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Table 1

Risk of Vertical Transmission of HIV with cART

Ref	Location * indicates breastfeeding population	Study Group	Study design	Years (data collection, if available, or publication)	Data BF= breastfeeding; VL= viral load; (c)ART= (combined) antiretroviral therapy; VT= vertical transmission (of HIV)
1	United Kingdom and Ireland	National Study of HIV in Pregnancy and Childhood (NSHPC)	National surveillance data	2000-2011	• 12,486 HIV-exposed infants delivered from 2000-2011 in the UK/Ireland. • VT declined from 2.1% in 2000-2001 (17/816, 95% CI: 1.2–3.3%) to 0.46% in 2010-2011 (9/1975, 95% CI: 0.21–0.86). • VT was 0.09% (6/6345) with undetectable VL (<50 copies/ml) near delivery, and 0.05% (2/3859) with undetectable VL on cART. • With preconception cART: 93% had undetectable VL at delivery (1894/2045), 5% were virally suppressed (50–399 copies/mL; 101/2045), and 2% had ≥400 copies/mL (50/2045). • With preconception cART: overall VT was 0.19% (4/2105), and VL was detectable (n = 3) or missing (n = 1) for transmitting mothers. • No transmissions occurred among those with preconception cART and undetectable VL at delivery (n=1894).
2	France	French Perinatal Cohort	Prospective cohort	2000-2011	• 8075 HIV-exposed infants delivered from 2000-2011. • VT was 0.2% (6/3505) with preconception cART, vs. 0.4% (3/709), 0.9% (24/2810), and 2.2% (23/1051) for those starting during the first, second, or third trimester (P < .001).
3	United States	Ponce Family and Youth Clinic of the Grady Health Systems	Retrospective chart review	2005-2012	• In review of all perinatal HIV cases treated in a regional referral center Atlanta, GA during this period, 24/27 (89%) were delivered by mothers with detectable VL. • Of those perinatally infected infants who delivered in the setting of undetectable VL, each had additional risk factors: prolonged rupture of membranes of unknown duration, placental abruption, and preterm delivery after third trimester VL >100,000. • Clear risk factors for VT: insufficient cART and/or prenatal care, illicit drug use
4	United States	IMPAACT	Prospective cohort	2002-2011	• In this multicenter study, 671 ART-naïve women started cART during pregnancy and 13.1% had a detectable VL at delivery. • 91.4% (117/128), 87.7% (399/455) and 76.1% (67/88) starting in first, second and third trimesters, respectively, achieved undetectable VL by delivery (P = 0.003). • The only case of VT (0.2%) in this cohort had third trimester initiation, nonadherence to cART, and VL >1000 near delivery.
5	Malawi, Mozambique, Tanzania, Rwanda, Botswana, Uganda, and Kenya*	DREAM, Mitra, Mitra Plus, AMATA, Mma Bana, Kisumu	Systematic review	2001-2009	• In 8 high quality clinical trials, up to 6 months of exclusive BF while on cART was associated with 0–1% postnatal VT.

Table 1 (continued)

Risk of Vertical Transmission of HIV with cART

Ref	Location * indicates breastfeeding population	Study Group	Study design	Years (data collection, if available, or publication)	Data BF= breastfeeding; VL= viral load; (c)ART= (combined) antiretroviral therapy; VT= vertical transmission (of HIV)
6	South Africa, Malawi, Tanzania, Uganda, Zambia, Zimbabwe and India*	PROMISE	Randomized controlled trial	2006-2011	• Postnatal VT (n=2431) after 6, 9 and 12 months of BF with maternal cART was 0.3% (95% CI 0.1-0.6), 0.5% (95% CI 0.2-0.8) and 0.6% (95% CI 0.4-1.1), respectively.
7	Botswana*	Mma Bana	Randomized controlled trial	2006-2008	730 women initiated cART from 26-34 weeks: • At enrollment: 13.6% had VL ≤1000, 19.6% had VL ≥100,000 and 23.3% had AIDS. • At 6 months postpartum, >90% had achieved and maintained viral suppression (<400 copies/mL) during pregnancy and BF. • Total VT was 1.1% (8/709), with 0.3% postnatal transmissions (2/709). • Of the two postnatal transmitting mothers, one postnatal had undetectable VL at delivery but subsequent "adherence issues" (by pill count or self-report); the other had VL >170,000 at enrollment and delivered at 32 weeks with a detectable VL.
8	Malawi*	BAN	Randomized controlled trial	2004-2010	849 infants BF for 28 weeks while mothers took cART: • Grade 3 or 4 adverse events included: 0.4% transaminitis (3), 19.6% anemia (166), 0.5% leukopenia (4), 1.1% thrombocytopenia (9), and 0.1% hypersensitivity rash (1). • These infants did not have an increased rate of events compared to 668 controls with just 1 week of postpartum maternal prophylaxis (RR 1.1; 95% CI 0.86-8.45).
9	Tanzania*	Kilombero and Ulanga Antiretroviral Cohort (KIULARCO)	Prospective cohort	2013-2016	215 women started ART before delivery, and continued it while exclusively BF for ≥ 5 months: • During BF, 91% of mothers had VL <1000 copies/mL, with 75% <100 copies/mL. • Two infants (1%) were infected from BF: one mother had high VL(144,111 copies/mL) one month postpartum, and the other mother stopped ART during BF. •There was no VT through BF among mothers with suppressed VL in this cohort
10	Mozambique, Malawi, Kenya, South Africa, Tanzania, Uganda, Zimbabwe, and India*	HPTN046 trial, Kisumu, BAN, DREAM, Mitra Plus, Vicente Ferrer HIV Cohort Study (VFHCS)	Systematic review and meta-analysis	2003-2010	Meta-analysis of 6 studies, including 3 cohorts embedded in RCTs and 3 observational studies, published 2009-2012, comprising 2109 BF infants with mothers on cART: • In pooled analysis, postpartum VT after 6 months of BF was 1.08% (95% CI 0.32-1.85), with range 0.24% (1/413; 95% CI 0.0%-1.40%) to 3.10% (4/127; 95% CI 1.20%-7.80%). •Limited or absent maternal VL or adherence data, routine initiation of cART late in pregnancy for majority of participants, many BF without viral suppression, rare preconception cART only in the setting of advanced HIV/AIDS, and infants did not receive current standard-of-care prophylaxis. • Very low quality evidence (GRADE profile) with "very serious" risk of bias, "very serious" inconsistency (I2=66.4%), "serious" indirectness, "not serious" imprecision.

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Table 2

Impact of Breastfeeding on Infant Health in High Income Countries

Ref	Location	Study design	Years (data collection, if available, or publication)	Data BF= breastfeeding; (c)ART= (combined) antiretroviral therapy; SIDS= sudden infant death syndrome; NEC= necrotizing enterocolitis
11	International	National surveillance data	2014	• Under-5 child mortality is 6.5/1000 in the US, vs. 83.1/1000 livebirths in Sub-Saharan Africa • Gastrointestinal and respiratory infections are leading causes of child mortality in low-income-countries, but not in high-income-countries. • In the US 83% of under-5 child deaths occur in the first year of life, a similar proportion to low-income-countries.
12	United States	National surveillance data	2013	• Infant mortality (5.96/1000 livebirths) is predominantly from complications of prematurity (36.1%) (eg. NEC, sepsis), and SIDS (6.7%). • Preterm infants disproportionately bear the morality burden, as they comprise 11.4% of livebirths, but 66.4% of deaths. • Infant mortality per 1,000 livebirths was 11.11 for non-Hispanic blacks vs. 5.06 for non-Hispanic whites, largely attributed to disparities in death from prematurity and SIDS (3 and 2 times higher mortality, respectively).
13	United States	Prospective cohort and retrospective review	2007-2010	• 18.6% of HIV-exposed infants are preterm (n=1869), with highest rates of spontaneous preterm delivery among those with preconception cART (OR 1.59, 95% CI 1.10-2.30). • Preterm birth occurred among 155 of 748 women (21%) with first-trimester exposure to cART and among 155 of 924 women (17%) with initial exposure to cART during the second or third trimester (P = .043, by the Fisher exact test). • Very preterm birth occurred among 3% of those with first-trimester exposure and among 1% of those with later exposure to combination regimens (P = .005, by the Fisher exact test), with risk up to 4 times greater with PI containing ART regimens, adjusted analysis (adjusted OR, 4.17; 95% CI, 1.70–10.26; P = .003), compared with no combination regimen in the first trimester.
14	United States	Prospective cohort	2001-2011	• Of 183 HIV-exposed infants, 31.2% were small for gestational age ≤10th percentile, with 12.6% weighing ≤3rd percentile.
15	France	Prospective cohort	2005-2009	• HIV-exposed infants (n=11,377) were twice as likely as the general population to be premature, with rates highest among those with preconception treatment.
16	High Income Countries	Confounder-adjusted meta-analyses	2016	• 11 studies showed 35% reduction (95% CI 14–51) in type 2 diabetes; • 23 high-quality studies with ≥1500 participants showed 13% lower overweight/obesity (95% CI 6–19); • 29 studies on asthma showed 9% (95% CI 2–15) reduction; • 18 studies on childhood leukemia showed 19% (95% CI 11–27) reduction; and, • 16 studies showed child intelligence quotient (IQ) increased by 3.4 points (95% CI 2.3–4.6).
17	Israel	Case-control	1995-2003	• Among 6198 preterm infants (<37 weeks), BF significantly decreased urosepsis (OR 0.314, 95% CI 0.140–0.707, P < 0.009).

