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## Concerns with Urinary Iodine Excretion Level in a Single Random Sample

The research article published in a recent issue of *Indian Pediatrics* [1] highlighted the success of National Iodine Deficiency Control Program in which universal salt iodization is an integral activity. The investigators found a Total goiter rate (TGR) of 2.08%, median Urinary iodine excretion (UIE) level of 175 µg/L and approximately 72% of subjects were consuming adequately iodized salt. In this study, 'on-the-spot urine' samples were collected from children and on the basis of this UIE level, proportion of children with mild, moderate and severe iodine deficiency were reported.

We submit this interpretation is scientifically not valid due to following:

1. WHO recommends that median UIE level estimated from spot urine samples of individuals in a cluster is for defining iodine status for the cluster/population and is not intended for individuals [2].
2. Defining iodine status at the individual level remains challenging. At least ten spot urine samples or 24-hour urine samples are needed to assess individual iodine status with 20% precision [3]. The spot samples may be collected at any time of the day, except the first morning samples. The random urine samples should be spread over a time frame to cover potential variations. UIE in spot samples varies substantially between days and seasons [4], as a

consequence of a circadian rhythm of iodine excretion [5], and due to differences in fluid intake [6]. Therefore, a single spot UIE is not a suitable indicator for individual assessment. Urinary iodine excretion (UIE) in 24-hour collections is regarded as a better method to reflect an individual's true daily excretion.

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## Assessment of Iodine Deficiency Disorders among School Children in Madhya Pradesh

We read an article by Bali, *et al.* [1] and would like to

appreciate the authors for highlighting the current status in their district as well as irregularities of national iodine deficiency control programme (NIDCP). The study also highlights the negative implication of unmonitored universal salt iodization (USI) and emphasize the need for periodic monitoring. However, there are certain points we would like to highlight, which might bring more clarity on this issue: