Original Research Article

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20253261

District health governance to improve service delivery of tea garden hospitals in selected districts of Assam: drivers of change

Tapashi Adhikary^{1*}, Gauri N. Saikia¹, Dipankar Chakma¹, Gauri S. Dutta¹, Bhargava Bordoloi¹, Ahsin Ahmed²

Received: 28 May 2025 Accepted: 04 September 2025

*Correspondence: Dr. Tapashi Adhikary,

E-mail: tapashi.adhikary@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Decentralized governance across different tiers of healthcare delivery has proven to yield positive outcomes globally. To strengthen governance and improve service delivery in PPP Tea Garden Hospitals (TGHs), District Task Force (DTF) committees were instituted across selected districts in Assam. This study examines how DTFs influenced health service delivery using the World Development Report 2017 framework, focusing on credible commitment, coordination, and cooperation.

Methods: A qualitative study was conducted across four districts in Assam namely Dibrugarh, Sivasagar, Jorhat, and Golaghat. Data collection included observation of DTF meetings and 23 in-depth interviews with key stakeholders in tea gardens. Data were analyzed thematically and triangulated across sources.

Results: DTFs enhanced credible commitment through active participation of district administration, improving accountability and transparency in TGH operations. Coordination among NHM block officials and TGH staff was facilitated through structured reporting tools. However, inconsistent participation from non-health sectors and tea garden management limited cooperative efforts.

Conclusion: DTFs have emerged as a promising model for decentralized, multi-sectoral health governance in Assam's tea garden areas. Formalizing DTF protocols, incentivizing stakeholder participation, and addressing inter-departmental gaps can further enhance their effectiveness and scalability.

Keywords: District task force, Health Governance, WDR framework

INTRODUCTION

The World Health Organization (WHO) identifies governance as one of the six building blocks for strengthening health systems.^{1,3} Governance through decentralization across different tiers of healthcare service delivery has proven to yield positive outcomes in many countries.¹ It reinforces decision-making by authorities based on local problems to improve the health outcomes.² Such approaches to decision making with substantial autonomy over finances, planning, and decision space

devolved to the authorities helps in assessment of health indicators in a particular geography which if conducted at a national level may hold limited significance. 1,2,4,5 Decentralization helps in narrowing the gap between a centralized government and distant social groups by constituting institutional structures that are more close to the community.^{4,6,7}

Dialogue around decentralization in India gained momentum during the planning of the National Health Policy in 2002 wherein decentralization of healthcare

¹Independent Researcher, Guwahati, Assam, India

²Department of Women's Studies, Gauhati University, Guwahati, Assam, India

delivery was proposed through Panchayati Raj Institutions. 4,8 After the launch of the National Rural Health Mission (NRHM) in 2005, decentralized governance became one of the primary focus areas for strengthening health systems. In Assam formation of the District Health Society (DHS) in 2005 was one of the key milestones towards establishing a decentralized governance system. The DHS chaired by the Deputy Commissioner (DC) of the district was recognized as the primary district-level decision-making forum responsible for supervising all health programs, preparing the district health plan, and ensuring intersectoral convergence across various departments.

The DHS became the sole responsible body for governing all healthcare facilities in Assam including the Public Private Partnership Tea Garden Hospitals (PPP TGHs) which upon signing a memorandum of understanding (MoU) with National Health Mission (NHM) are receiving support in broadening the accessibility and affordability of healthcare services in the TGHs.¹⁰ NHM allocates funds of up to Rs.10 lakhs annually to 170 PPP TGHs for infrastructure development, capacity building and hiring of manpower, procuring drugs and equipment, emergency and outreach services. 10,13 Besides, an MoU was signed between the DHS and TGH Management Authorities of respective districts which mandated the Hospital Management Committees (HMCs) of TGHs to adhere to certain guidelines including developing monthly health action plans, progress reports, capacity building of staff, and improving service delivery, utilizing PPP fund. HMCs were assigned the responsibility to maintain all relevant records for audit purposes and submit it to DHS based on which the MoU was to be renewed each year for disbursement of NHM funds. 10,13,14 The MoU mandated the formation of a District Level Monitoring and Evaluation Committee for TGHs. 10,13

Despite this, no standard mechanism was established to review the fund utilization, performance, and service delivery of the hospitals. ^{10,13} To address the gaps, District Task Force (DTF) committees were operationalized as administrative bodies responsible for establishing a routine review mechanism of the PPP TGHs in the selected districts. The initiative was supported by a four-year consortium project on accelerating quality Maternal, Newborn, and Child health (MNCH) interventions in Assam. Leveraging the consortium's footprint and field experiences in the region, consensus was built on establishing DTFs bringing together a diverse range of health and non-health actors in a common platform for strengthening the service delivery in TGHs.

