastfeeding was significantly associated with stunting only in the food-plenty season and age of introduction of solid and semi-solid foods was not significantly associated in either season.	Nahalomo A, Iversen PO, Andreassen BA, et al. Malnutrition and Associated Risk Factors among Children 6-59 Months Old in the Landslide-prone Bududa District, Eastern Uganda: A Cohort Study. Current Developments in Nutrition. 2022; doi.org/10.1093/cdn/nzac005
Epidemiology; nutrition & dietetics; public health; child nutrition; infant feeding; Bangladesh	7-Jan-22	Type of terrain and infant and young child feeding practices: cross-sectional study findings on children below 2 years of age from northern Bangladesh	BMJ Open	Original Research	This study sought to assess the prevalence of 8 WHO core infant and young child feeding (IYCF) indicators and their association with specific types of terrain (plain land, hilly, flash-flood prone, and wetland) among users of a large-scale nutrition program (Suchana) in rural northern Bangladesh. The 8 WHO IYCF indicators are: exclusive breastfeeding; initiation of breastfeeding within 1 hour of birth; continued breastfeeding at one year; introduction of solid, semisolid, or soft foods; minimum dietary diversity; minimum meal frequency; minimum acceptable diet; consumption of iron-rich/fortified foods. This cross-sectional study was conducted utilizing baseline data collected on 5440 children under 24 months between Nov 2016-Feb 2017 in Sylhet and Moulvibazar districts of Sylhet Division, Bangladesh, to evaluate the Suchana program's performance. Univariate analysis was used to establish the overall prevalence of indicators in each type of terrain. Logistic regression analysis showed that exclusive breastfeeding was higher in flash-flood prone areas (adjusted OR 1.92, 95% CI 1.12-3.30; p=0.019); Flash-flood prone areas were also significantly associated with minimum meal frequency (adjusted OR 1.45, 95% CI 1.07-1.97; p=0.018) and	This study identifies the associations between 8 core WHO IYCF indicators and type of terrain in rural northern Bangladesh. Exclusive breastfeeding was found to be higher in flash-flood prone areas while flash-flood prone areas were also significantly associated with minimum meal frequency and minimum dietary diversity. Hilly areas were associated with significantly lower introduction of solid, semisolid, or soft	Farzana FD, Choudhury N, Haque MA, et al. Type of terrain and infant and young child feeding practices: cross-sectional study findings on children below 2 years of age from northern Bangladesh. <i>BMJ Open</i> .

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					minimum dietary diversity (adjusted OR 1.63, 95% CI 1.01-2.63; p=0.046). Hilly areas were associated with significantly lower introduction of solid, semisolid, or soft foods (adjusted OR 0.39, 95% CI 0.18-0.82; p=0.013) compared with plain land. Researchers observed that the IYCF needs of communities vary by type of terrain and that observed prevalence of WHO core IYCF indicators can be used to help prioritize interventions targeting low-resource families in varying rural settings in northern Bangladesh.	foods compared with plain land. Authors sought to inform future interventions to improve IYCF nutrition among low-resource families in northern Bangladesh.	2022;12(2):e056593. Published 2022 Feb 8. doi:10.1136/bmjopen-2021-056593
Breastfeeding; Natural disaster; Infant and young child feeding; Breastmilk substitute; Integrative review	5-Jan-22	Infant and young child feeding during natural disasters: A systematic integrative literature review	Women and Birth	Review Article	This literature review examined challenges and supportive strategies for IYCF during natural disasters to inform further research and guide recommendations in disaster contexts. The search covered publications available in the PubMed, CINAHL and Cochrane Library databases from 2011 to 2021. 13 studies were included using mixed methods (4), critical ethnography (1), quasi-experimental studies (2), descriptive studies (4), qualitative study (1) and evidence gap map analysis (1). The authors found that factors that facilitated breastfeeding during natural disaster contexts were privacy for breastfeeding, community and family support, and adaptation of professional breastfeeding support to the local context. Additionally, the included studies suggested that breastfeeding was likely to continue in contexts where it was the norm prior to the disaster. Decreased breastfeeding self-efficacy (primarily referring to women's concerns about their ability to breastfeed or the quality or quantity of their breastmilk), lack of knowledge, and lack of resources were considered challenges for breastfeeding. Both mothers and individuals participating