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COMMENT

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Health in Kerala: exploring achievements and remaining challenges of health systems reform using an equity lens

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Abstract

Background The southern Indian state of Kerala is often regarded as a global model for its impressive health outcomes at a low cost. While the state consistently invests in healthcare and showcases remarkable health indicators, disparities persist, particularly among underserved populations who experience poorer health outcomes. This special issue focuses on research work that examines health equity in the region.

Methods Following an open call for the collection featuring research studies focusing on health equity in Kerala in 2022, we received 29 submissions; four editors handled the submissions, and after peer review, nine articles were finally published as part of the special issue.

Results The final collection has nine articles which include studies describing health system efforts and user experiences about the control of tuberculosis, two evaluations of Universal Health Coverage (UHC) reforms in the state, a commentary on challenges faced by transgender persons in accessing gender-affirming medical care, two qualitative studies that span the UHC reform process and policies through the lens of a marginalized section of society, a case study on rabies death and a cross-sectional analysis characterizing the impact of COVID 19 pandemic in the mental health of school children.

Conclusion The special issue contributes to the growing body of literature around health equity in Kerala and India and documents key challenges that plague the state health system like persisting access issues to seek necessary care, lack of acknowledgment of important social determinants in policies, absence of targeted interventions for underserved communities, and shortcomings in engaging with the private sector - that continue to plague the journey of moving towards Universal Health Coverage (UHC). The findings suggest that custom made policies are required to address the specific health needs of underserved population rather than a doing "more of same" approach.

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Introduction

The southern Indian state of Kerala has a legacy of being a global exemplar of 'good health at low cost.' [1] The state has the highest life expectancy at birth in the country and the lowest proportion of people living with multidimensional poverty in India [2, 3]. While Kerala's aggregate indicators of population health and development measures paint a rosy picture, they often mask recalcitrant health inequalities that persist, to the increasing disadvantage of minoritized and disadvantaged sub-populations. Aggregated health indicators may not measure the equity aspects and seldom reflect the health of the underserved population groups. Studies reporting the condition of tribal populations in the state often indicate poor maternal and child health outcomes, including reports of maternal and child deaths in many tribal settlements [4, 5]. Further more women belonging to disadvantaged communities and Indigenous population groups were found to be exposed to inequalities in health and education, landholding and employment in the state [10]. There is literature that notes that people with disabilities and migrant labourers face challenges while accessing public health facilities in the state [6]. Non-Communicable Diseases (NCDs) have rapidly increased over the past decade among all segments of the population, including the elderly, women, and other underserved population groups in the state. Kerala is a pioneer in incorporating the care of NCDs in the health system, however, NCD screening services tend to be slightly more concentrated among wealthier groups [7]. Multiple inequalities underlying the COVID 19 pandemic response in coastal areas are also documented [8].

Given this mixed bag of results, it is imperative to look closely at inequalities in disease burden, healthcare access and socio economic determinants within the state, especially since Kerala has launched an ambitious program of health reform around 5 years ago, as well as the fact that Kerala is looked upon as an exemplar for states that do not have such impressive outcomes. The argument is that it may be good not only for Kerala but also for other states to be aware of the type of issues that are likely to persist in high performance settings. This special issue was planned initially as a compendium of research outputs from a five-year study on health inequalities in the state, supported through a grant awarded to one of the Special Issue editors (DN). As we put together the findings from this study, we found it to be in great company: extensive academic work has been done on health inequalities by some of the leading research institutions and public health scholars in the state. The Special Issue then sought to curate studies that amplify the voices of fellow researchers researching health equity in Kerala.

Articles in the special issue: "Leaving no one behind on the road to universal health coverage: The Kerala Story"

The final curated collection has nine articles focusing on Kerala, showcasing perspectives, case studies, quantitative and qualitative research studies, and on-the-ground reflections of researchers from various institutions researching diverse yet key areas of health equity.

The collection includes studies describing health system efforts and user experiences about the control of tuberculosis [9, 10], two evaluations of Universal Health Coverage (UHC) reforms in the state [11, 12], a commentary on challenges faced by Transgender population in accessing gender-affirming medical care [13], two qualitative studies that span the UHC reform process and policies through the lens of underserved sections of society [14], a case study on rabies death [15] and a cross-sectional analysis characterizing the impact of COVID 19 pandemic in the mental health of school children [16]. We believe that a mix of methods used to study the varied and complex issues of different population subgroups around health equity in Kerala would be an enriching experience for the readers.

