

13th September, 2017

To whom it may concern,

We welcome the opportunity to give input to SACN consultation 'Feeding in the first year of life'. Here we note some evidence pertaining to the SACN inclusion criteria, which we would suggest be considered in relation to the SACN's goals, along with brief comments.

We note the SACN's overall recommendations for exclusive breastfeeding for the first six months' of a baby's life; on the basis of some randomized and further observational evidence from developed country settings, showing reductions in the risk of acute upper respiratory tract infections, diarrhoea, and otitis media, with exclusive breastfeeding as compared to partial or no breastfeeding. All three outcomes are, as noted by SACN, contributors at a national level to infant morbidity.

However, as noted by SACN substantial proportions of women stop breastfeeding early during their baby's life. Evidence from the Infant Feeding Survey 2010 (cited by SACN) and from the global research literature suggests one major reason is insufficient milk supply.

- Li R, Fein SB, Chen J and Grummer-Strawn LM (2008). Why mothers stop breastfeeding: mothers' self-reported reasons for stopping during the first year. *Paediatrics*, 122 Suppl 2:S69-76.
- Otoo GE, Lartey AA and Pérez-Escamilla R (2008). Perceived Incentives and Barriers to Exclusive Breastfeeding Among Periurban Ghanaian Women. *J Hum Lact*, 25(1): 34–41.
- Newby RM and Davies PS (2016). Why do women stop breast-feeding? Results from a contemporary prospective study in a cohort of Australian women. *Eur J Clin Nutr*, 70(12):1428-1432.

Estimates of the actual incidence of insufficient milk supply or delayed onset of lactogenesis II range from 22% to 44%.

- Dewey KG, Nommsen-Rivers LA, Heinig MJ and Cohen RJ (2003). Risk factors for suboptimal infant breastfeeding behavior, delayed onset of lactation, and excess neonatal weight loss. *Pediatrics*, Sep;112(3 Pt 1):607-19.
- Nommsen-Rivers LA, Chantry CJ, Pearson JM, Cohen RJ, and Dewey KG (2010). Delayed onset of lactogenesis among first-time mothers is related to maternal obesity and factors associated with ineffective breastfeeding. *Am J Clin Nutr*, 92(3), 574-58.

The risks of insufficient milk supply include malnutrition to the baby, hypoglycaemia, hyperbilirubinemia and/or hypernatremia.

- Samayam P, Ranganathan PK, Kotari UD and Balasundaram R (2015). Study of Asymptomatic Hypoglycemia in Full Term Exclusively Breastfed Neonates in First 48 Hours of Life. *J Clin Diagn Res*, 9(9): SC07–SC10.

We are concerned to note that the document contains no mention of the potentially life-changing and threatening complications caused by hypoglycaemia, hyperbilirubinemia and/or hypernatraemia.

- Boskabadi H, Akhondian J, Afarideh M, Maamouri G, Bagheri S, Parizadeh SM, Mobarhan MG, Mohammadi S and Frens GA (2017). Long-Term Neurodevelopmental Outcome of Neonates with Hypernatremic Dehydration. *Breastfeed Med*, 12:163-168.

The outcomes of such feeding related complications should be considered in any cost:benefit analyses, particularly in relation to SACN's comment that increased breastfeeding rates would produce cost-savings for the UK health service.

Furthermore, it is critical to understand whether the increases in breastfeeding rates that would be required to achieve the savings described in SACN's report on p30 can actually be achieved; *how* this can be achieved, and how much it would cost to achieve this. The modelling conducted by Renfrew et al (2012) and Pohkrel et al (2014) does not establish what it would cost to achieve the increase in rates required, or whether the type of interventions advocated will deliver the necessary improvement in rates. More recently, a systematic review of cost-effectiveness studies failed to identify any breastfeeding promotion studies which could be used to calculate "return on investment":

- Masters R, Anwar E, Collins B, Cookson R and Capewell S (2017). Return on investment of public health interventions: a systematic review. *J Epidemiol Community Health*, 71(8):827-834.

If more mothers are encouraged to breastfeed then it follows that the incidence of breastfeeding related morbidities such as thrush, mastitis, subclinical mastitis, cracked nipples, D-MER and other associated conditions are also likely to increase, and this should also be considered in any cost analysis.

With regards to helping mother breastfeed for longer, two recent randomized studies have sought to identify how such mothers might be helped:

- Flaherman VJ, Aby J, Burgos AE, Lee KA, Cabana MD and Newman TB. (2013). Effect of early limited formula on duration and exclusivity of breastfeeding in at-risk infants. *Pediatrics*, 131(6):1059-65.
- Straňák Z, Feyereislova S, Černá M, Kollárová J, Feyereisl J (2016). Limited Amount of Formula May Facilitate Breastfeeding: Randomized, Controlled Trial to Compare Standard Clinical Practice versus Limited Supplemental Feeding. *PLoS One*, 26;11(2):e0150053.

It has long been assumed that in seeking to achieve exclusive breastfeeding (as per SACN's recommendations), all supplementation must be avoided. This assumption has been driven by observational evidence indicating associations between use of supplementation and greater likelihood of stopping breastfeeding, or lower likelihood of achieving exclusive breastfeeding later on. However, the two trials noted above suggest that this assumption is false and likely a result of confounding, and that mothers whose babies have experienced moderate weight loss may benefit from being advised to 'top up' with small amounts of formula. A further trial, planned to recruit 328 infants, is currently ongoing and is anticipated to complete primary outcome data collection in Dec 2017: <https://clinicaltrials.gov/show/NCT02313181>.

Together, these studies indicate that caution should be advised regarding the direct promotion to mothers to exclusively breastfeed at all costs, and to avoid all formula; some mother/baby pairs will benefit from limited formula introduction and this may even assist with the establishment of breastfeeding.

Further studies indicate that negative emotional consequences are common for mothers who are feeding their babies formula. These researchers note limitations but conclude: “current approach to infant feeding promotion and support in higher income countries may be paradoxically related to significant issues with emotional wellbeing”:

- Fallon V, Komninou S, Bennett KM, Halford JC, Harrold JA (2016). The emotional and practical experiences of formula-feeding mothers. *Matern Child Nutr*, doi: 10.1111/mcn.12392 [Epub ahead of print].

Given this work we would urge SACN to consider ensuring that messages directly targeted towards families are sufficiently flexible to permit them to safely and adequately feed their babies, without negative stigma, and acknowledging that not all parents can or choose to breastfeed fully for the first six months of their baby's life.

As a general comment, we would caution definitive conclusions regarding causation based on observational studies. As the SACN report states ‘in relation to infant feeding, it is necessary to use additional evidence from observational cohort studies, although the latter cannot be used to infer causation’. Furthermore, any claims should be backed up with suitable scientific references; for example, the report states that “some limited evidence suggests that formula-fed and breastfed infants differ in their ability to regulate milk intake; formula fed infants may not do so until they are over six weeks of age”, yet provides no evidence for this claim.

Thank you for the opportunity to contribute. Infant Feeding Support UK is strongly committed to communicating safe, unbiased and science-based infant feeding information to parents and carers.

Yours faithfully,

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Infant Feeding Support UK