off in the normal population would be challenging and not feasible. The Government run laboratories in the district and state headquarters can pitch in and publish district- or state-wise OD cut off based on the previous samples tested, which can be regularly updated with time.

Timely diagnosis is crucial in reducing morbidity and mortality of ST in children, and since ST PCR is not freely available everywhere, earliest laboratory confirmation is often done by serology by IgM ELSIA after 5-7 days of fever onset [2]. While IgM ELISA serology testing to diagnose ST is affordable, easy-to-use, with reasonable diagnostic accuracy for screening and diagnostic purposes, regional cut-offs should be identified and maintained by regional health authorities and should be validated from time to time in order to prevent misdiagnosis.

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REFERENCES

1. Gupte MD, Gupte M, Kamble S, et al. Detection of immunoglobulin M and immunoglobulin G antibodies against Orientia tsutsugamushi for scrub typhus diagnosis and serosurvey in endemic regions. Indian Pediatr. 2020; S097475591600242.
2. Rathi N, Kulkarni A, Yewale V; For Indian Academy of Pediatrics Guidelines on Rickettsial Diseases in Children Committee. IAP Guidelines on Rickettsial Diseases in Children. Indian Pediatr. 2017;54:223-29.
3. Gupta N, Chaudhry R, Thakur CK. Determination of cutoff of ELISA and immunofluorescence assay for scrub typhus. J Glob Infect Dis. 2016;8:97-99.
4. Rawat V, Singh RK, Kumar A, et al. Diagnostic validation of IgM and IgG ELISA and real-time PCR in detecting scrub typhus infection in endemic regions. J Vector Borne Dis. 2018;55:165-67.

AUTHORS' REPLY

We thank the authors for their comments about our article [1]. In exercises of determining the cutoff for diagnostic tests, it is inevitable that some amount of misclassification would always happen. We always try to minimize this risk but there is no way to eliminate it altogether. It is thus possible that the published studies, by using the cut-off of OD values of >0.5, would have over-estimated the proportion of *Orientia tsutsugamushi* infection among probable scrub typhus patients. We also feel that conducting well-planned epidemiological studies to estimate regional cut-offs in scrub typhus endemic area would be challenging without involving credible laboratories. Such studies would need sera from sufficient number of patients with detailed granular data on clinical details from a given region. The feasibility of involving district/state public health laboratories and using previous samples, as suggested by the authors, would therefore need a careful consideration before such studies are initiated.

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REFERENCES

1. Gupte MD, Gupte M, Kamble S, et al. Detection of immunoglobulin M and immunoglobulin G antibodies against *Orientia tsutsugamushi* for scrub typhus diagnosis and serosurvey in endemic regions. Indian Pediatr. 2020; S097475591600242.

Variation in Tribe-Specific Mortality Indicators of Child Health in India: Emphasizing Tribe-Specific Action Plan

Under-five mortality exhibits uneven distribution, incurring heavy toll among tribal population compared to non-tribal population in India. This necessitates the persistent need for research on tribe-specific indicators of child mortality and life expectancy in India. In this context, Verma, et al. [1] provided tribe-specific estimates of infant mortality rate (IMR), under-five mortality rate (U5MR) and expectation of life at birth (LEB) for 123 tribes in India using Census 2011 data. As is evident from the study, majority of selected tribes depicted higher IMR and U5MR than the national average and the total scheduled tribe (ST) population. The study not only highlighted immense difference in these estimates among tribal and non-tribal population, but also the differences in the estimates among tribes residing in different states and even within the same state.

The above findings are critical with respect to availability of maternal and child health care services and the sporadic success of related government flagship programs in achieving universal health coverage in tribal areas. Although the study acknowledges the need to develop programs to reduce the gap in child mortality and life expectancy within tribal population and between tribal and non-tribal populations, but it left scope for many unaddressed questions. It is important to explore the factors underpinning such huge gap in the indicators of child mortality and life expectancy among tribal and non-tribal populations in India.

Socio-cultural, economic and environmental factors varying across states and social groups play a critical role in uneven distribution of child mortality and life expectancy between tribal and non-tribal populations and even within tribal