in the response were found to have limited knowledge of optimal IYCF practices. Increased use of breastmilk substitutes attributable to uncontrolled donations was also found to be a challenge. Study authors stressed the importance of targeting community leaders and other caregivers (e.g., grandmothers) in interventions promoting optimal infant feeding practices. The challenges for feeding with formula were the lack of access to resources required for hygienic formula milk preparation and the lack of availability of formula milk in some contexts. The authors highlighted the scarcity of research related to maternal experiences of IYCF during natural disasters and interventions targeting non-breastfed infants.	Privacy for breastfeeding, family/community support, and locally adapted professional breastfeeding support services facilitated breastfeeding during natural disaster contexts. Women's concerns about their ability to sufficiently breastfeed as well as lack of knowledge and resources were considered challenges for breastfeeding.	Mudiyansele SR, Davis D, Kurz E, Atchan M. Infant and young child feeding during natural disasters: A systematic integrative literature review. Women and Birth. 2022;doi.org/10.1016/j.wombi.2021.12.006
HIV self-testing; HIV/AIDS; pregnancy; breastfeeding	4-Jan-22	HIV self-testing and repeat testing in pregnancy and postpartum in Northern Nigeria	Tropical Medicine & International Health	Original Research	This cross-sectional study sought to identify willingness to retest for HIV and predictors of willingness to self-test for HIV in pregnancy and postpartum in a tertiary hospital in Northern Nigeria. In low-resource settings, most women get tested only once during pregnancy and rarely postpartum. HIV self-testing, the performance and interpretation of a rapid diagnostic test on one's oral fluid or blood sample at home or in a clinic is a convenient and discreet way to discover one's HIV status. Structured questionnaires were administered to antenatal participants (n=370) in March 2021. Of the 85.7% (n=317) of participants who were willing to retest for HIV during pregnancy, 29.3% (n=93) were willing to self-test. Willingness to self-test during pregnancy was higher among participants who were multiparous (aOR=2.40, 95% CI, 1.14-6.43), employed (aOR=1.49, 95% CI, 1.13-4.53) and those with at least secondary education (aOR=2.96, 95% CI, 1.43-11.47). In contrast, willingness to self-test during pregnancy was lower among those who were unaware of their husband's HIV status (aOR=0.05, 95% CI, 0.02-0.13). Of the 94.6% (n=350) participants who were willing to retest for HIV after delivery, 27.4% (n=96) were willing to self-test. Willingness to self-test for HIV after delivery was higher among respondents who were married (aOR=15.41, 95% CI, 3.04-78.2), multiparous (aOR=2.01, 95% CI, 1.27-5.63), employed (aOR=1.59, 95%	This study of antenatal clients in a tertiary hospital in Northern Nigeria found that willingness to self-test for HIV when retesting during pregnancy (n=93; 29.3%) and willingness to self-test for HIV postpartum (n=96; 27.4%) were low. Willingness to retest during pregnancy was high both during pregnancy (n=317; 85.7%) and postpartum (n=350; 94.6%). Many participants were aware of risk of HIV transmission during breastfeeding and 54.3% acknowledged the possibility	Iliyasu Z, Galadanci HS, Musa AH, et al. HIV self-testing and repeat testing in pregnancy and postpartum in Northern Nigeria. Trop Med Int Health. 2022;27(1):110-119. doi:10.1111/tmi.13705

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					CI, 1.08-2.35) and had at least secondary education (aOR=6.12, 95% CI, 1.36-27.47). In contrast, willingness to self-test for HIV after delivery was lower among those who booked late for antenatal care (≥29 weeks) (aOR=0.11, 95% CI, 0.022-0.52), those who were unaware of HIV transmission risk during breastfeeding (aOR=0.29, 95% CI, 0.12-0.68) and participants who were unaware of their husband's HIV status (aOR=0.076, 95% CI, 0.03-0.19). Of participants, 82.2% (n=304) were aware of risk of HIV transmission during breastfeeding and 201 (54.3%) acknowledged the possibility of HIV-positive mothers breastfeeding without transmitting to the infant. Communication interventions and training of mentor mothers could improve self-testing in these settings, which is especially important given the increased risk of exposure to COVID-19 infection in crowded clinics.	of HIV-positive mothers breastfeeding without transmitting to the infant. Communication interventions and training of mentor mothers could improve self-testing in similar settings during pregnancy and postpartum, which is especially important given the increased risk of exposure to COVID-19 infection in crowded clinics.	