The DTF committees comprise representatives from the district administration, labour, and health departments, private health and non-health actors (TGH management, and welfare staff), civil society, and NGOs, with the DC serving as the chairman. The DTF works on the following solutions to enhance service in tea garden areas: evidence generation for identifying gaps related to PPP hospital

service delivery, strengthening the hospitals guided by existing mechanisms under PPP, establishing accountability among the healthcare providers of the hospitals, improving the linkage of tea garden beneficiaries to social protection schemes, strengthening the referral system, establishing multi-stakeholder forums for addressing social determinants of health, promoting community participation, and creating a robust review mechanism of the hospitals.

Since the establishment of DTF in 2022, it has become the converging platform for all processes of planning, review, and evaluation of TGHs. Decisions taken during the DTF meetings, largely inform on the performance of the TGHs and help gauge the impact of services. Therefore, the current study intends to understand the role of DTF in shaping the service delivery and performance of the TGHs using the World Development Report (WDR) 2017 framework on the three institutional functions of credible commitment, coordination, and cooperation. These three pillars are considered as imperative to establish positive reinforcement in governance mechanisms for effective decision-making. 15,16 The findings will help in identifying strategies for streamlining and strengthening the review process and help refine the MoUs for TGHs, extending the scalability and sustainability of PPP models of similar context.

METHODS

Study setting

Four districts namely Dibrugarh, Sivasagar, Jorhat, and Golaghat wherein DTF committees were formed between 2022 to 2023 were selected for the study. The four districts fall under the Upper Assam division comprising majority of tea garden plantation areas. There is a total of 66 PPP tea garden hospitals in the districts (37 in Dibrugarh, 6 in Sivasagar, 9 in Jorhat, and 14 in Golaghat). There are two tertiary care hospitals in the Upper Assam division, namely Assam Medical College and Hospital, and Jorhat medical College and Hospital located in Dibrugarh and Jorhat respectively. The PPP TGHs function under the ambit of their respective Block Primary Health Centres and are further linked to nearest public health facility.

Study design and data collection

The current study used descriptive qualitative methods. In each study district, one health block was purposively selected for inclusion in the study. From each block two TGHs were selected purposively. The four health blocks comprised a total of 25 PPP TGHs. Data was collected between February 2024 to May 2024. A field investigator documented two DTF meetings conducted in Jorhat and Dibrugrah districts. The meetings were documented on a non-participatory observation checklist consisting of sections on agenda setting, stakeholder participation, topics and levels of discussion, mode of decision making, feedback and follow-ups. Two members from the

investigating team conducted several rounds of in-depth interviews (IDIs) with district and block health officials, TGH staff, and representatives of the consortium. Detailed information of the participants' interviews is included in Table 1. The IDIs consisted of questions related to role and responsibilities of the participants, process of conducting meetings, reviewing performance of TGHs, decision

making, consensus building, existing challenges, and best practices in DTF. Interviews were audio-recorded, transcribed, and coded using Atlas.Ti (web version). Data from observation checklist and IDIs were triangulated and mapped against the 3 key domains of the WDR framework.¹⁵

Table 1: Profile of interviewees.

