Indian J Med Res 157, June 2023, pp 495-497
DOI: 10.4103/ijmr.ijmr_1810_22

Quick Response Code:

Perspective

Improving the health of tribal people in India: Time to address health data poverty

Health status of tribal people in India

Tribal people remain marginalized and their health remains poorer than that of non-tribal people. Despite the progress made in the 75 yr since independence, infant mortality among tribal people is higher by 50 per cent and a very recent analysis shows that life expectancy at birth is shorter by 4-7 yr compared to that among non-tribal people[1,2]. In the wake of the high number of deaths reported by the local news media among *Pando* tribal people in northern Chhattisgarh, we were asked by the public health department of the Surguja division to evaluate the causes of death and suggest interventions. Here, we share our experiences and challenges faced by us while conducting such an investigation.

About *Pando* people

Pandos belong to a particularly vulnerable tribal group predominantly residing in the Balarampur, Surajpur and Surguja districts of northern Chhattisgarh. They live on minor forest produce and subsistence farming. The information on the total population of *Pandos* is not easily available, but as per the local community leaders, there are an estimated 40,000 *Pando* people in India. They are grouped with the *Bharia-Bhumia* and *Bhuinhar-Bhumia* in the list of the Scheduled Tribes[3]. The community remains socioeconomically underdeveloped[4]. Barring a single published study, no literature is available on the health status of this tribe[4] underlining the health data poverty[4].

High number of deaths among *Pandos*

In late 2021, several deaths were reported among *Pandos* over a short period by the local news media. One unfortunate incidence was in a family where three young members died within a span of a few days[5]. A nine year old *Pando* child developed fever for a few days, became unresponsive and died at home. After finishing his last rituals, his father felt febrile and went straightway to the nearest medical college, accompanied by his 12 yr old son. Both, the son and the father developed fever, became unresponsive and died within the next three days. The cause of death reported was multiple organ failure. Such unexplained deaths in this community seemed like a recurrent event as four years prior, media had reported a high number of deaths in the same community[6].

This *post hoc* investigation into the causes of death was challenging. The questions we grappled with were – what was the crude death rate in the *Pando* community? Have the deaths increased recently or the community consistently had high death rates? What were the causes of death in this community? Most of this information was not available. The public health system compiled a list of deaths in this community in the Balarampur district over seven months. There were 47 deaths, of which 68 per cent were at home, 68 per cent were among males and the mean age of the deceased individuals was 42.2 yr. The completeness and accuracy of these data could not be verified. With the help of the narrative report available with these deaths, the potential causes of death were – fever of unknown origin (FUO) in 23 per cent, non-communicable diseases in 21 per cent, accidents and drowning in 13 per cent, other causes in 11 per cent, snake bites in four per cent while the cause was indeterminate in 28 per cent. We could also obtain information on the cause of death among 11 *Pando* people who died in the medical college at the divisional headquarter, which showed that 73 per cent died due to FUO, 18 per cent died of other causes and nine per cent died of snake bite. Clearly, FUO emerged as an important medical cause of death. In these patients, fever along with multisystem involvement, were common. We suspected scrub typhus, but facilities to diagnose were not available in the Surguja division. We requested the public health department to send samples of nine patients who were admitted to the

district hospitals in Surguja and Balrampur with febrile illness and multisystem involvement to the National Institute for Research on Tribal Health at Jabalpur for the enzyme-linked immunosorbent assay. Four of these samples were positive for immunoglobulin M antibodies for scrub typhus. Out of these, one patient was *Pando*, belonging to Balrampur district, where maximum deaths occurred. None of the patients, who died due to FUO and whose reports we had, were given doxycycline or azithromycin - drugs of choice to treat scrub typhus. Given the circumstances around the death of patients with FUO, there was a high likelihood that many of these could be due to scrub typhus, an emerging infection in rural central India[7].

Challenges related to obtaining health data

The investigation revealed several maladies afflicting *Pando* people and by extension, that of the tribal people in India. The lack of health data among *Pandos* was a reflection of a larger problem of paucity of health data among tribal people in India. For example, data on many key public health parameters such as maternal mortality ratio are unavailable for tribal people[1] and systematically collected information on causes of death among them is also unavailable. We found little information about the *Pando* tribe from government sources. Demographic parameters such as death and birth rates for *Pandos* and causes of death in this community were also not available. In the districts where tribal people constitute a large number, their health indicators, *e.g*. number of hospital admissions and deaths in the hospital were not tracked. The Health Management Information System does not have a direct way of tracking health data among tribal people. Infections remain a common cause of morbidity and mortality and diagnostic facilities for scrub typhus and other emerging infections, such as leptospirosis, were not easily available in this tribal area. Data on the prevalence of non-communicable diseases such as hypertension, diabetes and stroke were lacking. After submitting the report of our investigation, the tests for scrub typhus and leptospirosis were made available in the divisional medical college and our team trained medical officers in the Balrampur district hospital to suspect and manage these conditions.