Bottle feeding; breastfeeding; disasters; humanitarian assistance; infant; infant formula; mothers	1-Jan-22	‘We make a mistake with shoes [that's no problem] but... not with baby milk’: Facilitators of good and poor practice in distribution of infant formula in the 2014–2016 refugee crisis in Europe.	Maternal & Child Nutrition	Original Research	This cross-sectional, qualitative study sought to identify factors that contributed to following (‘good practice’) or not following (‘poor practice’) the Operational Guidance-Infant Feeding in Emergencies regarding infant formula distribution in the 2014–16 refugee crisis in Europe. A combination of rapid ethnographic assessment (REA) and semi-structured interviews were used. Research participants included individuals who were supporting, coordinating, or implementing infant feeding support to Syrian refugees in Europe. REA took place in Greece, France, and the United Kingdom in Mar-Apr 2016 and semi-structured remote interviews took place in Jul 2016 - Jun 2017. Thirty interviews contained content regarding distribution of infant formula and were included in analysis. Presence of breastfeeding support, properly implemented formula feeding programmes, understanding that maternal choice to formula feed should be considered within the risk context of the emergency, and positive personal experiences of breastfeeding contributed to good practice. Presence of infant formula donations, absence of properly managed formula feeding programmes, lack of understanding that maternal choice to formula feed must be balanced with context and risk, and personal experience of insurmountable breastfeeding challenges and/or formula feeding contributed to poor practice. The study concluded with the following 3 recommendations: (1) governments, humanitarian organizations, and donors should ensure that infant and young child feeding in emergencies preparedness and programmes are adequately resourced and implemented, (2) emergency responders should be appropriately trained with training including infant feeding experience debriefing, and (3) health and emergency organizations should provide maternity protections enabling employees to breastfeed as recommended.	This study explored practices regarding infant formula distribution to newly arrived Syrian refugees in western Europe and assessed which practices were and were not aligned with Operational Guidance for Infant Feeding in Emergencies (OG-IFE). The following were reported to be misaligned with OG-IFE: (1) presence of infant formula donations, (2) absence of properly managed formula feeding programmes, (3) belief that maternal choice to formula feed is paramount and should be facilitated regardless of context, and (4) personal experience of insurmountable breastfeeding challenges and/or formula feeding contributed to poor practice.	Gribble KD, Palmquist AEL. “We make a mistake with shoes [that’s no problem] but... not with baby milk”: Facilitators of good and poor practice in distribution of infant formula in the 2014-2016 refugee crisis in Europe. <i>Matern Child Nutr.</i> 2022;18(1):e13282. doi:10.1111/mcn.13282
Kitchen gardening; okra; mineral intake; refugees; East Africa	1-Jan-22	Okra (Abelmoschus esculentus) in a refugee context in East Africa: Kitchen gardening helps with mineral provision	SN Applied Sciences	Original Research	This study determined the contribution of okra grown in kitchen gardens towards adequate intake (AIs) or recommended dietary allowances (RDAs) of specific minerals for PLWs aged 19-30 years and children aged 1-3 years in predominantly South Sudanese refugee camps/settlements in Ethiopia and Uganda. The study sites were a) Kule and Tierkidi camps in the Gambella regional state of Ethiopia; and b) Rhino and Imvepi settlements in Arua district of Uganda. Okra samples (both fresh and dried) were taken between Nov 2019 and Jan 2020 from each study site and analyzed for mineral content. The mineral profile for okra grown in the two countries differed, with okra grown in Ethiopia having more iron and less zinc compared to okra grown in Uganda. The study estimated two levels of okra consumption for each demographic (low and high intake) based on fruit and vegetable consumptions and market access. Intake levels were defined as 17g (low) and 42g (high) for young children and 42g	This study found that the potential for okra to meaningfully contribute to mineral requirements for young children and PLWs in Uganda and Ethiopia varies by location, consumption levels, and demographic group. Low levels of okra intake contributed less than 15% of AIs or RDAs for all demographics for the key	Woldetsadik D, Llorent-Martinez EJ, Gebrezgabher S, et al. Okra (<i>Abelmoschus esculentus</i>) in a refugee context in East Africa: Kitchen gardening helps with mineral provision. <i>SN</i>