District	Block	Category	Participants	No. of participants (n)
Dibrugarh	Tengakhat	District level	-	0
		Block level	Block Program Manager, Sub-divisional Medical and Health Officer	2
		TGH level	Senior Medical Officer, Pharmacist	2
		Field level	District Program Officer (MNCH-consortium)	1
Sivasagar	Galeky	District level	• •	0
		Block level	Block Program Manager, Sub-divisional Medical and Health Officer	2
		TGH level	Tea Estate Manager, Medical Officer	2
		Field level	District Program Officer (MNCH-consortium)	1
Jorhat	Sangsua	District level	Assistant Labour Commissioner, District Media Expert	2
		Block level	Block Program Manager, Sub-divisional Medical and Health Officer	2
		TGH level	Tea garden Hospital In-charge, Pharmacist	2
		Field level	District Program Officer (MNCH-consortium)	1
Golaghat	Kamarbon- dha Ali	District level	District Program Manager, District Media expert	2
		Block level	Block Program Manager, Sub-divisional Medical and Health Officer	2
		TGH level	Medical Officer	1
		Field level	District Program Officer (MNCH-consortium)	1
Total				23

Interviews were audio-recorded, transcribed, and coded using manual and Atlas.Ti (web version). Data from IDIs and observation checklist were triangulated for qualitative analysis.

Analytic framework: drivers of change (credible commitment, coordination, and cooperation)

Credible commitment allows actors to rely on the decisionmaking body and the corrective strategies proposed by the body to overcome challenges. It allows actors to abide by the decisions undertaken by local governing bodies. If commitment made in such decision-making space is not credible the actors will lose trust in such institutions resulting in lack of compliance and accountability.

Coordination ensures all departments are equally contributing towards a common goal. Each department must believe that others are equally invested in achieving the goals. Therefore, actors involved in decision making must act in coordination to ensure optimal implementation of decisions and expectations.

For the success of any policy or decision to attain its expected outcome i.e. sustained development, collective cooperation from all actors is imperative. If any one or more actors tend to disarray from the shared goal or target, it leads to failure in sustaining the momentum for the desired outcome of the policy or decision.

At the centre of the framework is the decision-making space within which actors bargain and reach agreements on the decisions, given a set of rules i.e. the decisions can either be implemented as formal rules with established norms or may either have to be attained through backdoor deals. With the set of rules, it then comes to foreplay how commitment, coordination, and cooperation among the actors result in desired outcomes.

The current study's operational definition of governance adopted from the WDR framework defines governance as a process through which state and nonstate actors interact to design and implement policies within a given set of formal and informal rules that shape and are shaped by power.

RESULTS

Findings from observation tool on documenting DTF meetings

DTF meetings were reported to occur on a quarterly basis. During the period of data collection, DTF meetings from March to May 2024 2 DTF meetings were documented. The meetings generally were chaired by the DC or the Assistant Deputy Commissioner (ADC-Health) with the Joint Director of Health Services, NHM serving as the cochair. Other prominent actors who participate in DTF include Assistant Labour Commissioner (Labour department); Additional Chief Medical and Health Officer, NHM; District Nodal Officers-Maternal Health, and Child Health, NHM; District Immunization Officer, NHM; District TB Officer, NHM; District Social Welfare Officer; Medical Inspector Plantation; Sub-Divisional Medical and Health Officer, NHM; District Program and Block Management Unit Officials, NHM; zonal manager of Unique Identification Authority of India (UIDAI), Aadhar kendra; tea garden managers and welfare officers; PPP TGH Medical Officers or Pharmacists; representatives of tea associations; field representatives of MNCH consortium and NGOs.

The meetings occur on a quarterly basis. Key agendas discussed during the meetings are TGH infrastructure development, availability of equipment, laboratory, and emergency services in the, shortage and capacity building of manpower, improving access to MNCH related services, low footfall and performance of TGHs, health literacy among the community, social determinants of health, follow-up on previous DTF meetings action points, reward and recognition of good performing village health sanitation and nutrition committees (VHSNCs), and wage compensation scheme (WCS) related challenges.

DTF meetings follow a standard reporting of data using facility and performance assessment tools (FAT and PAT respectively). The FAT tool captures data including infrastructure, capacity building, laboratory and diagnostics, equipment and supplies, and essential drugs. The PAT tool on the other hand comprises day-to-day components involving evaluating the TGHs information management system including OPD records, disease burden, utilization of services, monthly meetings of VHSNCs, and other administrative/management related records.

Changes in service delivery

Most prominent change observed in service delivery of TGHs was in terms of WCS. Under the scheme, pregnant women of tea gardens are entitled to receive cash benefits of up to Rs. 15,000. WCS forms an important part of DTF meeting agendas, as such DTF facilitated documentation required for availing WCS entitlement for a significant number of pregnant women in the districts.

