

## Decline in Immunization Coverage Across Well-performing Districts in India: An Urban Conundrum? *Authors' Reply*

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*To the Editor:* We thank the commentators for their interest and observations in relation to our article entitled “Decline in Immunization Coverage Across Well-performing Districts in India: An Urban Conundrum?” published in the September 2014 issue [1].

We used logit regression where we considered poverty and health care infrastructure and stressed on the role of urbanization. We indicated that it could be a case that the dynamics in these areas explain the decline in immunization coverage. It may be noted that unless specific methodologies are followed, or a sound theory exists, econometric analyses indicate correlates and not causality. Hence, such exploratory findings need to be corroborated by the evidence from the field.

The commentators have not mentioned the word ‘urban’, which as we discuss above has been a key observation in our analysis, and merely stop at infrastructure and poverty. Their second paragraph is about infrastructure, whereas we use it only as one of the control variables.

No data has been provided to substantiate the arguments (by the commentators) on polio in the context of the states where declines occurred. We had already rejected this possibility: “these well-performing states were non-endemic for polio and had one/two pulse polio rounds/year”.

The commentators claim: “By the time their article was published, the DLHS 2012–2013 results have become available.” Our article was submitted for publication in December

2013; DLHS-4 (or, DLHS 2012–2013); results were unavailable then. As we write this response, a perusal of the website cited by the Commentators (<https://nrhm-mis.nic.in/SitePages/DLHS-4.aspx>) adds a significant Disclaimer: “Fact Sheets have been finalized for 18 States / UTs. Fact Sheets for others States / UTs are being finalized [2]”. At the cost of stating the obvious: we have carried out a district-level analysis (of DLHS-4) that requires unit-level data which is not yet available in the public domain.

We agree with the alarming decline pointed out by the Commentators with regard to some of the key states such as Tamil Nadu. The scale of the decline (in DLHS-4) is (sadly) a vindication of our analysis.

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### References

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