The collection features two articles related to the National TB Elimination Program (NTEP), which seeks to eliminate TB in India by 2025 [17]. Kerala is a low-burden state and TB elimination may be a low-hanging fruit for the state compared to the rest of India. A major bottleneck in ensuring universal access to TB care in India is engaging with a largely unregulated private health sector, which provides care to more people with TB [18]. India's NTEP, tasked with providing free TB care, if it were to engage with the (for-profit) private sector, could strengthen the elimination efforts with robust data, reduce out-of-pocket expenditure of the poorest of patients, and most importantly, ensure oversight of the quality of privately-delivered TB care. In Kerala, theSystem for TB Elimination in Private Sector (STEPS) program of engagement with the private sector has improved TB surveillance and treatment adherence at the population level, as traced in Rakesh PS and Mohd Shannawaz's case study contribution to the Special Issue [9]. The experience in Kerala suggests the plausibility of private care filling gaps in TB management among population subgroups facing financial hardship. Critically, the authors caution that the model's success may be due to several other favorable factors in the state that may not be easy to replicate. However, there are still lessons on expectations and modes of engagement with the private sector on the road to UHC.

The second paper on TB in our collection by Chandru and Varma details a demand-side perspective related to the TB program in Kerala using embedded mixed methods [10]. A cross-sectional survey component among

TB patients reported that 59.3% of participants adhered to daily drug consumption, and less than 30% were able to adhere to all seven aspects of advised guidelines. In-depth interviews capture powerful narratives from patients undergoing TB treatment to explain the role of patient agency, motivation, and social determinants in influencing compliance with TB treatment guidelines in the state. The authors thematically arranged the data to describe the role of perception of the physical body, individual morality, immediate social support, programmatic efforts, and the role of substance addiction that influences patient journeys while receiving TB care.

Sharma et al. present a state-level population survey findings on Publicly Funded Health Insurance Scheme (PFHIS) enrolment and utilization in Kerala [11]. The authors report that, as intended by design, the coverage of the scheme favours lower wealth quintile populations. The program has marginally reduced Out-of-Pocket Expenditure (OOPE) among the insured, especially while accessing care in public health facilities in the state. Among people with PFHIS, more males than females were hospitalized in the reference period, even as PFHIS coverage was higher in females. The study also noted that populations insured with PFHIS sought care in public sector hospitals, while the uninsured preferred private care. Whether these are gendered patterns of care seeking or influenced by other factors is an area of further study.

Some light is shed on this in Surendran et al. [14] work on factors that influence health care-seeking of underserved population groups in the state. The study reflected the voices through Focus Group Discussions and found that public facilities were preferred by marginalised communities due to affordability, as most of them provided outpatient care at discounted rates/ free of charge, and PFHIS could be availed for inpatient care. The accessibility of these institutions remained a challenge; participants mentioned distances to public facilities, long waiting times, shortage of medicines and lack of diagnostics, and perceived poor quality of care as major deterrents in accessing them. Some of these challenges identified in accessing public health care healthcare have been longstanding [18], affecting the poorest quintile of the population, relying more on public facilities than others.

Various UHC reforms, including the Aardram Mission[1] initiated by the state government in recent years, warrant a robust assessment. Our special issue features an article from GS et al. [12],who conducted an evaluation of UHC reforms in the state comparing data from multiple rounds of the National Sample Survey Organization (NSSO) surveys [21]. The study findings suggest that utilization of government health facilities has increased for both outpatient and inpatient admissions, with utilization rates increasing manifold among historically marginalized population subgroups like the Scheduled Tribe (ST) community. Out-of-pocket expenses for women accessing inpatient care are lower than for men, which is suggestive of lower priority given to and, therefore, greater unmet needs among women. The study points out that gender, caste, and class structure remain significant determinants of access to care in the state.

Sreekumar et al. [22] conducted a policy analysis looking at the Aardram reform through a qualitative lens, focusing on the representation of caste and class, particularly concerning the historically underprivileged population groups or "Dalits" in the policy documents of the mission. The paper uses the Critical Discourse Analysis method, which involved examining policy documents and conducting in-depth interviews with senior administrators and policymakers in Kerala's health department. The study argues that the Aardram policy documents fail to address the significance of caste and class as key determinants in healthcare utilization. The paper calls for specific policy mechanisms to address the complex influence of caste and class on health access.

