Paediatric update

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Welcome to our paediatric nutrition column 'Paediatric update'. In each column, Kiran Atwal, Freelance Paediatric Dietitian, will update you on new guidance, tools and current affairs. Here, Kiran explores the *US infant formula shortage – what lessons can be learnt?*

In 2022, one of the largest infant formula manufacturers in the US was forced to shut down production following bacterial contamination in several products. This triggered a mass product recall and subsequent out-of-stock rate, which reached up to 50% in many states. Whilst this risked patient safety in infants and created unprecedented uncertainty for parents, the American Academy of Pediatrics (AAP) outlined management recommendations during this time.[1]

However, the impact on clinical services was not fully explored until last month when the results of a US healthcare provider practice survey were published. The survey aimed to understand the practice changes during the infant formula shortage, the actions taken by parents and the consequences on infant health. The survey was distributed to 3,000 members of the American Society for Parenteral and Enteral Nutrition, and 241 members responded (94% were dietitians, of which 77% were hospital-based). More than half of the healthcare professional (HCP) respondents reported at least 50% of patients had difficulty obtaining infant formula (including specialised infant formulas for medical purposes).[2]

The following themes were identified from the survey:

- Healthcare professional adaptions: Almost all HCPs (97%) recommended switching to alternative brands; 67% recommended checking smaller stores, and 50% recommended checking parent groups to identify local availability. Some HCP adaptations that were not considered best practice included: purchasing infant formula from abroad (14%), using vitamin supplementation (14%), diluting infant formula (14%) and using whole milk or other alternatives (9%). Most HCPs relied on their formal education to make recommendations (73%), as well as resources from the AAP (60%) and other HCP societies (28%). Over 70% of HCPs reported they spent more time educating parents on the appropriate infant formula alternatives, dilution and use. Almost two-thirds of HCPs increased communications with manufacturers, 57% increased coordination of care with community resources and 28% increased duration of patient visits. Adaptations for support that were commonly requested included infant formula comparison charts (especially of non-US infant formulas).[2]
- Parent practices: HCPs in the survey reported on their awareness of parent practices, and switching to an alternative brand was the main action by parents (almost 99%). Some parent practices that were not recommended commonly included the use of toddler formula (55%), cows' milk (46%), other mammalian milk (32%), homemade formula (23%), the early introduction of solids (14%) and cessation of infant formula before 12 months of age (50%).[2]
- Adverse patient consequences: Approximately 52% of HCPs treated malnutrition cases, where 33% noted increased rates during the infant formula shortage. Malnutrition-related symptoms reported included nausea/vomiting, diarrhoea, anaemia and electrolyte imbalances. Non-recommended feeding practices by parents contributed to malnutrition in 95% of reported cases, and 91% of reported malnutrition cases with related symptoms.[2]

So, what does this mean?

The US infant formula shortage in 2022 revealed several changes in the practice of HCPs and parents, as well as the impact on infant malnutrition.[2] The survey reveals the lessons learnt, which can be useful to HCPs across the globe.

In the event of out-of-stock scenarios in any country, important considerations may include:

1. Advanced planning: As part of patient management, informing GPs and caregivers on the appropriate infant formula alternatives that can safely be interchanged and/or prescribed. Advanced planning may also include expanding departmental policies that account for suitable infant formula alternatives in worst-case scenarios.
2. Parent education: Discussing the importance of following infant formula use and dilution instructed by HCPs (especially in high-risk patients), appropriate complementary feeding practices and emphasising preparedness for alternative HCP recommendations on infant formula change.
3. Coordinating with supply chains: Communicating with manufacturers, wholesalers and pharmacies to find solutions to overcome supply issues, especially where local versus national supply problems exist.

It is essential to acknowledge that the US infant formula shortage exposed the demand and a much deeper societal problem; the US has one of the lowest rates of breastfeeding among high-income countries.[3] A lack of statutory paid maternity leave, legislation (including regulation of infant formula marketing), and adequate skilled support are some of the factors responsible.[4] These factors require urgent attention to significantly favour breastfeeding and enable sustainable and long-term optimal nutrition and health-related outcomes in infants.[5]

References: **1.** AAP (2022). Baby Formula Shortages: What Parents Need To Know. Accessed online: https://publications.aap.org/DocumentLibrary/Solutions/PPE/BabyFormulaShortages_ppe_document263_en_052022.pdf (Nov 2024). **2.** Sheehan MD, *et al.* (2024). Practice changes and infant health risks during the 2022 infant formula shortage: Results of a US healthcare provider survey. Nutr Clin Pract.; doi: 10.1002/ncp.11210 [online ahead of print]. **3.** UNICEF (2018). Breastfeeding: a mother's gift, for every child. Accessed online: www.unicef.org/media/48046/file/UNICEF_Breastfeeding_A_Mothers_Gift_for_Every_Child.pdf (Nov 2024). **4.** WHO (2014). Global Nutrition Targets 2025: Breastfeeding Policy Brief. Accessed online: https://iris.who.int/bitstream/handle/10665/149022/WHO_NMH_NHD_14.7_eng.pdf?sequence=1&isAllowed=y (Nov 2024). **5.** Doherty T, *et al.* (2022). Is the US infant formula shortage an avoidable crisis? The Lancet.; 400(10346): 83-84.