Table 2 (continued)

Impact of Breastfeeding on Infant Health in High Income Countries

Ref	Location	Study design	Years (data collection, if available, or publication)	Data BF= breastfeeding; (c)ART= (combined) antiretroviral therapy; SIDS= sudden infant death syndrome; NEC= necrotizing enterocolitis
18	High Income Countries	Systematic review and meta-analysis	2007	• 4 randomized-controlled trials demonstrate BF decreases NEC 58% (95% CI 4-82). • In 23 studies, comprising 4,251 cases and 58,055 controls, "the overall risk of SIDS was twice as great for bottle-fed infants compared to [BF] infants," (OR 2.11; 95% CI 1.66–2.68). • BF prevents gastroenteritis (OR 0.36, 95% CI 0.18–0.74, P=0.005) and hospitalization for respiratory infections (RR 0.28, 95% CI 0.14–0.54). • Sub-analysis of 6 high-quality studies showed BF decreased SIDS by 36% (95% CI 19–49), adjusted summary odds ratio [SOR]: 0.64 [95% confidence interval (CI): 0.51–0.81]).
19	United Kingdom	Systematic review and economic model	2013	• A model of the impact of BF on preterm infants (n=51,703, the number born in the index year) demonstrated 190 fewer deaths from sepsis and NEC if the infants were BF vs. formula-fed while in the NICU.
20	High Income Countries	Meta-analysis	1995-2009	• The multivariable pooled estimate revealed decreased SIDS with any BF (OR 0.55, 95% CI: 0.44–0.69). • SIDS risk is lowest with exclusive BF (OR 0.27; 95% CI, 0.27–0.31).
21	United States	Monte Carlo simulation and cost-analysis	2016	• An estimated 721 excess pediatric deaths/year were attributed to suboptimal BF in the US, mostly from SIDS (n = 492) and NEC (n = 190). • Increased uptake of BF decreased this estimate from 911 excess deaths in 2010.
22	United States	National surveillance data	2014	• Acute lower respiratory and gastrointestinal infections caused 476 US infant deaths (12/100,000 livebirths). • 275 deaths of children <15 years old from sepsis.
23	United States	Umbrella review	2016	• Acute otitis media, which affects ☐80% under 3 years, is decreased by 40-50% with BF (OR 0.50, 95% CI 0.36–0.70).
24	United States	National surveillance data	2014	• Mortality from perinatal HIV is extremely low: there was 1 death among 1,995 children <13 with perinatal HIV, 0.05/100 child-years.
25	United States	National surveillance data and population-based surveys	2014-2015	Healthy People 2020 Objectives: • 81.1% of US women initiate BF; target 81.9% • 51.8% are BF at 6 months; target 60.6% • 30.7% are BF at 1 year; target 34.1% • Exclusively BF at 3 months: 44.4%; target 46.2% • Exclusively BF at 6 months:22.3%; target 25.5% • Reduce proportion of BF newborns who receive formula supplementation in first two days of life: 17.1%; target 14.2% • Increase proportion of livebirths occurring in facilities providing recommended lactation care: 18.3%; target 8.1%

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Table 3

Impact of Breastfeeding on Maternal Health in High Income Countries

Ref	Location	Study design	Years (data collection, if available, or publication)	Data BF= breastfeeding
26	United States	Secondary analysis of prospective cohorts	1994-2005	• Among 139,681 parous participants in the Women's Health Initiative, women who had lactated were less likely to be obese, hypertensive, diabetic or hyperlipidemic than those who had not, with direct dose-response observed.
27	United States	Secondary analysis of prospective cohort	1986-2002	• In the Nurses' Health Study of 89,326 parous women over 1,350,965 years of follow-up demonstrated that 2 years of cumulative lifetime BF reduced myocardial infarction by 23% (95% CI 6–38%, p-value=0.02), with 34% reduction (HR 0.66, 95% CI, 0.49-0.89) in first 30 years after last delivery.
28	United States	Secondary analysis of prospective cohort	1991-2005	• Women who never BF are more likely to develop hypertension than those who BF ≥6 months (HR 1.29, 95% CI: 1.20-1.40).
29	United States, Italy, Canada, Australia, Poland, China, and Sweden	Meta-analysis	1992-2013	• Analysis of 8,981 women with endometrial cancer and 17,241 control women demonstrated that ever having BF was associated with an 11% reduction in risk of endometrial cancer (pooled OR 0.89, 95% CI 0.81-0.98).
30	United Kingdom	Cross-sectional analysis of population-based survey	1996-2001	• BMI decreased 1% per 6 months of BF among 740,628 British women.
31	United States, Germany, Australia, and China	Systematic review and meta-analysis	1989-2008	• Meta-analysis demonstrates 32% lower risk of type 2 diabetes (OR 0.68, 95% CI 0·57–0·82), with risk decreasing ~11% per 3 months of BF.
32	High Income Countries	Systematic review and meta-analysis	2015	• Meta-analysis of 72 studies showed 19% decrease in breast carcinoma (pooled OR 0.81, 95% CI 0.77-0.85, p<.001) with any BF compared to never BF, and after fine adjustment of international data for parity and other confounders risk was reduced 7% (OR 0.93, 95% CI 0.89–0.97). • 35 studies on ovarian cancer demonstrated 26% reduction with any BF (OR 0.74, 95% CI 0.68–0.80, p<.001), and 18% reduction in finely adjusted sub-analysis of international data (OR 0.82, 95% CI 0.75–0.89).
33	International	Systematic review and meta-analysis	1960-2010	• Among parous women, BF has a stronger inverse association with hormone/triple-negative breast cancer (OR 0.78; 95% CI 0.66–0.91) than BF alone. • Meta-analysis shows a protective effect of ever BF against hormone receptor-negative breast cancers, which are more common in younger women and generally have a poorer prognosis than other subtypes of breast cancer. •Because black women have elevated baseline risk of hormone-and-triple-negative breast cancers, BF decreases their risk by 19%.

Table 3 (continued)

Impact of Breastfeeding on Maternal Health in High Income Countries

Ref	Location	Study design	Years (data collection, if available, or publication)	Data BF= breastfeeding
34	United States	Retrospective case-control with Arizona state surveillance data	2003-2007	• Among 1466 singleton infant deaths, short interpregnancy intervals significantly increased mortality and preterm birth, even after adjusting for confounders. • Mortality risk was increased with short birth intervals (aOR 1.68, 95% CI 1.09–2.59, p <.05) vs. the optimal interval (18–23 months); infant mortality is 76 % higher for interpregnancy interval <6 months and 38 % higher for 12–17 months. • After adjusting for confounders, short intervals increased risk for subsequent preterm birth: aOR 4.44 (95% CI, 3.35–5.89, p<.01), and small for gestational age: aOR 1.96 (95% CI 1.45–2.66, p<.01).
35	Latin America; United States	Retrospective cohort study	1985-1997; 1989-1997	• Among 456,889 Latin American women, maternal death was more likely with interpregnancy interval <6 months (aOR 2.5; 95% CI 1.2-5.4) • A second pregnancy within 12 months postpartum significantly increased the risk of placental abruption by 52% and 111% among women whose first births were vaginal and cesarean, respectively. Interpregnancy intervals <12 months were associated with 70% increased risk of placenta previa for women with a prior cesarean first birth (n= 156,475; RR 1.7, 95% ci 0.9-3.1).
36	Brazil, Philippines, and Zimbabwe	Meta-analysis	1982-2004	• Subsequent pregnancies are also affected, as birth intervals <18 months are independently associated with SGA (aOR 1.51), prematurity (aOR 1.58), and infant mortality (aOR 1.83).
37	United States	Monte Carlo simulation and cost-analysis	2016	• Approximately 2,605 maternal deaths per year are attributed to suboptimal initiation and duration of BF.
38	United States	National surveillance data	2015	Examples of Racial and Ethnic Health Disparities: • % of pregnancies that are unintended: Black (69%), Hispanic (56%), White (42%) • % of livebirths that are premature: Black (17%), Hispanic (12%), White (10%) • Maternal deaths per 100,000 livebirths: Black (26), Hispanic (5), White (7) • Breast cancer deaths per 100,000 population: Black (31), Hispanic (15), White (22) • Diabetes-related deaths per 100,000 population: Black (33), Hispanic (13), White (24)
39	United States	Secondary analysis of observational study data	1993-2010	In confounder-adjusted analysis of the Women's Health Initiative Observational Study data: • Ever BF had a 23% lower risk of stroke than never BF (adjusted hazard ratio=0.77; 95% confidence interval 0.70□0.83). • Stroke risk was most decreased with BF among non□Hispanic black women (adjusted hazard ratio=0.52; 95% confidence interval 0.37□0.71). • Breastfeeding for a relatively short duration (1□6 months) was associated with a 19% lower risk of stroke (adjusted hazard ratios=0.81; 95% confidence interval 0.74□0.89).