"We have started some activities such as 'bank mela' under the directives of DTF. We found that in one of our tea gardens women were unable to receive benefits under WCS since they didn't have any bank accounts and valid documents required under WCS to receive the entitlements. So, in collaboration with India Post Payment Bank we organised a 'bank mela' where bank officials were sent across various service points at the tea garden to open bank accounts of those women" (District official, NHM, Jorhat).

Beside WCS, improving quality of MNCH services also formed an integral part of the meetings. Strengthening existing and establishing new labour room infrastructure, increasing immunization uptake (BCG vaccine, pulse polio, vitamin K), procurement of essential supplies and equipment for labour rooms, maintaining nutri-gardens in the hospital premises to demonstrate pregnant women the benefits of organically grown vegetables were some of the initiatives which directly resulted as best practices adapted under DTF.

"Nutri-garden that was set up at our hospital has helped us demonstrate to many women regarding the benefits of seasonally grown organic vegetables and herbs in meeting their diet requirements" (Block official, NHM, Dibrugarh).

Inadequate infection control measures were reported as a pressing issue during DTF meetings as per several IDI participants. Following DTF, across all four districts, adherence to infection control measures such as biomedical waste segregation and management practices, environmental sample collection, deep burial pit digging and maintenance, were strictly adhered to across several TGHs. Examples of these are provided in Table 2. DTF was reported as a significant platform for awareness generation on various existing health schemes and entitlements. Schemes encompassing maternal health, family planning, National Health Programmes, and TB were widely discussed in the meetings. "National programmes and initiatives often are part of the discussions in DTF. Intensified Diarrhoea Control Fortnight, National Deworming Day, and noncommunicable disease related programs are some examples" (District official, NHM, Jorhat).

Credible commitment

The district administration plays a significant role in establishing commitment within DTF. Its presence in DTF meetings ensured participation, involvement, accountability across various departments (health, labour, TGH management, UIDAI, and bank).

"When the DC is present in the meeting, it makes a lot of impact. In case DC is unable to attend then ADC-Health represents the meeting on DC's behalf. After all it is the administration who would be passing orders and directives" (District Official, NHM, Golaghat).

Table 2: Examples of changes in service delivery.

Service delivery change	Quote	
Initiation of laboratory services and mandatory diagnostic tests in TGHs	"Through DTF laboratory services were started in many PPP TGHs and certain lab tests were made mandatory to be performed at the hospitals. The directives given during DTF meetings to initiate services are documented, it sort of then becomes a bible for the tea garden staff, they ought to follow these directives as these action areas are followed up in the next quarter" (District health official, Golaghat).	
Increase in birth dose and vitamin K administration	administered in many TGHs, a joint decision was therefore taken to make it compulsor, amin K	
Prevention measures for infection control and water borne diseases	"Biomedical waste segregation and management has now become a routine practice in many hospitals. Bio-medical waste disposal practices are now adhered more strictly than before. Capacity building of many staff of TGHs including ANM of sub-centres were conducted. Also, during diarrhea season, initiatives were undertaken by several hospitals to clean their water tanks as a preventive measure to control diarrhea and other water-borne diseases" (Block health official, Dibrugarh).	
Discussion on wide range of health issues	"Discussions are now not just limited to MNCH, but many other specific health issues in the context of tea gardens are emerging, such as illegal liquor supply in the gardens, drug consumption, TB, food poisoning, seasonal outbreaks and infectious diseases. Mushroom poisoning cases were also reported during the meetings in some gardens. Social issues that encompass health also form part of the discussions including domestic violence, teenage pregnancy, early marriage etc. Understanding these issues is imperative for wider outreach of our services" (District health official, Golaghat).	
Improved maternal health outcomes	"We have observed that more women are now opting for institutional delivery, particularly in Sockieting and Numaligarh tea gardens. Labour room infrastructure has also improved in many hospitals. This will eventually result in low-burden on our district hospitals, so it's a win-win for both sides" (District health official, Golaghat). "There are pregnant women who have now completed 4 antenatal care check-ups, also many hospitals have started maintaining high risk pregnancy cases registers, these records are shared with district or with Jorhat Medical College and Hospital (JMCH) for follow-up and referral. We have also observed some reduction in maternal deaths recently" (Medical Officer, Tea Garden Hospital, Sivasagar). "We proactively worked on reducing home deliveries, a decision discussed and widely endorsed during DTF meetings" (In-charge, Tea Garden Hospital, Jorhat).	
Extending outreach services to address unintended pregnancy outcomes	"In Lohpohia tea garden hospital, two maternal deaths were reported, these cases were discussed during DTF meetings. It was pointed out that these events occurred due to inadequate quality of services in the hospital. To avoid such cases in the future, an initiative was taken to send mobile medical units consisting of doctors, nurses, and laboratory technicians on a monthly basis to the garden to strengthen the existing workforce of the hospital" (District health official, Jorhat).	

