

ORIGINAL RESEARCH

# Unpacking the politics and publicness of healthcare public-private partnerships: case studies from municipal hospitals in Maharashtra state, India

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Received 15 March 2025; Accepted 15 July 2025; Published 24 July 2025

## ABSTRACT

**Introduction:** Public-private partnerships (PPPs) have become a preferred global policy in healthcare. In India, PPPs have gained momentum over the past two decades but remain contentious. Most Indian research focuses on PPPs in primary rural healthcare. This study examines clinical and diagnostic PPPs in secondary and tertiary public hospitals in urban Maharashtra, analysing public-private relationships, decision-making processes, functionality, challenges, and their impact on health service delivery.

**Methods:** An exploratory, qualitative multiple-case study approach was employed. Forty hospital-based PPP projects active between 2017 and 2023 were mapped, and six diverse projects were selected for detailed case studies. Data collection included 25 qualitative interviews with stakeholders, review of technical documents, and a comparison of rates for 20 health services between PPPs and public hospitals. The study applied principal-agent theory to analyse public-private relationships and assessed PPP performance using the publicness criteria developed by David MacDonald and Greg Ruiters.

**Results:** The study revealed significant challenges in PPPs, including politicisation, lack of transparency, and governance inefficiencies. Local political influence often prioritised commercial interests over public health goals, with bureaucratic support addressing issues like doctor shortages and budget constraint. Decision-making for public hospitals was confined to municipal levels, with no involvement from the state health department. Of the 40 PPPs, 24 involved for-profit agencies and contracts lasting 10 to 30 years. Monitoring mechanisms were inadequate, leading to issues like non-compliance with contracts, underqualified staff, and inconsistent service delivery. Despite adequate resources, many projects had low utilisation rates. While some projects improved access, their services remained unaffordable for marginalised populations, with prices 3 to 15 times higher than those in public hospitals.

**Conclusion:** Addressing a critical knowledge gap, this study offers empirical insights into hospital-based clinical and diagnostic PPPs in municipal settings in India. Theoretically, PPPs can improve healthcare access by leveraging the private sector, however, structural reforms, robust governance frameworks, effective monitoring, and stricter regulation are critical to improving PPP performance in public interest. The study emphasizes the importance of strengthening the public health system to ensure comprehensive and equitable healthcare, raising concerns about the long-term viability of PPPs in addressing the complex challenges of urban healthcare.

**Keywords:** Healthcare, privatisation, public-private, governance, accountability, India

Abstract in Español at the end of the article

## INTRODUCTION

The burgeoning of public-private partnerships (PPPs) is reshaping the health systems worldwide. Since 1990s, the World Bank has advocated for PPPs to leverage private sector efficiency, expertise, and resources to complement public health systems [1]. Eventually, PPP has emerged as a favoured government approach for enhancing the health service delivery [2]. There is a significant rise in health-related PPPs, emphasising their role in addressing health system challenges, particularly in low- and middle-income countries [1]. These partnerships have evolved from traditional infrastructure projects to more integrated models that combine clinical services with management practices aimed at improving care quality [3].

In India, PPPs have gained significant momentum through various policy initiatives. Since 2005, PPPs have been integrated into formal government policy in India and is a key strategy within the National Health Mission [4]. The 12th five-year plan's working group on tertiary care institutions emphasised PPPs as essential tool for enhancing public health outcomes. It recommended large-scale public capital projects to support its planning and implementation, highlighting reduced health budgets [5]. The National Health Policy of India, 2017, underscores partnerships with private sector in urban areas, given the huge presence of private institutions in cities [6]. More recently, in 2020, NITI Aayog (National Institute for Transforming India), a central government policy think tank, emphasising the PPP models, has suggested handing over district hospitals with attached medical colleges to private healthcare companies on a PPP basis [7].

Although PPPs continue to be a favoured policy prescription for the health sector, its use, impact and expansion remain contested. Many concerns arise from the complexities involved in the hybrid approach of PPPs, involving public health systems and private actors. The complex interactions between public goals of public health system and profit goals of for-profit private health may lead to emergent consequences affecting effectiveness of healthcare services through PPP models.

The global literature suggests that although PPPs are intended to address internationally emerging public health issues, the questions related to their actual effectiveness and efficiency, remain unanswered [1, 8-11]. There are concerns related to affordability, financing, comprehensiveness, quality, regulation and accountability of PPPs [12-15]. Most studies and reports from Indian states shows a mixed picture. While some studies suggest increased access to health services, they also point to issues with service quality and non-compliance with contractual agreements [16, 17]. Studies have identified issues such as design flaws [2], operational irregularities, high costs, limited-service availability, and inadequate grievance redress mechanisms [18-24]. Research from states like Odisha and Bihar has highlighted monitoring and regulatory weaknesses arising from the diverse

contractual relationships with private organisations, [20, 25] leading to further fragmentation of an already weakened public health system, as seen in Delhi [26]. Despite these challenges, new PPP initiatives continue to emerge, often without incorporating lessons from existing evidence [27]. While many studies focus on PPPs in primary healthcare in rural areas [16, 28-30], very few have examined the hospital-based PPPs for secondary and tertiary care in urban areas such as Bihar, Chhattisgarh and Delhi [31]. These studies found that PPPs in healthcare often mirror public sector inefficiencies, such as staffing shortages and weak accountability. Rather than complementing public services, PPPs can fragment care and risk excluding vulnerable populations—raising concerns about their effectiveness and equity.

This paper aims to examine the public-private agency relationship with a focus on key actors, influences and decision-making process, and assess the functionality of PPP projects, related challenges, as well as their impact on health service delivery. We draw on in-depth qualitative research into existing hospital-based PPPs for clinical and diagnostic services in secondary and tertiary care public hospitals in two large cities in Maharashtra.

## METHODS

### Study context

Between 1999 and 2005, the World Bank funded a series of Health Systems Development Projects in the state of Maharashtra, which has an estimated population of 127.9 million as of 2024. These projects included PPP initiatives for the management of Seven Hills Hospital, a government super-specialty facility with 1,500 beds. However, due to widespread mismanagement of funds and resources at various levels, this project is largely regarded as a failed project [32]. Subsequently, under the National Health Mission, the state launched several PPP initiatives, including 40 mobile medical units and diagnostic centres. In line with NITI Aayog's proposal, Maharashtra is actively seeking bidders for the privatisation of district hospitals [33]. At present, various infrastructure projects are either in pipeline or in implementation phase across major cities.

