



Reply to Chiolero: Salt intake monitoring at a population level

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To the Editor:

We thank Dr Chiolero for his comments [1] on our statement [2]. We seem to agree that estimated sodium excretion using urine spot samples is inadequate to assess individuals' salt consumption and the health risks associated with high salt intake. This position is shared by other international panels [3, 4].

The stated goal no. 2 is “to estimate salt intake at the group or population level, e.g., for the monitoring of salt intake in a given population.” As we state in our piece, there are four objectives for measuring average population salt intake, one of which is to evaluate the effectiveness of intervention in populations, by assessing the average “change” in population salt consumption over time. Evidence from a randomized clinical trial in China confirms the inadequacy of urinary sodium assessed in spot samples to detect small but meaningful changes in average salt consumption in a head-to-head comparison with urinary sodium, assessed using 24 h collections [5] [see Fig. 2b in our statement] [2]. This is a fundamental limitation that does not make this method fit to evaluate the effectiveness of interventions in populations.

Validity and representativeness are two separate concepts. Whilst the evidence reassures us that 24 h urine collections are, as yet, the most valid method to evaluate the effectiveness of population programmes, low response and high attrition rates may limit the representativeness of the results. The risk is not avoided, though, by using spot urines, whilst the bias in the outcome is evident.

Collecting 24 h urines is feasible and can be cheaper than spot urines, given the much smaller sample sizes needed for the scope [6, 7]. In our view, we cannot trade pragmatism with validity at the time when global health priorities have set population salt reduction as one of the “best buys” for the reduction in the burden of cardiovascular disease [8], as the consequences of not detecting small but significant reductions in average population salt consumption in these programmes may have the effect of erroneously deterring governments from committing to long term strategies, with reduced health benefits for all.

Compliance with ethical standards

Conflict of interest FPC is a Technical Advisor to the World Health Organization, and President and Trustee of the British and Irish Hypertension Society. PSS declares that he has no conflict of interest.

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