The way forward

While many of the above challenges seem daunting, we believe that the following seven initiatives taken within the health system and academia can potentially help improve the situation. First, creating a central repository which provides authentic health-related data about various tribal communities in India can guide healthcare providers and researchers. Second, periodically estimating performances around key health indicators and evaluating causes of death in various tribal communities will help identify challenges and monitor the progress of various health programmes in tribal areas[1]. These efforts could start with the particularly vulnerable tribal groups. Third, periodic assessment of healthcare facilities in tribal areas should be done to ensure that good quality clinical and laboratory services are available. Fourth, national surveys such as the National Family and Health Surveys should collect information on tribal status among its participants and publish data on tribal people separately. Fifth, the cause-of-death determination system of India under the Registrar General of India should collect data on causes of death among tribal people. Sixth, tribal culture is inherently participatory and therefore interventions involving tribal community members to improve their health are likely to work. More research is needed on such participatory interventions. Finally, at the local level, strengthening health systems in tribal areas by way of optimal governance and management, ensuring adequate human and financial resources, building epidemiological laboratory surveillance capabilities and good quality data collection through health information systems will help improve the health of the tribal people. Such strengthening should be done urgently at all levels, from the district hospitals to the village-level health workers.

Tribal people are facing a double burden of communicable and non-communicable diseases[8,9]. Given the poorer state of health of the tribal people, sustained and systematic efforts guided by health data are needed in India instead of knee-jerk responses in the wake of reports of higher deaths among them. Building scholarship in tribal health, strengthening health systems in tribal areas and generating data to guide and track health system responses are the ways forward.

Financial support & sponsorship**:** None.

Conflicts of Interest**:** None.

Yogeshwar Kalkonde*, Chetanya Malik & Yogesh Jain
Sangwari, Surguja 497 001, Chhattisgarh, India
**For correspondence:*
yvkalkonde@gmail.com

Received August 18, 2022

References

1. National Health Mission. *Report of the Expert Committee on Tribal Health*. Available from: *https://nhm.gov.in/index1.php?lang=1&level=1&sublinkid=1110&lid=630*, accessed on August 15, 2022.
2. Vyas S, Hathi P, Gupta A. Social disadvantage, economic inequality, and life expectancy in nine Indian states. *Proc Natl Acad Sci U S A* 2022; *119* : e2109226119.
3. Ministry of Tribal Affairs, Government of India. *The constitution's Scheduled Tribe order, 1950*. Available from: *https://legislative.gov.in/sites/default/files/19_The%20Constitution%20%28ST%29%20Order%201950.pdf*, accessed on November 10, 2021.
4. Pandey GD, Roy J, Tiwary RS. Socio-cultural aspects and health care in pando tribe of Madhya Pradesh. *J Hum Ecol* 2001; *12* : 391-4.
5. Hindustan Times. *3 members of Pando tribe die due to multiple organ failure in Chhattisgarh*. Available from: *https://www.hindustantimes.com/cities/others/3-members-of-pando-tribe-die-due-to-multiple-organ-failure-in-chhattisgarh-101629289541003.html*, accessed on November 10, 2021.
6. Times of India. *National commission for ST to probe deaths of 29 Pando tribals in Chhattisgarh*. –Available from: *https://timesofindia.indiatimes.com/city/raipur/national-commission-for-st-to-probe-deaths-of-29-pando-tribals-in-chhattisgarh/articleshow/60955755.cms*, accessed on November 10, 2021.
7. Vikram K, Agarwala P, Bhargava A, Jain Y, Jagzape T, Wasnik P. Scrub typhus and leptospirosis in rural and urban settings of central India: A preliminary evaluation. *Trop Doct* 2020; *50* : 111-5.
8. Kalkonde YV, Deshmukh MD, Sahane V, Puthran J, Kakarmath S, Agavane V, *et al.* Stroke is the leading cause of death in rural Gadchiroli, India: A prospective community-based study. *Stroke* 2015; *46* : 1764-8.
9. Jain Y, Kataria R, Patil S, Kadam S, Kataria A, Jain R, *et al.* Burden & pattern of illnesses among the tribal communities in central India: A report from a community health programme. *Indian J Med Res* 2015; *141* : 663-72.