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Works Cited for Supplemental Tables

(bold entries not referenced directly in primary manuscript)

1. Townsend, C. L., L. Byrne, M. Cortina-Borja, C. Thorne, A. de Ruiter, H. Lyall, G. P. Taylor, C. S. Peckham, and P. A. Tookey. 2014. "Earlier Initiation of ART and further Decline in Mother-to-Child HIV Transmission Rates, 2000-2011." AIDS (London, England) 28 (7): 1049-1057.
2. Mandelbrot, L., R. Tubiana, J. Le Chenadec, C. Dollfus, A. Faye, E. Pannier, S. Matheron, et al. 2015. "No Perinatal HIV-1 Transmission from Women with Effective Antiretroviral Therapy Starting before Conception." Clinical Infectious Diseases : An Official Publication of the Infectious Diseases Society of America 61 (11): 1715-1725.
3. Camacho-Gonzalez, A. F., M. H. Kingbo, A. Boylan, A. R. Eckard, A. Chahroudi, and R. Chakraborty. 2015. "Missed Opportunities for Prevention of Mother-to-Child Transmission in the United States." AIDS (London, England) 29 (12): 1511-1515.
4. **Katz, I. T., E. Leister, D. Kacanek, M. D. Hughes, A. Bardeguez, E. Livingston, A. Stek, D. E. Shapiro, and R. Tuomala. 2015. "Factors Associated with Lack of Viral Suppression at Delivery among HAART-NaÃ¨ve HIV-Positive Women in the International Maternal Pediatric Adolescent AIDS Clinical Trials Group (IMPAACT) P1025 Study." Annals of Internal Medicine 162 (2): 90-99.**
5. Morrison, P., K. Israel-Ballard, and T. Greiner. 2011. "Informed Choice in Infant Feeding Decisions can be Supported for HIV-Infected Women Even in Industrialized countries." AIDS (London, England) 25 (15): 1807-1811.
6. Taha T.E., P. Flynn, M. Cababasay, et al. 2016. "Comparing maternal triple antiretrovirals and infant nevirapine prophylaxis for the prevention of mother-to-child transmission of HIV during breastfeeding." Poster presented at: 21st International AIDS Conference. Durban, South Africa.
7. Shapiro, R. L., M. D. Hughes, A. Ogwu, D. Kitch, S. Lockman, C. Moffat, J. Makhema, et al. 2010. "Antiretroviral Regimens in Pregnancy and Breast-Feeding in Botswana." N Engl J Med 362 (24): 2282-2294.
8. **Chasela, Charles S., Michael G. Hudgens, Denise J. Jamieson, Dumbani Kayira, Mina C. Hosseinipour, Athena P. Kourtis, Francis Martinson, et al. 2010. "Maternal Or Infant Antiretroviral Drugs to Reduce HIV-1 Transmission." N Engl J Med 362 (24): 2271-2281.**
9. **Luoga E et al. 'HIV transmission from mothers on antiretroviral therapy to their infants during breastfeeding in rural Tanzania.' Abstract No. PS5/5, Proceedings of the 16th European AIDS Conference (EACS 2017), Milan, Italy, October 25–27, (2017).**
10. Bispo, Stephanie, Lana Chikhungu, Nigel Rollins, Nandi Siegfried, and Marie-Louise Newell. 2017. "Postnatal HIV Transmission in Breastfed Infants of HIV-Infected Women on ART: A Systematic Review and Meta-Analysis." Journal of the International AIDS Society 20 (1): 21251.
11. **You, Danzhen, Lucia Hug, Simon Ejdemyr, Priscila Idele, Daniel Hogan, Colin Mathers, Patrick Gerland, Jin Rou New, and Leontine Alkema. 2015. "Global, Regional, and National Levels and Trends in Under-5 Mortality between 1990 and 2015, with Scenario-Based Projections to 2030: A Systematic Analysis by the UN Inter-Agency Group for Child Mortality Estimation." Lancet (London, England) 386 (10010): 2275-2286.**
12. Matthews, T. J., M. F. MacDorman, and M. E. Thoma. 2015. "Infant Mortality Statistics from the 2013 Period Linked Birth/Infant Death Data Set." National Vital Statistics Reports: From the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System 64 (9): 1-30.
