LETTER TO THE EDITOR

COVID-19 and leprosy new case detection in India

Guillermo Robert de Arquer^a, Arun Kumar^b, Rajni Kant Singh^c,
Naveen Satle^d, Radhika Mamidi^e & Pritha Biswas^f

^aHead of Global Health, Lepra, 28 Middleborough, CO1 1TG, Colchester,
UK

^bHead of Programmes, LEPR Society, Near TEC Building, Cherlapally to
Rampally Road, Cherlapally, Hyderabad—501 301, Telangana, India

^cState Coordinator (Bihar), LEPR Society, Near TEC Building,
Cherlapally to Rampally Road, Cherlapally, Hyderabad—501 301,
Telangana, India

^dState Coordinator (Madhya Pradesh), LEPR Society, Near TEC Building,
Cherlapally to Rampally Road, Cherlapally, Hyderabad—501 301,
Telangana, India

^eState Coordinator (Andhra Pradesh), LEPR Society, Near TEC Building,
Cherlapally to Rampally Road, Cherlapally, Hyderabad—501 301,
Telangana, India

^fState Coordinator (Odisha), LEPR Society, Near TEC Building,
Cherlapally to Rampally Road, Cherlapally, Hyderabad—501 301,
Telangana, India

Submitted 14 January 2021; Accepted 18 January 2021

Keywords: Case detection, COVID 19 and leprosy, epidemiology, elimination, passive and active case finding

Sir,

The Coronavirus disease (COVID-19) has affected the health and the economies of the whole world since early 2020, with particular repercussions for the most vulnerable populations, including people affected by leprosy. Following the World Health Organisation (WHO) declaration of the outbreak as a Public Health Emergency of International Concern (PHEIC),¹ the Indian Prime Minister imposed a nationwide lockdown and movement restrictions in March 2020. In the leprosy context, these restrictions have negatively affected access to quality healthcare services, including case detection activities. These challenges, together with some specific recommendations have been documented elsewhere.^{2–4} However, the impact of COVID-19 on new case detection has not yet been quantified.

Correspondence to: Guillermo Robert de Arquer, Head of Global Health, Lepra, 28 Middleborough, CO1 1TG, Colchester, UK (e-mail: GuillermoR@lepra.org.uk)

* Forecasted for the 12-month period

ANCD: Annual New Case Detection, NCD: New Case Detection, LCDC: Cases detected through Leprosy Case Detection Campaign, PCD: Mainly passive case detection

Figure 1 Annual vs Semester case detection.

Annual New Case Detection (ANCD) is a key outcome indicator and a denominator for most leprosy targets. This is particularly relevant with regards to the Neglected Tropical Disease (NTD) Roadmap 2021–2030 where the achievement of many leprosy targets proposed depends on ANCD.⁵ Access to quality baselines and a good understanding of epidemiological trends are therefore crucial. ANCD figures for the second and third quarters of 2020 (April–September 2020), recently shared by the National Leprosy Eradication Programme (NLEP), for the states of Andhra Pradesh, Odisha, Bihar and Madhya Pradesh, are examined here. These two quarters correspond to the first and second quarters of the Indian fiscal year.

Early detection and treatment are still the cornerstones for leprosy control. Active case finding (ACF) is specifically recommended in high-endemic areas and hard-to-reach locations at risk.⁶ The need for quality ACF is also supported by the fact that only a proportion of people affected by leprosy voluntary self-report.⁷ Moreover, it has been suggested that strategies based only on passive detection can result in delayed diagnosis.⁸ In India, vertical house-to-house case detection methods were implemented from 2016 to 2019 under the Government's Leprosy Case Detection Campaign (LCDC).⁹ Today, leprosy control interventions generally operate through integrated health system structures. In the context of COVID-19 and following WHO recommendations in May 2020,¹⁰ ACF activities were totally suspended in selected states during the period April–September, 2020.

The four states accounted for 35% of the total new cases reported nationally in 2019. Between 2016 and 2019, more than 160,000 new cases were diagnosed in these states, of which approximately 30% were found through LCDCs. Out of these new cases found through LCDCs, less than 40% were identified during the six-month period April–September (Figure 1). About half of the total new cases reported between 2016 and 2019 were also detected during April and September. However, only 8270 new leprosy cases have been reported for the second and third quarters of 2020 (April–September 2020), compared to about 22,000 new cases reported for the same quarters of 2019. This is a decrease of 63%, compared to the same quarters last year. The proportions of multi-bacillary (MB) leprosy and grade-2 disability (G2D) amongst the new cases have increased by 20% and 12%, respectively, during these two quarters of 2020, compared to the same 6-month period in 2019. The proportion of both women and children among new cases has decreased by 70% compared to the same two quarters last year (Figure 2).