"Initially they (TGHs and management) were not answerable to anyone, so they were functioning without much accountability but now with district administrations involvement they feel answerable and they have in fact started to acknowledge the gaps and are working towards closing the gaps" (MNCH consortium representative).

Involvement of district administration in DTF ensures accountability among block health officials to conduct regular monitoring, supportive supervision (SS) and sending their representatives to attend HMC meetings in the TGHs. It also resulted in TGHs reciprocating and synergizing their activities with block NHM including conducting regular HMC meetings, and following-up on resolutions taken during DTF.

"With DTF there is now this mechanism where we are answerable to the system, otherwise it was really challenging for us to manage. Like at present, immediately following DTF we conduct HMC meetings in our hospital and discuss key action points highlighted in DTF and how we could implement those" (Medical Officer, TGH, Sivasagar).

"We conduct field visits following DTF meetings. Me and my team from block program unit visit each TGH to check and verify the work done as per decisions taken during DTF. Also, TGHs conduct HMC meetings where we send our representatives to attend the meeting for monitoring and coordination with the garden staff" (Block Official, NHM, Jorhat). IDIs also revealed that DTF over time was able to establish 'credible promises' in bridging the gap in dialogue. Although PPP TGHs are supported by NHM, significant gaps in communication and lack of dialogue between the two actors were persistent. Through consecutive DTF meetings, these issues were addressed as it offered a platform to engage in dialogue and share common concerns among the stakeholders. It further highlighted the role and significance of DTF ultimately resulting in its buy-in across the departments.

"There was a disconnect between us and the TGHs, it was very weak starting from the beginning, we were not able to cross-check the data shared with us by TGHs on various performance parameters, there was a lag in monitoring visits from our end but with DTF this gap is breached as TGHs data is presented in PAT and FAT formats during the meetings" (Block Official, NHM, Sivasagar).

"We have been working with TGHs from a long time but we were not able to achieve much progress but with DTF we are witnessing a change, the progress level is very high at present, we see TGHs now raising their issues to us, it's not just a one-way communication now" (Block Official, NHM, Dibrugarh).

Although the majority of the participants opined involvement of other departments as beneficial, in few instances involvement of other departments was reported to deviate key agenda of the meetings, undermining the credibility of the meetings.

"In my opinion, the meetings should include stakeholders primarily from the health sector. The presence of individuals from other departments invites unnecessary chaos, diverting the main agenda. Attendees should predominantly comprise individuals actively engaged in grassroot health initiatives, probably ASHA and Anganwadi workers who possess invaluable insights in community health challenges" (TGH staff, Jorhat).

Coordination

Coordination among TGH and block health units of NHM were strengthened over time. Following DTF, TGHs and block NHM coordinated several SS visits underpinned by HMC meetings. Representatives from the block were proactively involved in both these processes which fostered a sense of collective action for better health outcomes in the TGHs. Besides, availability of "Whatsapp" was reported as an easy mode of communication and helped in sharing prompt updates and notification regarding the HMC meetings and SS visits.

"After the minutes are circulated, we visit the hospital and support the hospital staff in implementing the resolutions taken during DTF, the tea garden staff are slowly starting to realize the significance of these meetings" (Block Official, NHM, Dibrugarh).

Officials from the health department however reported lack of collective understanding and ownership of health in tea gardens as a challenge resulting in inadequate engagement of officials from other departments in the meetings.