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					(low) and 169g (high) for PLWs. The potential contribution of key minerals for the two demographic groups differed by intake level (i.e., low or high) and location (Ethiopia or Uganda). At low levels of intake of okra, contribution towards AIs or RDAs was less than 15% for all demographics for the key minerals of potassium, calcium, iron and zinc, with the notable exception of iron intake in Uganda for lactating women (43.4%). At high intake levels, the contributions ranged from 6.7% to 17.4% for potassium, 10.7% to 32.1% for calcium, 13.2% to 108% for iron and 11.1% to 27.8% for zinc. The contributions were consistently higher in Ethiopia for zinc and consistently higher in Uganda for iron. This study suggests that okra can play an important role in micronutrient adequacy for young children and PLWs in the study sites, but this varies by intake level, location, and demographic group.	minerals of potassium, calcium, iron and zinc, with the notable exception of iron intake in Uganda for lactating women. At high intake levels, the contributions ranged from 6.7% to 17.4% for potassium, 10.7% to 32.1% for calcium, 13.2% to 108% for iron and 11.1% to 27.8% for zinc.	applied sciences. 2022;4(1):1-19. doi.org/10.1007/s42452-021-04898-6
Conflict; breastfeeding; child growth	1-Jan-22	The impact of civil conflict on child health: Evidence from Colombia Access to abstract only	Economics & Human Biology	Original Research	This study assessed Colombia's long-term conflict on child growth by evaluating whether exposure to conflict in utero or in early childhood was associated with worse growth outcomes up to 5 years of age. Data collected on approximately 23,000 children of the Demographic Health Surveys (DHS) between 2005-2010 were used in this study. Children were categorized as experiencing varying levels of conflict intensity during each stage of life based on counts of conflict-related violence in their area of residence. The study found exposure to conflict while in utero was associated with lower Z-scores for height-for-age (HAZ) (-0.06, p=0.02) and weight-for-age (WAZ) (-0.06, p=0.02). Sub-group analyses showed that this association existed only for rural communities (compared to urban) and that conflict exposure in utero is associated with negative impacts on HAZ and WAZ scores later in life (children in the 2-3 years and 4-5 years old category). For weight-for-height Z-scores (WHZ), the significant associations identified were in the opposite direction. Exposure to conflict in year 3 was associated with higher WHZ scores (0.05, p=0.02) whereas exposure in year 5 was associated with lower WHZ scores (-0.06, p=0.03). No significant associations were found for in utero exposure. In addition, no consistent significant associations were found between conflict in utero or early childhood for binary outcomes of stunting, wasting, or being underweight. One exception was for children exposed to conflict in year 1, underweight decreased (-0.01, p=0.01). No associations were found with the duration of breastfeeding (0.19; p=0.21) and anthropometric outcomes. The authors argue that any relationships between conflict and negative growth outcomes most likely occur during pregnancy and birth rather than through infant feeding practices.	Exposure to conflict in utero and in early life is negatively associated with child growth in Colombia. This association varies by nutritional index (e.g. WHZ, HAZ, WAZ), rural/urban location, and child age. Significant associations were found between conflict exposure and healthcare access during pregnancy and birth. Conversely, no associations were found between conflict exposure and breastfeeding practices.	Kreif N, Mirelman A, Suhrcke M, Buitrago G, Moreno-Serra R. The impact of civil conflict on child health: Evidence from Colombia. Economics & Human Biology. 2022;44:101074. doi.org/10.1016/j.ehb.2021.101074