Kerala's state policy for transgender persons, the first in the country, recognizes the right of transgender individuals to equality, freedom of expression, right to dignity, and equal voice and participation in development [23]. In their commentary, Nair et al. [13] reflect on the challenges faced by transgender individuals in accessing gender-affirming medical care despite proactive state policy in Kerala and positive legal support. These challenges include a lack of family support, a lack of needed services in government health facilities, and poor service quality. The paper recommends improving awareness of transgender issues among medical professionals through changes in the medical curriculum, state support, and societal sensitization.

While aggregate health indicators portray Kerala as a state with good population health outcomes the tribal population in Kerala has been disproportionately excluded from achieving improvements in health status. The case study by Nujum et al. [15] follows the investigation of the death of a tribal adolescent girl brought to a government hospital suspected of sexual abuse, which medical investigations later revealed to be a case of rabies. The study, while pointing to the need for access issues around anti-rabies vaccines and the lack of mass pre-exposure prophylaxis to dogs in tribal settlements,

[1] The Aardram mission was launched by the government of Kerala in 2016, aimed to overhaul the public healthcare system in the state [19] The Kerala Economic Review 2023 report states that 726 out of 1105 government-owned health institutions (ranging from primary health centers to teaching medical colleges) were transformed through investments through Aardram mission that improved the infrastructure, human resources for health, and availability of essential diagnostics, medicines, and consumables [20].

echoed many of the challenges identified by other authors in our special issue: the remoteness of tribal settlements, and difficulty in commuting to the nearest health facilities. Authors argues for a one health-informed approach to ensure that rabies elimination measures equitably reach all sections of the population.

The COVID-19 pandemic had a profound impact on the mental well-being of population globally. The period of lockdown was unprecedented in human history, and children were especially affected as schooling shifted entirely online, limiting chances of social interaction in the early growing years. Vincent et al. [16] studied the impact of the pandemic on school children in Kerala through a cross-sectional study conducted in five districts. The study used the Devereux Early Childhood Assessment Clinical Form, pre-school (DECA-P2), to assess the social and emotional development of children aged 3–5 years and found that a major proportion of surveyed children fell into the category of area of concern. The study finds that children faced a substantial burden owing to pandemic management measures and calls for inclusive measures considering their mental health in future pandemic responses.

Conclusion

This special issue has been compiled at an important time. In 2017, the state of Kerala rolled out structural reforms in the health sector under the Aardram mission, along with three focused missions on improving housing, public education, eco-friendly and sustainable natural resources, waste management and sustainable agricultural practices under the umbrella of Nava Kerala Karmapadhati, a comprehensive pro-poor structural reform aimed to reduce inequalities and accelerating the attainment of the UN SDG Goals 2030 [24]. While the state health system continues to invest more in improving universal access to healthcare, a growing body of literature suggests that health equity does not result from doing "more of the same" in terms of what works to improve the summary measures of health outcomes. Addressing inequities requires tailored and adaptive and often targeted interventions backed by research. Research on health inequalities in India, while growing, remains inadequate and is a crucial component of reducing health inequity [25]. The special issue contributes nine articles to the growing health equity literature in the state using a variety of methods, showcasing the work of researchers studying health equity challenges in Kerala.

The authors who contributed to our special issue acknowledged the progress made by the state and highlighted the priority the health sector and equity of access receive in the state. Even being able to research and raise these issues is significant. And when issues are raised, questions asked, and research conducted, it is to be expected that critical gaps will emerge. These include persisting access issues to seek necessary care, lack of acknowledgment of important social determinants in policies, absence of targeted interventions for underserved communities, and shortcomings in engaging with the private sector - that continue to plague the journey of moving toward UHC.

The exercise has made us aware of the depth and breadth of health equity research happening in Kerala as we received 29 full paper submissions responding to our initial call in January 2023 for the special issue. The quality and variety of issues were impressive and much vaster than what we could accommodate in this issue. With this limitation, we have tried to curate a collection that comprehensively brings out equity issues around health in Kerala with a "Malayalam" (native language of the state) language abstract of each of the articles, which we hope could be useful to improve the reach of study findings, while also allowing conversations on equity– including those starting in Kerala - to truly become more global.

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HS wrote the first draft, ATS, RG, and DN reviewed and edited the manuscript. All the authors read and approved the manuscript.

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Data availability
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Declarations

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