

Complementary Food Supplements to Achieve Micronutrient Adequacy for Infants and Young Children

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Abstract:

Many children in developing countries survive on a nutritionally inadequate diet. Dietary inadequacies during the complementary feeding period can be prevented by using complementary food supplements (CFSs) such as water dispersible or crushable micronutrient tablets, micronutrient sprinkles added to food just before feeding, or fortified spreads added to food just before feeding or fed as a snacks. A meeting was convened to discuss technical and operational issues related to the development of these new approaches and to identify knowledge gaps. The technical issues covered: what micronutrients to include, tolerable upper intake limits, bioavailability, micronutrient and macronutrient stability, package systems and amounts, encapsulation technologies, methods to limit or eliminate allergens, bacterial and chemical contamination, interactions between CFSs and complementary foods, and flavoring agents. Operational issues included: identifying the market positioning of CFSs, cost positioning of CFSs, regulatory requirements, CFS production and technology transfer, quality assurance, and public-private sector partnership and coordination. Intervention trials are needed to determine the efficacy of CFSs in preventing micronutrient deficiencies. Other important knowledge gaps relate to technical and operational issues. Sprinkles and tablets are produced using well-known technologies, but further research is needed to modify them for use as CFSs. Spread development is not as advanced as sprinkle and tablet development, and further research is needed to improve the technology. Although none of the products is ready for widespread use, enough information is available to set research priorities and accelerate product development and implementation.

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