The suspension of ACF activities, travel restrictions, reduced healthcare services and social distancing policies have severely affected the early detection of people affected by leprosy.

NCD: New Case Detection, MB: Multi-Bacillary, PB: Pauci-Bacillary, G2D: Grade-2 disability

Figure 2 Epidemiological indicators for the 6-month period (April–September), from 2015 to 2020.

Estimates suggest that 6 in 10 leprosy cases in the selected states may go undetected by the end of this fiscal year if quality ACF activities are not implemented in the next 6 months (October 2020–March 2021).

The ongoing pandemic is, however, discouraging. We hypothesise that even if ACF activities are implemented during the next 6 months (October 2020–March 2021) many new cases will be missed. G2D rates will probably increase further this year. An important proportion of women, children and marginalised communities will go undiagnosed this year.

Other Indian states may have similar outcomes to the selected states examined here: Andhra Pradesh, Odisha, Bihar and Madhya Pradesh. It is important that when measuring the progress of leprosy, we are not misled by ANCD-based targets if quality ACF activities are not systematically and regularly implemented in high-endemic settings, especially, in hard-to-reach areas. In Bihar, it has been observed that about 70% of new cases are detected beyond household contact examination based surveys,¹¹ suggesting the need to screen beyond household contacts.

ANCD numbers are falling because ACF activities have been reduced by the government. This has been worsened by the COVID-19 pandemic. Serious consideration should be given to planning urgent vertical, systematic, ACF campaigns to identify the backlog cases, reduce transmission and address the worrying decline in the numbers of women and children being diagnosed.

References

- ¹ WHO. COVID-19 Public Health Emergency of International Concern (PHEIC) forum Grai. WHO, 2020.
- ² GPZL. Persons Affected by Leprosy and the COVID-19 Global Health Crisis. Report. 2020.
- ³ Mahato SBS, Singh R. Inequities towards leprosy-affected people: A challenge during COVID-19 pandemic. *PLoS Negl Trop Dis*, 2020; **14**(7): e0008537.

- ⁴ Thangaraju PAM, Venkatesan S, Gurunthalingam MP, Thangaraju E. COVID-19 and leprosy-hurdles and possible solutions. *Asian Pacific J Trop Med*, 2020; **13**(10): 472–473.
- ⁵ ILEP. NTD Roadmap 2021–2030 2020 [Available from: <https://ilepfederation.org/ntd-roadmap-2021-2030/>].
- ⁶ WHO. *Global Leprosy Strategy 2016–2020: Accelerating Towards a Leprosy-free World - Operational Manual*. New Delhi: World Health Organization, 2016. Report No.: 978-92-9022-525-6.
- ⁷ Subramanian M, Showkath Ali MK, Thorat DM, Muthukumar M, Sathiskumar E, Ramadoss C *et al*. Leprosy situation in endemic states of India and prospects of elimination of the disease. *Ind J Lepr*, 2003; **75**(4): 335–345.
- ⁸ Moura MLN, Dupnik KM, Sampaio GAA, Nóbrega PFC, Jeronimo AK, do Nascimento-Filho JM *et al*. Active surveillance of Hansen's Disease (leprosy): importance for case finding among extra-domiciliary contacts. *PLoS Negl Trop Dis*, 2013; **7**(3): e2093.
- ⁹ NLEP_India. *Operational guidelines for Leprosy Case Detection Campaign*. Central Leprosy Division MoHaFW, Government of India, 2016.
- ¹⁰ WHO. *Community-based Health Care, Including Outreach and Campaigns, in the Context of the COVID-19 Pandemic. Interim Guidance*. World Health Organization, 2020. 05/2020.
- ¹¹ Mangeard-Lourme J, Singh A, Singh RK, Parasa J, De Arquer GR. Enhanced active case-finding, identifying leprosy cases missed by recent detection campaigns in Munger District, Bihar, India. *Lepr Rev*, 2017; **88**(4): 452–462.