

Zinc/ORS Co-packaging: A Step Towards Bridging the Gap in Preventable Childhood Diarrhoeal Deaths in India

Sir,

Diarrhoeal disease is one of the leading causes of mortality and morbidity among children aged five years and below in the world. It accounted for approximately 9% of all deaths among children aged under five worldwide in 2019.^[1] The majority of the burden of morbidity as well as mortality associated with diarrhea has been borne by developing countries worldwide.^[2] India is the country with the second highest burden of deaths from diarrhea among those under-five where 7% of all under-five deaths are caused by diarrhea.^[3]

In 2004, the World Health Organization (WHO) issued a global recommendation to formalize ORS + zinc as the gold standard for the treatment of diarrheal disease. According to this, ORS along with Zinc for 10-14 days can significantly reduce the incidence of diarrhea among under-five children.^[4] In 2013, WHO and UNICEF devised the “Global Action Plan for Prevention and Control of Pneumonia and Diarrhoea” to end diarrheal deaths among children by 2025. The “Protect-Prevent-Treat” strategy focused on ORS and Zinc as essential components in diarrhea treatment.^[5] Oral Zinc has been shown to reduce both the duration and frequency of diarrhea among under-5 children.^[6] There has been enough evidence on the cost as well as clinical effectiveness of Zinc in controlling acute and bloody diarrhea.^[7] In a Lower Middle-Income country (LMIC) like India, where the prevalence of undernutrition is high, the role of Zinc in the prevention of diarrheal death is even more significant.^[8] However, the recent National Family Health Survey-5 (NFHS-5) from India reported that only 30.5% of the under-5 children suffering from diarrhea received Zinc as compared to 60.6% who received ORS.^[9] Under these circumstances, India is yet to incorporate zinc-ORS co-packaging into its national diarrhea control strategy.

Co-packaging can help in scaling up the Zinc uptake along with ORS among under-five suffering from acute diarrhea and reduce the gap between compliance to ORS and Zinc during episodes of diarrhea.^[10] This strategy has also been shown to reduce the irrational use of antibiotics during acute diarrhea management helping in tackling the threat of anti-microbial resistance.^[11] Co-packaging and rebranding it in the form of a “diarrhoea kit” can help in improving the medical prescription practice among healthcare providers for diarrhea patients.^[12] The zinc/ORS co-pack can further facilitate Zinc utilization by frontline health workers during community-based management of diarrhea.^[13] This would also help correct the inventory management issues related to Zinc at the primary care level through combined stock management and dispensation along with ORS.^[14]

Panel 1: Priorities for zinc/ORS co-packaging implementation

Health system-based:

1. Upgradation of national drug policy
2. Supply chain management
3. Public-private partnership
4. Community engagement
5. Service provider engagement

Community-based:

1. Information, education, and communication
2. Acceptability
3. Affordability
4. Compliance

There are certain issues that need to be addressed based on previous experiences before introducing zinc/ORS co-pack into the healthcare delivery system. Strengthening the functional supply chain management should be one of the utmost priorities for the delivery of zinc/ORS co-pack at the grassroots level. The introduction of zinc/ORS co-pack into the health system and market will need upgrading national drug policy under the appropriate regulatory framework. A national-level action plan for the integration of the co-packaged product into national guidelines for diarrhea management and health programs would be the first step in this direction.^[15] Utilization of zinc/ORS co-pack would require the sincere engagement of both the providers and community through IEC and capacity building respectively. Partnerships with the private sector and professional bodies would assist in scaling up this strategy effectively. Designating zinc/ORS co-pack as an Over counter (OTC) product would be essential in the implementation of the strategy as this would improve its accessibility for beneficiaries. On the other hand, incorporating flavored Zinc tablets and making the co-packaged product more affordable would improve the acceptability as well as compliance at the consumer level.

Long-term interventions like improving WASH practices and Rotavirus vaccination have been instrumental in reducing the burden of preventable diarrhoeal deaths. However, the existing opportunity for further reduction in childhood diarrhea mortality through greater coverage of ORS/zinc co-packaging has received several calls for action worldwide. World Health Organization has already added zinc/ORS co-pack to the Essential Medicine List in 2019. It's time that other LMIC countries including India introduce the zinc/ORS co-pack under their national health programs as this would go a long way in reducing the burden of diarrhoeal deaths worldwide.

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Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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10.4103/ijcm.ijcm_1006_22

How to cite this article: Behera P, Pradhan SK, Behera SM, Rao EV. Zinc/ORS Co-packaging: A step towards bridging the gap in preventable childhood diarrhoeal deaths in India. *Indian J Community Med* 2023;48:505-6.

Received: 25-12-22, **Accepted:** 18-04-23, **Published:** 30-05-23

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