13. Watts, D. H., P. L. Williams, D. Kacanek, R. Griner, K. Rich, R. Hazra, L. M. Mofenson, H. A. Mendez, and Pediatric HIV/AIDS Cohort Study. 2013. "Combination Antiretroviral use and Preterm Birth." The Journal of Infectious Diseases 207 (4): 612-621.
14. **Aaron, E., A. Bonacquisti, L. Mathew, G. Alleyne, L. P. Bamford, and J. F. Culhane. 2012. "Small-for-Gestational-Age Births in Pregnant Women with HIV, due to Severity of HIV Disease, Not Antiretroviral Therapy." Infectious Diseases in Obstetrics and Gynecology 2012: 135030.**
15. **Sibiude, J., J. Warszawski, R. Tubiana, C. Dollfus, A. Faye, C. Rouzioux, J. P. Teglas, D. Ekoukou, S. Blanche, and L. Mandelbrot. 2012. "Premature Delivery in HIV-Infected Women Starting Protease Inhibitor Therapy during Pregnancy: Role of the Ritonavir Boost?" Clinical Infectious Diseases : An Official Publication of the Infectious Diseases Society of America 54 (9): 1348-1360.**
16. Victora, C. G., R. Bahl, A. J. Barros, G. V. Franca, S. Horton, J. Krasevec, S. Murch, et al. 2016. "Breastfeeding in the 21st Century: Epidemiology, Mechanisms, and Lifelong Effect." Lancet (London, England) 387 (10017): 475-490.
17. Levy, I., J. Comarsca, M. Davidovits, G. Klinger, L. Sirota, and N. Linder. 2009. "Urinary Tract Infection in Preterm Infants: The Protective Role of Breastfeeding." Pediatric Nephrology (Berlin, Germany) 24 (3): 527-531.
18. Ip, S., M. Chung, G. Raman, P. Chew, N. Magula, D. DeVine, T. Trikalinos, and J. Lau. 2007. "Breastfeeding and Maternal and Infant Health Outcomes in Developed Countries." Evidence Report/Technology Assessment (153) (153): 1-186.
19. Mahon, J., L. Claxton, and H. Wood. 2016. "Modelling the Cost-Effectiveness of Human Milk and Breastfeeding in Preterm Infants in the United Kingdom." Health Economics Review 6: 0.
20. **Hauck, Fern R., John M. D. Thompson, Kawai O. Tanabe, Rachel Y. Moon, and Mechtild M. Vennemann. 2011. "Breastfeeding and Reduced Risk of Sudden Infant Death Syndrome: A Meta-Analysis." Pediatrics 128 (1): 103-110.**
21. **Bartick, M. C., E. B. Schwarz, B. D. Green, B. J. Jegier, A. G. Reinhold, T. T. Colaizy, D. L. Bogen, A. J. Schaefer, and A. M. Stuebe. 2016. "Suboptimal Breastfeeding in the United States: Maternal and Pediatric Health Outcomes and Costs." Maternal & Child Nutrition.**
22. Kochanek, Kenneth D., Sherry L. Murphy, Jiaquan Xu, and Betzaida Tejada-Vera. 2016. "Deaths: Final Data for 2014." National Vital Statistics Reports: From the Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System 65 (4): 1-122.
23. **Lodge, C. J., G. Bowatte, M. C. Matheson, and S. C. Dharmage. 2016. "The Role of Breastfeeding in Childhood Otitis Media." Current Allergy and Asthma Reports 16 (9): 0.**
24. Centers for Disease Control and Prevention. 2016. "HIV Surveillance Report, 2015." http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Accessed July 8, 2017.
25. **National Center for Chronic Disease Prevention and Health Promotion: Division of Nutrition, Physical Activity, and Obesity. 2016. "Breastfeeding Report Card Progressing Toward National Breastfeeding Goals United States, 2016: CDC National Immunization Surveys 2014 and 2015, among children born in 2013."**
26. **Schwarz, E. B., R. M. Ray, A. M. Stuebe, M. A. Allison, R. B. Ness, M. S. Freiberg, and J. A. Cauley. 2009. "Duration of Lactation and Risk Factors for Maternal Cardiovascular Disease." Obstetrics and Gynecology 113 (5): 974-982.**
27. Stuebe, A. M., K. B. Michels, W. C. Willett, J. E. Manson, K. Rexrode, and J. W. Rich-Edwards. 2009a. "Duration of Lactation and Incidence of Myocardial Infarction in Middle to Late Adulthood." American Journal of Obstetrics and Gynecology 200 (2): 138.e8.

