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EVALUATION OF ZINC STATUS AND COMMUNITY PERCEPTIONS IN PAKISTAN: THE NATIONAL NUTRITION SURVEY 2011

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Background and objectives: Over a third of the global population is at risk of zinc deficiency. Zinc deficiency is the fifth leading risk factor for childhood illnesses in the developing world. Several systematic reviews of preventive and therapeutic strategies have highlighted potential benefits of zinc. Pakistan is recognized as a country with a significant proportion of its population at risk of zinc deficiency. Previous National Nutrition Survey in 2001 identified over a third of the women and children as zinc deficient on the basis of plasma zinc estimation. In the last decade, other than the introduction of zinc for the management of diarrhea, no large scale preventive interventions have been evaluated. In order to understand the population prevalence of zinc, we evaluated the zinc status as part of the recently concluded National Nutrition Survey 2011.

Methods: The survey was conducted on a national and provincial sampling frame weighted for urban and rural populations and targeted women of reproductive age (WRA) 15-49 years and children under 5 (U5C) 0-59 months. All seven provinces of the country were included and in a two stage stratified survey. Altogether 30,000 households were surveyed and 12,000 blood specimens each from WRA and U5C analysed for a range of micronutrients using standard procedures in a CDC certified central micronutrient laboratory.

Results: Preliminary findings from the survey indicate that overall nutritional status of children in Pakistan have not improved since 2001. Stunting rates range from 37-54% and between 5-9% of children severely wasted. Among WRA 5-18% BMI < 18.5. Preliminary findings of the overall prevalence of zinc deficiency suggest that 38% of U5C and 48% of WRA have serum zinc concentrations < 60 µg/dL).

Conclusion: To reduce the burden of zinc deficiency in low resource countries, fortification of food may be the only solution at a population level.

Key words: Zn deficiency, urban, rural, Pakistan