Maharashtra has a highly privatised healthcare system, ranking third in India for the number of private hospital beds [34]. The total bed capacity of private hospitals in the state is approximately double that of public sector hospitals [19]. In terms of urbanisation also, Maharashtra ranks third with 45.23% of its population living in urban areas, according to the 2011 census [35]. The two large cities included in this study shows prominence of private healthcare providers. Both cities also have a significant slum population, with around 30-40% of residents living in slums [36].

At city level, four different departments deal with health agenda namely, urban development department at the Municipal Corporation (MC), state directorate of health services, Directorate of Medical Education and Research and Ministry of Health & Family Welfare. The

MC of the city autonomously make decisions on PPP initiatives for the public hospitals within its jurisdiction. The health infrastructure in both cities (see Table 1), gives

a glimpse of number of different types of hospitals under different departments in the cities.

**Table 1.** Secondary and tertiary hospitals in two cities of Maharashtra\*.

Number of hospitals	City I	City II
<b>a. Public hospitals</b>		
Under Municipal Corporation	Maternity hospitals: 29 General hospitals: 16 Specialty hospitals: 6 Medical colleges: 5 Dispensaries: 175 Health posts: 183	Maternity hospitals: 19 General hospitals: 2
Under Directorate of Medical Education and Research	8	1
Under State Directorate of Health Services	0	1
<b>b. Registered private hospitals</b>	1416	742

\* Data available as of 2019-20. Source: compiled by authors from various official online sources.

### Study design

This study employed a multiple case study design, primarily using a qualitative approach. Triangulation of data sources, including mapping of hospital-based PPP projects in secondary and tertiary hospitals and conducting exploratory in-depth case studies [37] of selected PPPs through qualitative interviews, review of technical documents and rate comparisons, enhanced the robustness of the findings.

### Analytical framework

The selection of the principal-agent theory and the publicness framework was based on the dual focus of our study: examining the governance dynamics and performance of PPPs. We used the principal-agent theory for analysing contractual relationship and processes between principal and agent in the PPP [38], which is widely applied for understanding PPPs from various domains including healthcare to identify related issues and gaps [39, 40] and is particularly suited to understanding the contractual and governance dynamics in PPP arrangements. It describes a relationship where an agent, hired by a principal, performs services using the principal's resources, with the principal bearing the risks [41]. Developed by Michael Jensen in the 1970s, the theory highlights the separation of control when a principal hires an agent.

Further, for examining performance of PPP projects, we refer to the publicness criteria as proposed by McDonald and Ruiters [42]. It has been used to assess public services like water supply, electricity, and healthcare [43]. We chose the publicness criteria over more conventional frameworks like access or availability, as going beyond these and allows to assess PPP performance in terms of equity, accountability, and transparency—dimensions that are critical when evaluating public service delivery models, particularly in contexts with complex state-

private sector dynamics.

Together, these frameworks allow for a more holistic analysis that connects structural features of PPPs with their everyday functioning. Our position also contributed to choosing these frameworks. This study was conducted by a team based at civil society organisation engaged in health systems research. As researchers embedded in public health systems research and rights-based advocacy, we approached this study with a normative commitment to equitable public provisioning. Our positionality was grounded in a rights-based perspective that conceptualizes healthcare as a public good. While this positionality informed our critical lens on PPPs, our methodological approach remained empirical and inductive, ensuring that findings emerged from robust data collection and analysis.

### Data collection

We initiated data collection by mapping hospital-based PPPs in secondary and tertiary hospitals under the two municipal corporations, focusing on active projects spanning from 2017 to 2023. Based on the lists of PPPs officially received from both MCs, we identified 40 PPPs and documented key attributes for each PPP such as the type of partnership, the public and private entities involved, contract durations, and the range of services offered. Following this, we selected six diverse PPP projects as case studies based on criteria such as the type of PPP model, private agency, services provided, and contract duration, to represent maximum variation (Table 2). Among the eligible projects meeting the criteria, six were purposively selected based on variation, data availability, and overall feasibility of conducting the study. Data collection was done during November 2023 to March 2024. These projects involved outsourcing the management and delivery of:

- a. Cardiac care unit at tertiary hospital

- b. ICU services at tertiary hospital;
- c. Diagnostic center at maternity hospital;
- d. Entire multispecialty hospital;
- e. Entire maternity care hospital; and
- f. Intensivists to multiple tertiary hospitals.

For each case, we examined the Memoranda of Understanding (MoUs) and media reports, paying particular attention to partnership agreements, operational and financial arrangements, the services provided, rates, subsidies, and governance mechanisms. In order to assess affordability of PPP projects, we also compared the rates of 23 commonly required health services offered through PPP projects with those provided in public hospitals. List of services with rate were obtained from respective public hospitals. We also obtained service utilisation data for some projects from official sources at MCs.

**Table 2.** Profile of PPP projects identified in the study.

Characteristics	Details
Total PPP projects in both MCs	40 PPP projects
Type of services under PPP projects	13: dialysis 9: entire hospital 8: diagnostic 4: intensivist care 6: specific health services like cardiac care, eye care, blood bank and palliative care cardiac care, eye care and blood bank
Type of private agency involved in the PPP	23: for profit agency 13: not for profit/trust organisation
Contract duration of PPP projects	15: for 11 months to 5 years 13: for 10 years 11: for 15-30 years 1: for 60 years

We conducted 25 in-depth qualitative interviews with four categories of respondents- government officials and ex-corporators (n=5), private agency management and staff (n=6), patients and/or their relatives (n=6), health activists and journalists (n=8). Respondents were selected through purposive and snowball sampling techniques, based on their direct involvement, relevant position with the concerned department or service and their willingness to participate in the study. Interview guides were developed and contextualised, referring to some technical documents available with us.

Interview guides were tailored to each respondent and focused on themes such as the nature of the PPP relationship, roles of stakeholders, governance processes, and service delivery outcomes—specifically addressing dimensions like access, affordability, equity, accountability, and quality, as informed by the publicness criteria and principal-agent theory.

Informed consent was obtained, and interviews, ranging from 30 minutes to 1.30 hours. We explained the study purpose and sought respondents' willingness to participate in the study. We reassured respondents regarding the confidentiality and the anonymity of their participation as many of them were concerned about their names getting published in a report or scrutiny of their practice by the government. Eight respondents provided written consent, three provided recorded consent and rest of the respondents participated in the study with verbal consent. All the interviews were conducted in Marathi (a local language) by authors SM and DY who are well versed in Marathi. All recorded interviews were transcribed verbatim.

In essence, we used different data sources appropriately to examine various dimensions of PPPs keeping with both frameworks. For example, affordability was assessed through service rate comparisons, accountability through analysis of MoUs and interviews, and access and equity through interviews and service utilisation data as available for some cases.

### Data analysis

All transcripts and handwritten interview notes were analysed using *Taguette* software. The coding and subsequent findings were guided by the analytical frameworks. We used a primarily deductive thematic analysis [44], guided by principal-agent theory and publicness criteria, with some inductive coding to capture emerging themes. Key elements focused were—stakeholder roles, governance, accountability (from principal-agent theory), and access, equity, affordability, quality, and efficiency (from publicness criteria). Each case was analysed individually as well as cross-case comparison by combining data from interviews and technical documents to identify common themes and variations. SM and DY conducted the coding and thematic analysis, while all authors participated in discussions to refine analysis and interpret the findings.

### Ethics

The study was approved by the Institutional Ethics Committee of Anusandhan Trust. Ref number-IEC32/2023). Informed consent was obtained from all the participants. All participants gave their written, recorded or verbal consent to participate in the study. Given the sensitive nature of the study, the names of municipal corporations, public hospitals, private agencies, and respondents were fully anonymised to strictly maintain the confidentiality.



## RESULTS

The findings begin with a brief overview of active PPP projects in both cities, followed by insights from six in-depth case studies, structured around the two analytical frameworks guiding the study: Principal-Agent theory and Publicness Criteria.

### Mapping of PPP projects

The mapping of PPP projects showed that most of them belonged to the models of outsourcing delivery and management of a part or all of a public facility by private sector. We received a list of total 40 PPP projects (Table 2), 20 from each MC. Of these, notably, nine were for running the entire hospitals (i.e. all departments of the public hospital). In 24 projects, private entity involved was for-profit private company. Data on the duration of the projects revealed that 24 projects were contracted for a period of 10 to 30 years, with only one project lasting for 60 years.

We now turn to findings from the six in-depth case studies, structured in two parts, aligned with the study's analytical frameworks.

### Principal-agent relationship in PPP projects

As informed by officials, decisions regarding PPPs for health services under MCs were made at the level of governing body, the standing committee and the commissioner, with initial approval from the health department. The three key actors in the PPP process included government officials (such as medical officers from the health department, the commissioner, and other concerned officers), elected political representatives (such as local corporators), and private agencies.

### Interest and incentives to the key actors

*Principal* (government i.e. municipal corporation): PPPs in healthcare were primarily legitimised by government authorities, often in response to long standing challenges such as a shortage of medical professionals and financial constraints. Various officials cited, *"we do not get doctors"* as a common reason behind entering PPPs. However, as noted by some officials:

*"The salary scales for permanent doctors offered are significantly lower than those in private hospitals, and these scales have not been updated for decades."* (Respondent 24, health official)

Government officials expressed scepticism regarding the recruitment process for doctors, salary negotiations, and union-related issues, which often leads to a preference for outsourcing services through PPPs. Budgetary constraints, particularly because of stagnated and decreasing health budgets, significantly limit the government's ability to provide healthcare services, rendering PPPs an appealing alternative for ensuring access to affordable care.

*"PPP based projects at least ensure availability of some services. It's much better than receiving nothing."* (Respondent 1, health official)

Conversely, activists argued that governments reliance on PPPs, amounts to shrugging off its duties, favouring commercial interests over public welfare.

*Political representatives:* Our study revealed that local corporators often influence PPP initiatives. According to various respondents, political influence has increased mostly since 2013-14. In the PPP cases we studied, sitting and former corporators played direct or indirect roles in PPPs, from infrastructure construction and purchases to selection of agents and managing the projects.

*"With the support of municipal bureaucracy, corporators leverage available space and funds to initiate the hospital infrastructure projects. They have no capacity or interest to run hospitals or serve patients. They are mainly interested in making money and gaining the publicity."* (Respondent 24, health official)

*Private agencies:* Private agencies were drawn to PPPs due to the potential for commercial benefits, such as access to free or heavily subsidised resources like infrastructure and utilities. In our study, all six PPP cases secured space at minimal costs—some for as little as 1 per month—and four received complimentary water, electricity, and maintenance services. Given the soaring costs of land, these arrangements significantly reduce expenses for private agencies [45]. For these agencies, PPPs offer considerable commercial opportunities for growth in collaboration with the government. For instance, the private agency managing an entire hospital on PPP basis has established multiple projects across various municipal corporations in Maharashtra. Similarly, a nationwide diagnostic chain has envisioned the expansion through partnerships with the government through PPP model, as articulated in their vision document.

### The process of selection of and contracting with private agency

*Selection of private agent:* Officials explained that the standard process for contracting PPPs begins with a needs assessment by health officials, considering patient load on existing public hospitals and gaps in health services. After approval from the health department and commissioner's office, tenders are invited. In a two-stage tender process, agencies passing technical scrutiny are further evaluated on quality and commercial parameters, with final selection made by the standing committee and governing body.

The principal-agent theory posits that principal should select the most suitable private agent; however, the actual selection process often diverges significantly due to the influence of corporators, bureaucrats, and private agencies. For example, a PPP case of an entire maternity hospital raises serious questions about the process of private agency's selection. From 2005 to 2015, the municipality had a PPP with "X" private agency, which was terminated in 2015 due to violations of contractual norms. Violating the agreement with MC, which mandated the facility to operate solely as a maternity home, the agency provided multiple specialty care, including

orthopaedics, general surgery, urology, cardiac surgery, and oncology. As a result, the high court ordered the closure of all these multi-specialty departments. Additionally, “X” privacy agency had not paid the standard rent to MC for the entire contract duration. Despite this problematic history of breaches and legal action, as per media reports, the agency was re-selected in 2019 and was awarded a new contract extending until 2034 [46]. Intriguingly the municipality’s new agreement with this agency includes a clause, which permits the agency to provide the same services that had led to its previous termination.

*Role of corporators in contracting:* Regarding process of entering the PPP, respondents noted that standard processes were not adhered to in many cases. The corporators often initiated the PPP ideas and prompt the health officials to prepare proposals. This pattern was evident in four out of six case studies.

*“Interested corporator either take contract on own by forming a private consultancy firm or identify the favourable contractor and earn commission out of it.” (Respondent 20, social activist)*

In the PPP cases for cardiac care and ICUs, it appeared that certain corporators not only proposed the initiatives but also formed their own registered private firms, submitted tailored tenders, and subsequently entered into contracts. This dual role, where they acted both as public representatives and private agents because in both cases, the selected private agency was newly formed specifically for PPP and had no prior healthcare experience. For instance, the corporator who initiated the ICU outsourcing came from the hotel industry. They formed the consultancy firm, making the ICU their first healthcare venture.

Moreover, there was a growing trend where corporators initiated infrastructure projects and equipment purchases with official approvals, which were then handed over to private agencies under PPPs, citing the inability of health officials to manage them.

*“Corporators look for vacant plots for hospital projects and seek approval through the proper channels. Upon completion of construction, they transfer the building to the MC health department which subsequently declares that they are not in a position to run it and opt to offer it on a PPP basis!.” (Respondent 2, former political representative)*

For instance, in a PPP concerning an entire hospital, a 76-bed multi-specialty facility was constructed through the initiative of a corporator. Subsequently, the MC handed over the hospital to a private agency. This agency gained control of the property, valued at INR 50 crores (INR 12 crores for the land and INR 38 crores for infrastructure), for a lease period of 28 years. Similarly, in the PPP case concerning an ICU, an intensive care unit

was established in a tertiary hospital during 2011–2012, equipped with resources worth INR 60–65,00,000 and staffed by five physicians [47]. However, it remained non-functional for nearly a decade. In 2023, after media scrutiny, it was transferred to a private agency owned by a political representative.

#### *Gaps in drafting the technical documents*

The drafting of MOUs for healthcare PPPs (Table 3), exhibited a lack of uniformity and clarity. It appeared that health officials often did not possess the necessary technical expertise to draft comprehensive agreements. Key details were frequently omitted, such as the composition of monitoring committees and procedures for subcontracting, including review and grievance mechanisms. The MOUs also failed to specify crucial operational aspects like the handling of equipment and consumable costs, as well as maintenance and repair responsibilities. Moreover, none of the MOUs set deadlines for making services fully operational, and most lacked provisions for user feedback or grievance redressal, limiting insights into patient experiences and needs.

#### *Transparency in contracting process*

Respondents, including journalists, activists, and officials, expressed serious concerns about the lack of transparency in the contracting process. As some participants noted:

*“Based on negotiations between health officials, corporators and private agency, different terms are included in different documents. The revisions in key documents are made through back door dealings that bypass legal requirement for re-tendering.” (Respondent 20, social activist)*

*“Various technical documents like tenders, Workorders, MOU and Annual Maintenance contract, may have different terms and conditions, which may not match with each other.” (Respondent 24, health official)*

In a specific case of an eye hospital, it was shared that,

*“The tender and MOU documents clearly specified that the private agency was required to purchase 43 types of equipment, which they didn’t. When activists opposed the MC’s proposal to purchase equipment worth Rs 2 crores, the terms in the MOU were amended retroactively, which is clearly illegal and unjust to other bidders.” (Respondent 20, social activist)*

Further, the key contract documents were not publicly available. Even when requested by activists or journalists, authorities only provided the latest versions, making it difficult to identify discrepancies and raise concerns.

**Table 3.** Key points from MOUs between municipal corporation and the private agency .

<b>Key points</b>	<b>Case I- Outsourcing ICU services</b>	<b>Case II- Outsourcing entire Multi Specialty Hospital</b>	<b>Case III- Outsourcing diagnostics services</b>	<b>Case IV- Outsourcing cardiac care center</b>	<b>Case V- Outsourcing entire maternity care hospital</b>	<b>Case VI- Outsourcing intensivist care</b>
<b>Type of PPP model</b>	Outsourcing of operations and management of specific clinical services	Outsourcing of operations and management of entire hospital	Outsourcing of operations and management of diagnostic services	Outsourcing of operations and management of specific clinical services	Outsourcing operations and management of entire hospital	Outsourcing of human resources for a specific clinical service
<b>Type of implementing agency</b>	Private consultancy firm	Trust foundation	PAN India diagnostic chain	Private consultancy firm	Private for-profit hospital	Not-for profit, charitable trust
<b>Duration of PPP</b>	30 years, started from Dec2022	28 years, started from Nov 202	10 years, started from Jan 2018	30 years, started from Sep 2017	15 years (2019-2034).	10 years started from 17/08/2018. Terminated in June 2023
<b>Services offered</b>	ICU services	Multi-specialty facilities	Diagnostic services	Super specialty Cardiac care	Maternity care and other specialties	Provide intensivist doctors in ICUs
<b>Rates</b>	at 1 % less than CGHS rates	at 4.5% less than CGHS rates	at 6 % less than CGHS rates	at 5 % less than CGHS rates	Rates decided by the committee formed under the chairmanship of Director	Rs 2049 per bed per day, total contract amount of 1,64,25,000 to be paid by MC to agency
<b>Premises provided by MC</b>	First floor of the public hospital at free cost, without rent	Entire building of 25,000 sq.ft at free of cost, without rent. All taxes borne by corporation	Front side of ground floor of public hospital at annual rent of Rs 1	Second floor of the public hospital at free cost, without rent	Municipal Maternity Hospital of size admeasuring 1108.50 sq. metres constructed on the plot	Not mentioned
<b>Electricity and water</b>	By MC	By agency	By MC	By MC	By agency	Not mentioned
<b>Equipment purchase</b>	Most equipment by MC	Most equipment by MC	Equipment by agency	Most equipment by MC	By agency	Not mentioned
<b>Provision of human resources</b>	By agency	By agency	By agency	By agency	By agency	By agency

<b>Monitoring and accountability mechanisms</b>	A committee will be formed to ensure project implementation and coordination.	Performance checks and review every 7 years	Private agency to submit monthly compliance report every month to MC	A committee will be formed and 10% penalty for 2.5% delayed reports and 20% for 5% or more for delayed reports will be charged	Private agency will set up a Monitoring Committee and meet every three monthly	'No work, no pay' principle will be applicable for any absent doctor and penalties will be applicable
<b>Complaints redressal committee</b>	Not mentioned	Not mentioned	Complaints Redressal Committee to be set up by MC	Not mentioned	Not mentioned	Not mentioned
<b>Free treatment with 100% reimbursement to agency by MC</b>	Contributory Health Scheme (CHS) members, current and former corporators, women for ante and post-natal care, infant below 1 year of age	CHS members, current Corporators and former Corporators.	CHS members, current and former Corporators, women for ante and post-natal care, infant below 1 year of age	CHS members, current Corporators, former Corporators, and beneficiaries of govt health insurance scheme	30% maternity beds and 5% NICU beds in this hospital are provided 'free of cost'.	Not mentioned
<b>Concessional treatment with MC reimbursement to private agency</b>	50% free to Urban Poor Health Scheme members	50% free to Urban Poor Health Scheme members	50% free to Urban Poor Health Scheme members	50% free to Urban Poor Health Scheme members	For services other than maternity services 1. 20% beds at chargeable services at the rate minimum 25% less than Govt approved insurance scheme 2. 40% beds at free services under Govt approved insurance scheme	Not mentioned

### Understanding performance of PPP projects using publicness criteria

#### Availability of health services

In the PPP case of cardiac care, according to official data on service utilisation, with an average of 103 admissions per month situation appeared satisfactory. However, it was found that patients were not admitted unless they paid a deposit of approximately INR 30,000–40,000.

In the PPP case of diagnostic care, patients reported overall positive feedback, however, further conversations with concerned staff respondents mentioned that CT and MRI scans remained non-available for two years after opening of the center due to unresolved electricity issues due at the MC level. Further it also highlights a breach of contractual obligations and a lack of accountability from both the MC and the private agency, particularly as the



agency was provided free utilities (water and electricity) as well as the entire building from the MC as part of this PPP project.

The PPP case of ICU, according to official data from December 2022 to February 2024 indicated poor utilisation, with average of only 40 admissions per month. Reports from respondents and the media revealed that critical patients were routinely referred to the city's only larger public hospital, which actually defeats the purpose of making this ICU operational in tertiary hospital

under the PPP. While talking about money making practices of this ICU, a patient's relative shared that,

*"Although hospital had generic medicine store in the hospital premises, we were forced to buy medicines from ICU which are sold at MRP and hence were costlier." (Respondent 10, patient relative)*

**Table 4.** Comparison of rates of health services at PPP projects and public hospitals.\*

Rates for health services	Rates in hospital/lab under PPP project (in INR)	Rates in public hospital (in INR)	Rates in PPP project X times higher than those in public hospitals
Outpatient consultation for general medicine	100	20	5
Outpatient consultation for medical specialities	300	20	15
Inpatient consultation for specialist/medical consultant	400	30	13
ICU	5130	400	13
Oxygen	1188	110	11
Ventilator	526	220	2
Catheterisation	420	60	7
Central line-in ICU	1485	60	25
Echo Cardiogram (ECG)	200	70	3
X-ray Chest	132	50	3
CT scan	3000	800	4
MRI	3500	2250	2
Lipid profile	216	55	4
CBC	146	45	3
2D ECHO	1500	400	4
Sonography abdomen	950	120	8
Sonography Obstetrics	1250	120	10
Angiography	12565	2200	6
Angioplasty	67450	3500	19
Cardiac consultation	333	20	17

\* Source: Rate cards from respective PPP cases and the public hospital

In the PPP case of outsourcing an entire hospital, the five-story, 76-bed multi-specialty facility—equipped with an ICU and Cath lab—was barely functional even after 15 months of opening. It received only 4-5 outpatient visits daily, with specialist consultations available only by appointment. Data from December 2022 to February 2024 revealed that in 15 months, there were just 119 admissions, and 18 procedures performed. Essential services like pharmacy, X-ray, and MRI were not available. Activists reported that patients were frequently referred to the city's larger public hospital.

*"A patient with snake bite went to this hospital but was denied care as they did not have antivenom injection in their pharmacy. The patient*

*was then referred to the larger public hospital in the city which was at 15 kms. After reaching that hospital patient died. If injection could have been given in time, then the patient might have survived." (Respondent 11, political activist)*

#### *Provision of schemes and subsidies*

The MOUs for all PPP cases in the study explicitly outline the government schemes and subsidies that private agencies are required to provide. Since MCs reimburse the costs, private agencies do not bear any financial burden for delivering services under schemes and subsidies. Despite this arrangement, private agencies were reluctant in providing these services. For instance,

in PPP case of diagnostic care, the MOU guaranteed free services for specific groups, such as pregnant and lactating women, but as community workers reported,

*“Diagnostic center does not inform patients about these subsidies unless specifically asked by the patient and generally women are not aware of or afraid to ask for free services and so do not able to avail it.” (Respondent 22, community worker)*

In the PPP case of maternity hospital, the MOU stipulated 30% free maternity beds and 5% NICU beds, with an additional 40% under a government health insurance scheme. However, this information was not displayed in the hospital anywhere.

#### **Affordability**

While health service rates under PPP projects were lower than market rates, they were significantly higher than those in public hospitals. A comparison of 20 services—including pathology, radiology, outpatient and inpatient care, and common surgeries—revealed that prices of services under six PPP cases were 2 to 25 times higher than rates in public hospitals (see table 4). For instance, outpatient consultation fee at a facility under PPP was INR 300, ten times higher than the INR 30 charged at a public hospital.

It was reported that, the rates for PPP projects were decided at MC level. The MOUs for the PPP cases included in the study specify that health services should be provided at rates ranging from 1% to 6% less than CGHS rates.

*“We were told a package of INR 1,75,000 (5% less than CGHS rates) for cardiac surgery which was not affordable for us. We could afford it and got the mother’s surgery done only due to 50% concession we availed from MC level scheme for below poverty level people.” (Respondent 15, Patient relative)*

*“Rates in lab under PPP were low than private labs and hence we prefer to go to them [those run under PPP].” (Respondent 17, patient)*

As reflected in patients’ feedback, while some individuals find the rates for services under PPPs lower than market prices and therefore acceptable, many marginalised and poor people—whom the public health system is intended to serve through PPPs—still consider these rates unaffordable. For instance, the cost of an MRI for the spinal cord is INR 13,000 at a private lab, INR 5,000 at a PPP lab, and INR 2,200 at a public hospital. This means that the PPP lab is more than twice as expensive as the public hospital, making it out of reach for many in need.

#### **Efficiency and Quality of services**

Efficiency and quality of care in hospital settings were closely linked to the availability of adequate infrastructure, essential equipment, and qualified human resources. Findings from the six PPP case studies revealed a mixed picture—while some improvements in service delivery were perceived by patients such as clean facilities, courteous staff behaviour, good maintenance also timely report delivery, reduced waiting time, and a more pleasant environment than typically found in public hospitals, there were significant structural and operational challenges, especially related to human resources (HR) and secondary outsourcing.

*Human resources and capacity:* As shared by officials, owing to difficulties faced by MC in recruiting HR, private agencies were mandated to employ HR in all six PPP case studies. While some cases—such as the diagnostics and maternity hospital—reported no HR-related issues, insights from interviews and reviews of MoUs reveal significant concerns in others. The cardiac care PPP emerged as the only case demonstrating a sustainable HR model. The private agency involved employed full-time, qualified doctors at competitive market rates and explicitly prohibited them to work outside. This ensured continuity of care and accountability.

In contrast, the remaining three cases exhibited HR non-compliances, including insufficient or underqualified staffing and reliance on part-time or on-call doctors and nurses.

As per MOU, in PPP case of intensivists, a private charitable trust was contracted for INR 8,83,30,000 for two years to supply qualified intensivist doctors and nurses. However, as reported in media reports, following an alarming 149 deaths [48] in the ICU over a period of nine months, it was discovered that the trust had employed underqualified doctors including homeopathy and ayurveda doctors, who were not authorised to work in ICU. Some doctors did not even possess valid registration with the Maharashtra Medical Council. This serious breach not only violated clinical and regulatory norms but directly compromised the quality of care delivered to critically ill patients. The lack of appropriate medical expertise in such a high-dependency unit likely contributed to preventable deaths and eroded public trust in the facility. Consequently, the contract with the private agency was terminated by the Municipal Corporation. Similarly, in PPP case of the entire hospital with 76 beds, even after 15 months of its opening, only two full-time in-house doctors and two nurses were employed per shift. Other specialists were available only on a panel or on-call basis. The hospital administrator was underqualified with just secondary school graduation and was a relative of the politician behind the PPP project. The lack of qualified staff and on-site specialists disrupted timely care and weakened the hospital’s emergency response.

In another PPP case of ICU, the manager had barely completed bachelor’s degree, and was a relative of corpo-

rator behind the project, who owned the private agency under PPP. This agency had not employed full-time doctors, instead relied on contractual, part-time doctors and nurses, often homeopathy and ayurveda doctors. Owing to non-availability of qualified, full-time doctors, as shared by respondents, all the critical patients had to be referred to the city's only large public hospital, effectively defeating the purpose of establishing the ICU in the first place.

*Secondary outsourcing:* In addition to HR-related issues, quality of care appeared to be further compromised in some cases due to secondary outsourcing—where the primary private agency subcontracted services to other private providers. For example, in the PPP case of the full hospital, CT scan, pathology, and dialysis services were outsourced to separate private agencies. This multi-layered outsourcing model raised concerns around service quality due to weak monitoring systems and accountability measures.

### *Governance, accountability, and transparency*

*Accountability and Monitoring:* Despite having large number of PPPs in MCs, there was no dedicated cells to manage them in both MCs included in the study. The MOUs for the six case studies included provisions for monitoring and accountability through health department under MC. However, these committees were often inactive, and as officials confirmed that the audits were either non conducted or barely conducted by health officials from MCs. This lack of monitoring also opens the door to corruption, often due to nexus among interested parties.

*"In case of entire hospital, although air conditioning machines were not used for more than one year as this hospital was barely functional, maintenance bills were generated and paid by corporation in the interest of concerned corporator."*  
(Respondent 11, political activist)

In three of the PPP cases, the accountability provisions in the MOUs were quite problematic. In PPP case of entire hospital which remained non-functional for 18 months from its opening, the MOU specifies performance reviews every seven years till 28 years. In another case of PPP of maternity hospital, the responsibility of forming the monitoring committee was put on the private agency instead which may undermine objectivity and create conflict of interest. Further, in PPP case of intensivist service, while the MOU mentions penalties for absent doctors, it lacked monitoring mechanisms to ensure whether hired doctors were qualified or not. Due to which, a scandal of appointing unqualified doctors was uncovered only after an investigation into multiple deaths in the ICU [48].

As noted earlier, secondary outsourcing, involves accountability issues. In PPP case of entire hospital, despite the MC providing major equipment and infrastructure, the private agency further subcontracted key services. While it cannot be proven illegal due to vague

terms in MOU, the arrangement lacked clarity in terms of accountability. Taking a step forward, in another PPP case of ICU, the MOU itself explicitly allowed sub-contracting, stating private agency's obligation as, "To do an agreement or collaboration with other people or organisations to provide quality ICU care without any financial burden to government". Such clauses raise serious concerns about the selection process and the capacity of private agencies involved in the PPP for provision of the said health services. While allowing such sub-contracting, the MOU lacked clarity on monitoring mechanisms and grievance redressal.

*Grievance redressal:* Of the six PPP cases examined in the study, only one MOU for diagnostic services mentioned a grievance redressal mechanism. However, respondents, including private agency staff and MC officials, reported that no such committee was functional and patients were expected to file complaints through a portal or directly with the health department. Data on how this mechanism works at MC level couldn't be obtained.

*Transparency:* In some PPP cases, details like a list of services and their rates were displayed. However, in PPP case of diagnostics, a journalist and activists reported that it took months of extensive follow-up to get rate cards displayed at the center. Despite MOU requirements to clearly display services, rates, and subsidies, no such boards were posted in either PPP case of entire hospital. Except for the launch event, there was no publicity or signage on the main road. Owing to lack of information regarding PPP projects in public domain, some respondents suggested that, the contract documents, performance and audit reports of PPP projects should be available on MC's website.

## DISCUSSION

This empirical study fills the important gap in literature in India on facility-based PPPs for delivering clinical services from urban secondary and tertiary public hospitals. The mapping of PPP projects from both MCs highlights the extent and scope of hospital-based PPP initiatives under these MCs. Through in-depth analyses of six diverse PPP cases, this study provides insights into the processes, influences, and challenges associated with the functioning, implementation, and impact of these PPPs on health service delivery.

There is significant variation in how the PPPs are defined and operationalized. Internationally, PPPs are typically characterized by shared risks, long-term contracts, and private investment in public service delivery infrastructure [49,50]. However, in the Indian context, many arrangements labelled as PPPs may not meet these criteria fully, often resembling short-term outsourcing or management contracts without substantial risk transfer or asset creation. In this study too, while many of the cases we examined may not fully meet these criteria, acknowledging this definitional limitation we based our analysis on how these arrangements are officially

labelled and operationalized by municipal authorities. Below, we discuss key issues that emerged from the findings.

With regard to the principal-agent relationship, this study reveals two key points. First, since municipal health agenda falls under the urban development department, PPP decisions for public hospitals in MC jurisdiction were made exclusively at the municipal level, without state health department involvement or oversight. Reflecting on this structure, a senior official [51] from state public health department shared that, *“at present, the state government is largely in the dark about what is happening on the public health front in the urban and municipal corporation areas. For some local bodies like the municipal councils, public health may not be a priority”*. To address this, it has been officially declared that the ‘directorate of urban health services’ will be set up in Maharashtra under the purview of the state public health department to oversee all 27 MCs. Such structural changes may help reduce the ongoing interference of local corporators in the health system. While decentralisation aims to enhance local accountability, our findings indicate that, without sufficient technical and regulatory capacity, it can lead to serious governance gaps. In this context, a system with state health department involvement providing supportive oversight—without curtailing local autonomy—could help address the current accountability challenges as well as political influence. Second, political interests heavily influence healthcare PPPs, enabled with the autonomous decision-making at the MC level. Over the past decade, corporators increasingly viewed these projects as potential avenues for income opportunities. This politicisation risks diverting PPPs from their intended focus on healthcare access and quality and potentially exacerbating the issues like corruption, favouritism, and resource misallocation [52].

Theoretically, principals aim to maximise social welfare, while private agencies focus on economic gains [53]. However, our study reveals that local corporators—who were public representatives, in collaboration with bureaucracy—often influenced PPP initiatives with commercial interests similar to private agents. As a result, the expected conflict of priorities between principals and agents, as outlined in principal-agent theory [54], was not evident in the PPP cases we examined. Moreover, although the principal-agent theory highlights information asymmetry as a key challenge, our findings suggest a more complex reality with both MC officials and private agents lacking adequate information and expertise. In two PPP cases—cardiac care and ICU services—corporators established consultancy firms solely to secure contracts despite lacking any healthcare expertise and experience. Further, in the PPP cases we examined, the drafting of MOUs appeared vague or incomplete which led to unclear responsibilities, weak accountability, and spaces for opportunistic behavior. These observations align with insights from institutional economics, particularly the argument that drafting com-

plete contracts in healthcare is inherently challenging due to high asset specificity, information asymmetry, and uncertainty in service provision [55]. Further, regarding publicness criteria, our study demonstrates that all examined PPP cases involve serious shortcomings related to performance and score poorly in meeting various publicness criteria including equity in access, quality and efficiency, transparency, accountability and governance. It highlights significant gaps in governance and accountability mechanisms in PPPs, an issue echoed by previous research [20-22,31]. As noted by others too, often, governance challenges in PPPs were associated with corruption and unethical behaviour among the involved parties [56]. Further, as evident, many of the gaps in implementation and compliances with MOUs were linked with the lack of transparency, accountability measures, inadequate monitoring, and grievance systems [4]. The delegation of public resources with ill-defined governance mechanisms, not only impinge upon service delivery [57] but may also exacerbate the potential risk of the loss of ownership and control over government resources [58].

As our study shows, inequities in access to healthcare also persist, as even though PPP service rates were lower than market rates, they remain unaffordable for marginalised segments of the society. Similar findings and the concerns were observed in a study from West Bengal on user fees under the PPP framework [21]. Although non-profit private agencies in PPPs are commonly assumed to offer affordable, socially oriented services [4], yet our findings demonstrate otherwise. In all our PPP cases, service rates were of CGHS standards and so there was no pricing difference between profit and non-profit agencies. Additionally, non-profit agencies in the study exhibited multiple issues, with one providing intensivist services being prematurely terminated.

The study notes the concerns with service availability and efficiency, impinging the quality of healthcare. The PPP projects in the study faced certain challenges similar to those in public hospitals, as noted in prior studies as well [31, 59, 60]. Although PPPs are promoted as a solution to staffing issues, our study found significant HR deficiencies in PPP cases, such as hiring unqualified personnel, lack of full-time staff, dependence on visiting doctors, and persistent staff shortages. While public hospitals often deny services due to limited resources and overcrowding, the PPP cases in our study, despite being well-equipped, sometimes also withheld treatments either because of unavailability of certain services despite being listed in the MoUs or due to refusing admission of patients under government schemes and subsidies. It was observed that the PPP cases we studied did not fill the gaps in the urban public health system as intended. Although promoted to improve healthcare access, four out of six PPP cases—except two-cardiac and diagnostic PPP cases—were underutilised. When public hospitals remain overcrowded and patients from PPP projects were still referred there. This trend mirrors



findings in other parts of India [31, 61].