The Journal of Law, Medicine & Ethics, 47 (2019): S1-S9. © 2019 The Author(s)

28. **Stuebe, A. M., E. B. Schwarz, K. Grewen, J. W. Rich-Edwards, K. B. Michels, E. M. Foster, G. Curhan, and J. Forman. 2011. "Duration of Lactation and Incidence of Maternal Hypertension: A Longitudinal Cohort Study." American Journal of Epidemiology 174 (10): 1147-1158.**
29. Jordan, S. J., R. Na, S. E. Johnatty, L. A. Wise, H. O. Adami, L. A. Brinton, C. Chen, et al. 2017. "Breastfeeding and Endometrial Cancer Risk: An Analysis from the Epidemiology of Endometrial Cancer Consortium." Obstetrics and Gynecology 129 (6): 1059-1067.
30. **Bobrow, K. L., M. A. Quigley, J. Green, G. K. Reeves, and V. Beral. 2013. "Persistent Effects of Women's Parity and Breastfeeding Patterns on their Body Mass Index: Results from the Million Women Study." International Journal of Obesity (2005) 37 (5): 712-717.**
31. **Aune, D., T. Norat, P. Romundstad, and L. J. Vatten. 2014. "Breastfeeding and the Maternal Risk of Type 2 Diabetes: A Systematic Review and Dose-Response Meta-Analysis of Cohort Studies." Nutrition, Metabolism, and Cardiovascular Diseases : NMCD 24 (2): 107-115.**
32. **Chowdhury, R., B. Sinha, M. J. Sankar, S. Taneja, N. Bhandari, N. Rollins, R. Bahl, and J. Martines. 2015. "Breastfeeding and Maternal Health Outcomes: A Systematic Review and Meta-Analysis." Acta Paediatrica (Oslo, Norway : 1992) 104 (467): 96-113.**
33. Islami, F., Y. Liu, A. Jemal, J. Zhou, E. Weiderpass, G. Colditz, P. Boffetta, and M. Weiss. 2015a. "Breastfeeding and Breast Cancer Risk by Receptor Status--a Systematic Review and Meta-Analysis." Annals of Oncology: Official Journal of the European Society for Medical Oncology 26 (12): 2398-2407.
34. **Hussaini, K. S., D. Ritenour, and D. V. Coonrod. 2013. "Interpregnancy Intervals and the Risk for Infant Mortality: A Case Control Study of Arizona Infants 2003-2007." Maternal and Child Health Journal 17 (4): 646-653.**
35. **Getahun, Darios, Yinka Oyelese, Hamisu M. Salihu, and Cande V. Ananth. 2006. "Previous Cesarean Delivery and Risks of Placenta Previa and Placental Abruption." Obstetrics & Gynecology 107 (4): 771–778.**
36. **Kozuki, N., A. C. C. Lee, M. F. Silveira, C. G. Victora, L. Adair, J. Humphrey, R. Ntozini, R. E. Black, and J. Katz. 2013. "The Associations of Birth Intervals with Small-for-Gestational-Age, Preterm, and Neonatal and Infant Mortality: A Meta-Analysis." BMC Public Health 13 (Suppl 3): S3.**
37. **See reference #21 above**
38. **"ACOG Committee Opinion no. 649: Racial and Ethnic Disparities in Obstetrics and Gynecology." 2015.Obstetrics and Gynecology 126 (6): 130.**
39. Jacobson, Lisette T., Erinn M. Hade, Tracie C. Collins, Karen L. Margolis, Molly E. Waring, Linda V. Van Horn, Brian Silver, Maryam Sattari, Chloe E. Bird, and Kim Kimminau. 2018. "Breastfeeding History and Risk of Stroke among Parous Postmenopausal Women in the Women's Health Initiative." Journal of the American Heart Association 7 (17): e008739.

Additional sources for online supplement: works consulted but not cited

Risk of vertical transmission with cART

- Sturt AS, Dokubo EK, Sint TT. Antiretroviral therapy (ART) for treating HIV infection in ART-eligible pregnant women. Cochrane Database Syst Rev. 2010;(3):CD008440.
- Lunney KM, Iliff P, Mutasa K, et al. Associations between breast milk viral load, mastitis, exclusive breastfeeding, and postnatal transmission of HIV. Clin Infect Dis. 2010;50(5):762-769.
- Birkhead GS, Pulver WP, Warren BL, et al. Progress in prevention of mother-to-child transmission of HIV in New York state: 1988-2008. J Public Health Manag Pract. 2010;16(6):481-491.
- Momplaisir FM, Brady KA, Fekete T, Thompson DR, Diez Roux A, Yehia BR. Time of HIV diagnosis and engagement in prenatal care impact virologic outcomes of pregnant women with HIV. PLoS One. 2015;10(7):e0132262.
- Del Bianco G, Bell CS, Benjamins LJ, et al. Persistently high perinatal transmission of HIV: Assessment of risk factors. Pediatr Infect Dis J. 2014;33(6):151.
- Johnson LF, Stinson K, Newell ML, et al. The contribution of maternal HIV seroconversion during late pregnancy and breastfeeding to mother-to-child transmission of HIV. J Acquir Immune Defic Syndr. 2012;59(4):417-425.