"Although participation from the labour and social welfare department has increased, there is a need for orienting the stakeholders on public health issues, their role on how they can be of help and could get more involved and participate actively. We should create SOPs listing programs of all those concerned to see where our actions can converge" (District Official, NHM, Golaghat).

"We can expect other department's contribution only when we will be able to completely make them understand regarding NHM's goal and objectives and I think here we are still lagging behind" (Block Official, NHM, Dibrugarh).

Substantial support from district administration was reported across all four districts. However, availability of DC or ADC was a challenge due to their busy schedules and additional responsibilities which resulted in poor compliance in attending DTF meetings of representatives from departments other than NHM.

"The inter-departmental coordination is not happening as it should have been. At the most we could send letters, we are not getting the desired response and involvement until DC gets involved" (Block Official, NHM, Jorhat).

"For schemes like WCS we expect active participation from UIDAI, bank, and village head. It becomes very difficult to coordinate with so many parties, sending them constant reminders. Moreover, the garden managers do not check their mails, so we have to connect to them through Whatsapp" (Block Official, NHM, Golaghat).

Cooperation

It is important to note that although considerable change was reported following DTF's implementation, involvement of tea garden management and labour unions remained a persistent issue in many gardens, limiting dialogue and participation from tea garden representatives.

"If the manager or somebody from the labour union, preferably the president or the secretary attends the meeting, it becomes much easier for us to implement action. They have a lot of influence over the tea garden community and can motivate the community to uptake healthcare services and entitlements" (Block Official, NHM, Sivasagar).

"Tea garden managers and health officials must know DTF's importance, otherwise the meetings will not be very beneficial. We issue letters, but we don't get the desired participation, and involvement from the management" (Block Official, NHM, Dibrugarh).

"Tea garden managers should participate in these meetings voluntarily. Although medical officers of TGHs are present in the meetings, most decisions are taken by managers so their participation no doubt will add value" (District Official, NHM, Golaghat).

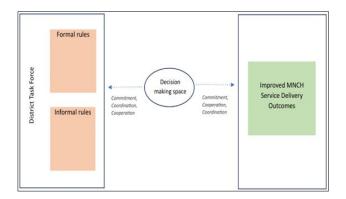


Figure 1: Conceptual framework on dtf governance mechanism. 14,15

IDIs with TGH staff indicated their involvement in DTF rely on management's participation as it is the managers who oversee and in authority of the hospitals.

"We cannot make decisions by ourself. It is the garden manager who decides for the hospital, if we happen to know in advance regarding the meetings we could probably bring someone from the management to attend the meetings" (TGH staff, Dibrugarh).

"Tea garden managers come and go, there is frequent change of doctors who are posted in the gardens. It is the managers who are there for a long time and who have more influence over things at the gardens" (Block official, NHM, Golaghat).

"We need our managers to participate in the meetings, many of the issues raised during the meeting need management's intervention as they are tackled by the management, also funds allocated by NHM are not adequate, managers can highlight this to the authorities during the meeting" (TGH staff, Jorhat).

The MNCH consortium is one of the key actors involved in ensuring participation and involvement of various departments. It was reflected in several interviews.

"We liaison with district administration, district and block NHM to decide a day for quarterly meetings, serve as correspondence and maintain coordination with each department to ensure official notifications are shared with concerned departments for the meeting" (field representative, MNCH consortium).

DISCUSSION

The findings of this study highlighted the role of the DTF in strengthening governance of TGHs in through the lens

of the WDR 2017 framework. The analysis highlights how the DTF's institutional functions: credible commitment, coordination, and cooperation, collectively shape service delivery and accountability, while also revealing systemic challenges that call for policy attention.

The DTF's success in fostering credible commitment hinges significantly on the active involvement of the district administration, particularly the DC. This aligns with decentralized governance models where local administrative leadership is critical for enforcing accountability and bridging gaps between policy intent and implementation.¹⁷ The DC's role in legitimizing the DTF's authority underscores the importance of hierarchical accountability in settings where informal power dynamics often overshadow formal institutional mandates. 18 However, reliance on individual leaders rather than systemic protocols risks instability, a challenge observed in other decentralized health systems where leadership continuity.¹⁹ transitions disrupt governance Institutionalizing DTF mandates within state health policies could mitigate such risks, ensuring sustained commitment beyond individual tenures.