### Strengths and limitations

Addressing a key knowledge gap, this study provides empirical insights into hospital-based clinical and diagnostic PPPs in secondary and tertiary care. Grounded in local political and institutional contexts, it captures the complexity of diverse PPP models. Its analytical strength lies in the use of two complementary frameworks—Principal-Agent Theory and Publicness Criteria—enabling a comprehensive analysis of structural relationships and service delivery outcomes. Access to the full set of technical documents for the PPP projects was challenging. Despite multiple follow-ups, we accessed MOUs and brief performance reports but couldn't secure the complete docket of PPP projects, which includes all relevant documents from the expression of interest to the amended MOUs. To protect the anonymity of MCs and the concerned officials and health departments, the names of cities have been masked and hence certain sources, especially, news reports have not been fully cited. While the study is rooted in the specific context of urban municipal PPPs in India, the findings may have broader relevance for similar settings.

### Conclusion

This study on hospital-based PPPs within urban health system brings attention to the large number of PPPs at MC level and offers critical policy insights for streamlining it. It uncovers a complex interplay among government officials, politicians, and private agencies. It also foregrounds the structural limitations of PPPs in healthcare—particularly the challenge of writing complete contracts in high-uncertainty, high-asset-specificity settings like health services. While PPPs aim to address resource shortages and improve healthcare access, our findings highlight major flaws in their design, processes, implementation, and effectiveness in delivering health services to marginalised populations. These issues, compounded by local political interests and inadequate oversight at the municipal level, undermine the effectiveness of PPP projects. More than anything, PPP projects have emerged as a political agenda, sidelining need-based decision-making, and public health goals. While PPPs theoretically hold promise of enhancing healthcare delivery through private sector involvement, their success hinges upon well-designed contracts, robust governance with improved capacities, transparency, and accountability. Moreover, given the challenges with regulatory capacity in India, the risks of relying on PPPs for core clin-

ical services remain high. Key measures include establishing multi-stakeholder monitoring committees with civil society and health department representatives, publicly accessible contract documents and performance audits, a patient feedback and grievance portal, increased public awareness of available services and subsidies, and evidence-based policies for PPPs.

Finally, the study highlights a policy shift in government's role from providing care to purchasing or outsourcing the care. While some PPPs may play a complementary role in addressing specific gaps, the long-term strategy must prioritize strengthening public provisioning of healthcare as the most reliable and equitable approach to serve marginalized populations.

## DECLARATIONS

### Publication consent

Not applicable.

### Competing interests

The authors declare no competing interests.

### Funding

This research was conducted as part of COPASAH project, funded by Population Action International.

### Author contributions

SM conceptualised the study. SM and DY co-led the study. They jointly developed the methodology, collected and analysed the data. AM gathered and analysed the technical documents. SM wrote the original draft. DK contributed inputs to the editing and revisions. All authors reviewed and approved the manuscript.

### Data availability

Technical documents and anonymised transcripts of the qualitative interviews can be provided by the corresponding author upon reasonable request.

### Acknowledgements

The authors express their gratitude to all participants in this study for sharing the information and their experiences. We thank Veena Sriram for carefully reviewing the manuscript and sharing valuable feedback. Thanks also go to the anonymous peer reviewers for their critical observations and suggestions in detail, which undoubtedly strengthened the manuscript.

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## Análisis de la política y la dimensión pública de las asociaciones público-privadas en el sector salud: estudios de caso en hospitales municipales del estado de Maharashtra, India

### RESUMEN

**Introducción:** Las asociaciones público-privadas (APP) se han consolidado como una política preferida a nivel global en el sector salud. En India, las APP han ganado impulso en las últimas dos décadas, aunque siguen siendo objeto de debate. La mayoría de las investigaciones indias se centran en APP en la atención primaria rural. Este estudio examina APP clínicas y diagnósticas en hospitales públicos de segundo y tercer nivel en zonas urbanas del estado de Maharashtra, analizando las relaciones público-privadas, los procesos de toma de decisiones, su funcionamiento, los desafíos enfrentados y su impacto en la prestación de servicios de salud.

**Métodos:** Se utilizó un enfoque exploratorio cualitativo con diseño de estudio de casos múltiples. Se mapearon 40 proyectos hospitalarios de APP activos entre 2017 y 2023, de los cuales se seleccionaron seis proyectos diversos para estudios de caso en profundidad. La recolección de datos incluyó 25 entrevistas cualitativas con actores clave, revisión de documentos técnicos y comparación de tarifas de 20 servicios de salud entre APP y hospitales públicos. Para el análisis de las relaciones público-privadas se aplicó la teoría del agente-principal, y se evaluó el desempeño de las APP utilizando los criterios de "carácter público" propuestos por David MacDonald y Greg Ruiters.

**Resultados:** El estudio reveló desafíos significativos en las APP, incluyendo politización, falta de transparencia e ineficiencias en la gobernanza. La influencia política local a menudo priorizó intereses comerciales por encima de los objetivos de salud pública, mientras que el respaldo burocrático se centró en problemas como la escasez de médicos y restricciones presupuestarias. La toma de decisiones en hospitales públicos se limitó al ámbito municipal, sin participación del departamento estatal de salud. De los 40 proyectos analizados, 24 involucraban agencias con fines de lucro y contratos de entre 10 y 30 años. Los mecanismos de supervisión fueron insuficientes, lo que derivó en incumplimientos contractuales, personal no calificado y prestación irregular de servicios. A pesar de contar con recursos adecuados, muchos proyectos mostraron baja utilización. Aunque algunos mejoraron el acceso, sus servicios resultaron inaccesibles para poblaciones marginadas, con precios de 3 a 15 veces más altos que los de los hospitales públicos.

**Conclusión:** Este estudio llena un vacío crítico de conocimiento al ofrecer evidencia empírica sobre APP clínicas y diagnósticas en hospitales municipales en India. En teoría, las APP pueden mejorar el acceso a la atención mediante la participación del sector privado; sin embargo, para lograr un desempeño efectivo y alineado con el interés público, son necesarias reformas estructurales, marcos de gobernanza sólidos, mecanismos de monitoreo eficaces y una regulación más estricta. El estudio subraya la importancia de fortalecer el sistema público de salud para garantizar una atención integral y equitativa, y plantea dudas sobre la viabilidad a largo plazo de las APP frente a los complejos desafíos de la atención sanitaria urbana.

**Palabras clave:** Atención sanitaria, privatización, público-privado, gobernanza, rendición de cuentas, India

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