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Questioning the ethics of international research on formula milk supplementation in low-income African countries: response

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We thank Nankabirwa and colleagues for their response[1] to our commentary.[2] We concur that well-supported early, exclusive breast feeding (EBF) has important health benefits for infants. We also agree that strategies to prevent infant growth impairment are urgently needed. However, we are concerned that supplementing all low birthweight newborns with commercial milk formula, during the first 30 days, is ill considered as a possible solution and has potential for harm in these two countries where 40% of families lack access to basic drinking water services. Introducing commercial milk formula in the first 3 days, when frequent breast feeding is so critical to establish lactation and breast feeding, may also have a negative impact on these processes.

We fully share the trial authors' wish to help infants who fail to thrive while breast feeding and we applaud sincere efforts in this respect. We agree that there are situations where breast feeding is not adequate or indeed not possible. However, the trial was not designed to assess the need for an update to the WHO (2009) acceptable medical reasons for use of breast milk substitutes.[3] The current WHO recommendation regarding the duration of EBF was based on a systematic review[4] which concluded that: 'neither the trials nor the observational studies suggest that infants who continue to be exclusively breastfed for 6 months show deficits in weight or length gain, although larger sample sizes would be required to rule out modest differences in risk of undernutrition'. A 2012 update of this review concluded that: 'Although infants should still be managed individually so that insufficient growth or other adverse outcomes are not ignored and appropriate interventions are provided, the available evidence demonstrates no apparent risks in recommending, as a general policy, EBF for the first 6 months of life in both developing and developed country settings'.[5] Furthermore, a rationale for the WHO multicentre growth reference study[6] was that formula-fed infants grow on a different and higher trajectory than breastfed infants.[7]

There is overwhelming evidence that EBF for 6 months prevents morbidity and mortality, particularly in the first months of life when infants are at highest risk of infection-related mortality.[8 9] Early supplementation with commercial milk formula increases infection risk and alters the gut microbiota.[10] There is extensive evidence from the HIV epidemic that introduction of commercial milk formula increases infant morbidity and mortality.[11] In a study undertaken in Uganda,[12] the mortality risk among formula-fed infants was sixfold higher at 12 months of age. The formula was provided free of charge with good training and supervision by the health system.

Early supplementation of low birthweight newborns with commercial milk formula is not a sustainable or safe public health

SUMMARY BOX

⇒ Well-supported early, exclusive breast feeding has important health benefits for infants.
⇒ We argue that supplementation with commercial milk formula, during the first 30 days, is ill considered as a possible intervention for small and at-risk newborns and has potential for harm within the research settings.
⇒ Interventions to address infant growth impairment must be sustainable, scalable and not increase harm.

intervention. We agree with Nankabirwa and colleagues that all who care for small and at-risk infants need to join together to improve infant nutrition, growth, health and survival. We argue that any proposed interventions must be sustainable, scalable and not increase harm. We believe early supplementation of low birthweight newborns with expensive human milk oligosaccharide-enhanced commercial milk formula is not a scalable, sustainable or safe public health intervention.

All of the authors of the commentary are researchers or health professionals with considerable experience in low/middle-income countries. We respect institutional review boards and in no way intend to impugn their integrity. According to Nankabirwa and colleagues, the ethical committees who approved and monitored the PRIMES trial were highly engaged and active in evaluating the study and modifying its design to ensure appropriateness for local context. Making public these deliberations would help us understand their decisions.

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