The DTF's multi-sectoral structure facilitated coordination across health, labour, and social welfare departments, enabling WCS. This aligns with evidence that structured platforms enhance intersectoral collaboration by clarifying roles and fostering shared objectives. Development of the months of the months of the participation from non-health stakeholders reflects broader systemic barriers to coordination, such as misaligned incentives and insufficient capacity-building for non-health actors. The use of WhatsApp for real-time communication exemplifies adaptive strategies to overcome bureaucratic inertia, though digital tools alone cannot substitute for formalized workflows. Developing SOPs and integrating health literacy into non-health departments' agendas could strengthen collective action.

Cooperation within the DTF was hindered by limited engagement from tea garden managements and labour unions, reflecting power asymmetries common in PPPs.²⁴ While the MNCH consortium role as a neutral intermediary helped, sustainable cooperation requires aligning private actors' incentives with public health goals.²⁵ For instance, linking NHM funding to management participation in DTF meetings could incentivize accountability, a strategy effective in other PPP contexts.²⁶ Additionally, fostering trust transparent dialogue rather than top-down directives has been shown to enhance stakeholder buy-in in marginalized communities.²⁷

The DTF model demonstrates the potential of decentralized governance to address systemic gaps in PPP-driven healthcare. To scale this approach, policymakers should formalize multi-sectoral governance frameworks to clarify roles and accountability, integrate digital tools with institutional workflows to sustain coordination beyond

meetings and design incentive structures to align private stakeholders' priorities with public health objectives.

CONCLUSION

The DTF meetings represent a significant step towards improving healthcare services in tea garden communities through credible commitment, effective coordination, and active cooperation. However, to fully realize their potential, it is essential to enhance the involvement of all stakeholders, manage power asymmetries constructively, and align the incentives of actors towards common health goals. Future research should focus on exploring the power dynamics within DTF meetings, and refining methods to align incentives effectively. By addressing these areas, the DTF meetings can continue to drive significant improvements in healthcare delivery for tea garden communities.

ACKNOWLEDGEMENTS

Authors would like to thank the NHM officials and all others who supported the conduct of this study, as well as the entire team of the MNCH consortium, for their invaluable contributions and support throughout.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

REFERENCES

- 1. Panda B, Thakur HP. Decentralization and health system performance—a focused review of dimensions, difficulties, and derivatives in India. BMC Health Serv Res. 2016;16(Suppl 6):561.
- Feldhaus I, Chatterjee S, Clarke-Deelder E, Brenzel L, Resch S, Bossert TJ. Examining decentralization and managerial decision making for child immunization program performance in India. Soc Sci Med. 2023;317:115457.
- 3. Sharma A, Prinja S, Aggarwal AK. Measurement of health system performance at district level: A study protocol. J Public Health Res. 2018;6(3):917.
- Panda B, Zodpey SP, Thakur HP. Local self governance in health - a study of it's functioning in Odisha, India. BMC Health Serv Res. 2016;16(Suppl 6):554.
- Bhattacharyya S, Issac A, Girase B, Guha M, Schellenberg J, Iqbal Avan B. "There Is No Link Between Resource Allocation and Use of Local Data": A Qualitative Study of District-Based Health Decision-Making in West Bengal, India. Int J Environ Res Public Health. 2020;17(21):8283.
- 6. Seshadri SR, Parab S, Kotte S, Latha N, Subbiah K. Decentralization and decision space in the health sector: a case study from Karnataka, India. Health Policy Plan. 2016;31(2):171-81.