Health risks for HIV-exposed US infants

- Mofenson LM. Antiretroviral therapy and adverse pregnancy outcome: The elephant in the room? J Infect Dis. 2016;213(7):1051-1054.
- INSIGHT START Study Group, Lundgren JD, Babiker AG, et al. Initiation of antiretroviral therapy in early asymptomatic HIV infection. N Engl J Med. 2015;373(9):795-807.
- Adams JW, Brady KA, Michael YL, Yehia BR, Momplaisir FM. Postpartum engagement in HIV care: An important predictor of long-term retention in care and viral suppression. Clin Infect Dis. 2015;61(12):1880-1887.

The Journal of Law, Medicine & Ethics, 47 (2019): S1-S9.

- Nachega JB, Uthman OA, Anderson J, et al. Adherence to antiretroviral therapy during and after pregnancy in low-income, middle-income, and high-income countries: a systematic review and meta-analysis. AIDS. 2012;26(16):2039-2052.

Breastfeeding impact on maternal and infant health in high-income settings

- American Academy of Pediatrics. Breastfeeding and the use of human milk. Pediatrics. 2012;129(3):827.
- Victora, C. G., B. L. Horta, C. Loret de Mola, L. Quevedo, R. T. Pinheiro, D. P. Gigante, H. Goncalves, and F. C. Barros. 2015. "Association between Breastfeeding and Intelligence, Educational Attainment, and Income at 30 Years of Age: A Prospective Birth Cohort Study from Brazil." The Lancet.Global Health 3 (4): 199.
- United States Cancer Statistics Working Group. Age-Adjusted Cancer Death Rates for the 10 Primary Sites with the Highest Rates within Race- and Ethnic-Specific Categories. https://nccd.cdc.gov/uscs/toptencancers.aspx. Accessed October 7, 2017.
- Dias CC, Figueiredo B. Breastfeeding and depression: a systematic review of the literature. J Affect Disord 2015;171:142-154.

Ethics and health disparities affecting WLHIV

- Beer L, Mattson CL, Bradley H, Skarbinski J, Medical Monitoring Project. Understanding Cross-Sectional Racial, Ethnic, and Gender Disparities in Antiretroviral Use and Viral Suppression Among HIV Patients in the United States. Medicine (Baltimore). 2016 Mar;95(13):e3171.
- Chang S, Yu Y, Carlsson NP, Liu X, Colditz GA. Racial disparity in life expectancies and life years lost associated with multiple obesity-related chronic conditions. Obesity. 2017;25(5):950-957.
- Denning, P., and DiNenno, E. Communities in crisis: Is there a generalized HIV epidemic in impoverished urban areas of the United States? https://www.cdc.gov/hiv/group/poverty.html. Accessed April 30, 2017.
- Hardeman RR, Medina EM, Kozhimannil KB. Structural racism and supporting black lives - the role of health professionals. N Engl J Med. 2016.
- Forbes, B. How to get donor milk from a milk bank: Interview with Pauline Sakamoto, president, HMBANA. Best for babes website. http://www.bestforbabes.org/how-to-get-donor-milk-from-a-milk-bank-interview-with-pauline-sakamoto-president-hmbana/. Published May 15, 2010; Updated May 19, 2016. Accessed October 16, 2016.
- Court refuses HIV-infected mother custody of baby. Aids Alert. 1999;14(6):72.
- Wolf LE, Lo B, Beckerman KP, Dorenbaum A, Kilpatrick SJ, Weintrub PS. When parents reject interventions to reduce postnatal human immunodeficiency virus transmission. Arch Pediatr Adolesc Med. 2001;155(8):927-933.
- Greiner, T., M. Sachs, and P. Morrison. 2002. "The Choice by HIV-Positive Women to Exclusively Breastfeed should be Supported." Archives of Pediatrics & Adolescent Medicine 156 (1): 87-88.
- Kennedy VL, Loutfy MR, Brophy J. Issues in applying a harm reduction approach to breastfeeding in the context of maternal HIV. Clin Infect Dis. 2015;60(4):672-674.
- Hepple B, Nuffield Council on Bioethics. Public health: Ethical issues. London: Nuffield Council on Bioethics; 2007:191.