Nutrition News for Africa

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A short report entitled "Prescription and administration of a 14-day regimen of zinc treatment for childhood diarrhea in Mali" was published by Winch et al. in the American Journal of Tropical Medicine and Hygiene 74(5), 2006, pp880-883.

Globally diarrhea accounts for approximately 18% of childhood deaths. The World Health Organization and UNICEF currently recommend a 10 to 14-day course of zinc treatment in addition to oral rehydration salts (ORS) for the treatment of acute childhood diarrhea. Concerns have been raised regarding the 10- to 14-day course of zinc treatment, which is longer than most treatment regimens. This report characterizes administration of zinc treatment in the home in a small scale pilot study examining operational issues associated with the introduction of this new treatment. This report focuses on the Mali part of a multi-center study with a pilot phase conducted in Mali, Pakistan and India.

The project covered two health zones in Bougouni District in Southern Mali and studied the operational impacts of zinc introduction in health centers and in drug kits managed by community health workers (CHW).The project trained health center staff and CHWs in diarrhea case management, counseling parents and recording routine data. Labels attached to the 14-count blister packages provided pictorial and written instructions on zinc administration in Bambara, the local language. Instructions for caretakers of children under 6 months of age were to cut the tablet in half. The cost of zinc to the patients was 100 francs CFA (~0.19USD) for the full blister package and half of that amount for a half-pack for children under 6-months of age. Follow-up interviews were conducted at the home on days 3 and 14 over a period of 8 weeks in June-August 2004. Semi-structured qualitative interviews were also conducted with 37 caretakers and 18 CHWs and 2 health facility nurses. A total of 123 children received zinc, 21 at health centers and 102 from CHWs.

The correct dose of zinc for the child's age was prescribed and sold by health center staff and CHWs in the majority of cases based on interviews with parents. More than 90% of caretakers reported that CHWs and health center staff sufficiently explained the quantity of zinc needed, duration of treatment and alternatives for administering the tablets. Ninety-five percent of caretakers dissolved the zinc tablets in a small amount of water and gave it to a child in a spoon, 4% dissolved it in a few drops of breastmilk and only 1% reported putting the tablet directly in the child's mouth.

Adherence to the full 14-day regimen was high (63.6%) and dosing was generally appropriate (94.3%). Overall, 89.3% of children followed received at least 10 days of zinc treatment. Community reaction to the zinc treatment was very favorable.

The authors report that the levels of correct prescription, counseling and administration observed are higher than those expected in a programmatic context as zinc was a newly introduced treatment under conditions of closer than usual observation. The authors also state that interviewers visiting households for follow-up could also have increased the level of compliance. The next phase of the research will examine factors affecting administration of zinc such as who purchases the zinc, counseling received from the health care provider, educational level of the parents, concomitant symptoms and medications, and side effects.