- 7. Sapkota S, Dhakal A, Rushton S, van Teijlingen E, Marahatta SB, Balen J, Lee, et al. The impact of decentralisation on health systems: a systematic review of reviews. BMJ Glob Health. 2023;8(12):e013317.
- 8. Malik AK. Health Sector Governance and Reforms in India. Liberal Studies. 2017;2(2):221-40.
- 9. Government of Assam. Health and Family Welfare Department. 2005. Available at: https://dhs.assam.gov.in. Accessed on 03 May 2025.
- National Health Mission, Assam. Operational Guidelines Tea Garden Hospitals under PPP with NHM, Assam: Financial year 2023-2024. Available at: https://nhm.assam.gov.in. Accessed on 03 May 2025
- 11. National Health Mission, Assam. Tea Garden Mobile Medical Unit (MMU). Available at: https://hfw.assam.gov.in. Accessed on 03 May 2025.
- 12. Labour Welfare. Government of Assam. Available at: https://labour.assam.gov.in/department-highlights/plantation-workers. Accessed on 03 May 2025.
- 13. National Health Mission, Assam. Operational Guidelines Tea Garden Hospitals under PPP with NHM, Assam: Financial year 2020-2021. Available at: https://nhm.assam.gov.in/sites/default/files /swf_utility_folder/departments/nhm_lipl_in_oid_6/menu/document/district_operational_guideline_for_tea_garden_hospital_under_ppp_2020-21.pdf. Accessed on 03 May 2025.
- 14. National Health Mission, Assam. Operational Guidelines Tea Garden Hospitals under PPP with NHM, Assam: Financial year 2021-2022. Available at: https://nhm.assam.gov.in/sites/default/files/ swf_utility_folder/departments/nhm_lipl_in_oid_6/menu/document/operational_guideline_tea_garden_hospit al_under_ppp_2021-22.pdf. Accessed on 03 May 2025.
- 15. The World Bank. Governance and the law: world development report 2017. Washington, DC: World Bank Group. 2017.
- Schneider H, George A, Mukinda F, Tabana H. District Governance and Improved Maternal, Neonatal and Child Health in South Africa: Pathways of Change. Health Syst Reform. 2020;6(1):e1669943.
- 17. Brinkerhoff DW. Accountability and health systems: Toward conceptual clarity and policy relevance. Health Policy and Planning. 2004;19(6):371-9.
- 18. Mikkelsen-Lopez I, Wyss K, de Savigny D. An approach to addressing governance from a health system framework perspective. BMC Int Health Human Rights. 2014;14(1):24.
- 19. Bennett S, Glandon D, Rasanathan K. Governing multisectoral action for health in low- and middle-income countries. PLOS Med. 2018;15(4):e1002575.
- Odendaal WA, Anstey Watkins J, Leon N, Goudge J, Griffiths F, Tomlinson M, et al. Health workers' perceptions and experiences of using mHealth technologies to deliver primary healthcare services: a qualitative evidence synthesis. Cochrane Database Syst Rev. 2020;3(3):CD011942.

- 21. Gilson L, Schneider H, Orgill M. Practice and power: A review and interpretive synthesis focused on the exercise of discretionary power in policy implementation. Health Policy and Planning. 2017;32(3):1-16.
- 22. Marston C, Renedo A, McGowan CR. Understanding the role of trust in community engagement with public health. Soc Sci Med. 2020;265:113387.
- 23. Buse K, Harmer AM. Seven habits of highly effective global public-private health partnerships: Practice and potential. Soc Sci Med. 2007;64(2):259-71.
- 24. McCoy D, Chand S, Sridhar D. Global health funding: How much, where it comes from, and where it goes. Health Policy Planning. 2020;35(6):673-81.
- 25. World Health Organization. Decentralization in Health Care: Strategies and Outcomes. 2021. Available at: https://eurohealthobservatory.who.int/publications/m/decentralization-in-health-care-strategies-and-outcomes. Accessed on 03 May 2025.

- 26. Bennett S, Frenk J, Mills A. The evolution of the field of Health Policy and Systems Research and outstanding challenges. Health Res Policy Systems. 2021;19(1):43.
- 27. Adam T, Hsu J, de Savigny D, Lavis JN, Røttingen JA, Bennett S. Evaluating health systems strengthening interventions in low-income and middle-income countries: Are we asking the right questions? Health Policy and Planning. 2021;36(1):i1-3.

Cite this article as: Adhikary T, Saikia GN, Chakma D, Dutta GS, Bordoloi B, Ahmed A. District health governance to improve service delivery of tea garden hospitals in selected districts of Assam: Drivers of Change. Int J Community Med Public Health 2025;12:4612-20.