



**HARVARD**  
**T.H. CHAN**

**SCHOOL OF PUBLIC HEALTH**

Department of Global Health  
and Population

---

## **Assessing Quality of Care in India: Considerations for National Reform**

Anuska Kalita\*, Liana Woskie\*, Winnie Yip

*\*Joint First Authors*

December 2022

---

**India Health Systems Project**

Working Paper No. #5

## Table of Contents

<b>Preface to the Working Paper Series.....</b>	<b>i</b>
<b>Abstract .....</b>	<b>ii</b>
<b>1. Introduction .....</b>	<b>1</b>
<b>2. Context and Health System in Odisha.....</b>	<b>2</b>
<b>3. Methods .....</b>	<b>2</b>
<b>4. Results .....</b>	<b>3</b>
<b>4.1 Clinical Effectiveness .....</b>	<b>3</b>
<b>4.2 Patient Safety.....</b>	<b>4</b>
<b>4.3 Patient-Centeredness .....</b>	<b>5</b>
<b>5. Implications for Broader Health Policy Reform .....</b>	<b>6</b>
<b>5.1 Provider Training and Clinical Education.....</b>	<b>6</b>
<b>5.2 Clinical Guidelines and Digital Decision-Support Tools .....</b>	<b>7</b>
<b>5.3 Strategic Purchasing and Provider Incentives .....</b>	<b>8</b>
<b>5.4 Facility Autonomy and Flexibility to Respond to Outcome-Based         Incentives .....</b>	<b>9</b>
<b>5.5 Accreditations and Ratings .....</b>	<b>10</b>
<b>5.6 Promoting a Non-Punitive Culture and Peer Monitoring for         Patient Safety.....</b>	<b>10</b>
<b>5.7 Reforms for Patient-Centeredness .....</b>	<b>11</b>
<b>6. Conclusion .....</b>	<b>12</b>
<b>7. References .....</b>	<b>13</b>

## **Preface to the Working Paper Series**

The India Health Systems Project is motivated by the goal of advancing health system reforms in India to provide equitable access to good quality of care and financial risk protection for its citizens. The Project adopts a system approach to assess the strengths and weaknesses of India's current health care system, identify underlying causes, propose potential solutions drawing on best practices within India and international experience, and, finally, to monitor and evaluate progress and impacts of reforms.

The Working Paper Series presents products from the project. They include research papers, country cases, and analytical tools for conducting health system and reform analysis. The intended audiences are researchers, health policy analysts and practitioners of health systems reform in India—at the national- and state-level—and worldwide. The Working Papers are available at <https://www.hsph.harvard.edu/india-health-systems/>.

Funding from the Bill and Melinda Gates Foundation (OPP-1181215 and OPP-1181222) is gratefully acknowledged.

Winnie Yip, PhD  
Professor of Global Health Policy and Economics  
Principal Investigator, India Health Systems Project  
Harvard T.H. Chan School of Public Health

## **Abstract**

As the availability and affordability of healthcare improve, many countries are not experiencing expected gains in health outcomes. One potential driver for stagnating health outcomes is low-quality health services. India is a prominent example of this discordance: the country has recently implemented several major healthcare reforms at national and state levels, yet continues to face significant challenges in improving health system performance. These challenges are particularly daunting in India's poorer states, like Odisha. In this context, the Harvard T.H. Chan School of Public Health conducted a comprehensive study to assess quality of care throughout the state. We assessed quality along three core domains: clinical effectiveness, patient safety, and patient-centeredness. Using an interconnected set of surveys – outpatient and inpatient exit interviews, interviews with primary care providers using clinical vignettes, and interviews with hospital staff, allowed us to assess healthcare quality from multiple angles. In this case study, we present the following: (1) a summary of the key findings on the three domains of quality, (2) a brief diagnosis of possible causes behind our findings, and (3) recommendations for reforms to improve quality based on global experiences.

## 1. Introduction

Even as the availability and affordability of healthcare improve, many countries are not experiencing anticipated gains in health outcomes. One potential driver for stagnating health outcomes is low-quality health services. For example, between 5.7 and 8.4 million deaths are estimated to result from poor-quality healthcare each year in low- and middle-income countries (LMICs).<sup>1</sup> While people may have better access to health services, the quality of those services is highly variable. At best, healthcare can improve health and save lives; but it can also cause physical harm and erode trust. India has recently implemented several major healthcare reforms at national and state levels, yet the nation continues to face significant challenges in achieving better health system performance.

These challenges are particularly daunting in India's poorer states, like Odisha. While the focus of several past and newer health policies has been to improve access to care and financial risk protection, there have been few initiatives to improve quality of care in the country. Importantly, there is limited data on quality of care, which often impedes an assessment of the extent and scale of the problems, diagnosing the causes behind them, and designing evidence-based solutions to address it. In this context, the Harvard T.H. Chan School of Public Health conducted a comprehensive study in Odisha to assess quality of care. We assessed quality of care along three aspects: clinical effectiveness, patient safety, and patient-centeredness. These three aspects of quality are the major gaps in existing knowledge, but they are the critical components of healthcare linked to patient outcomes. Using an interconnected set of surveys—patients at outpatient and inpatient exit interviews, interviews with primary care providers using clinical vignettes, and interviews with hospital staff, allowed us to assess three aspects of healthcare quality: patient safety, patient-centeredness, and clinical effectiveness.

We focused on three main questions related to quality:

- i. First, do patients in Odisha receive appropriate treatment for clinical conditions when they seek care? (*clinical effectiveness*)
- ii. Second, when patients receive care in different kinds of facilities, is the care safe and not harmful to patients? (*patient safety*)
- iii. Finally, are patients treated with respect and involved in decisions regarding their care? (*patient-centeredness*)

Utilizing this methodology, we present the following: (1) a summary of the key findings on the three aspects of quality: clinical effectiveness, patient safety, and patient-centeredness; (2) a brief diagnosis of possible causes behind our findings; and (3) some recommendations for reforms to improve quality based on global experiences.

## 2. Context and Health System in Odisha

The state of Odisha in eastern India has a population of over 41 million and is predominantly rural (83.3%). With 32.6% of people living below the poverty line (BPL), Odisha is among India's six most impoverished states with very low developmental indices. Odisha is home to many vulnerable social groups, including a large tribal (indigenous) population base, constitutionally known as the Scheduled Tribes (ST), and historically disadvantaged castes or the Scheduled Castes (SC).<sup>2</sup> In addition, health expenditure has remained low (around \$46 per capita or Rs. 2,949) compared to other Indian states, and with about 76% of total health expenditure (THE) paid by individuals, as out-of-pocket expenditure (OOPE), one of the highest in India.<sup>3</sup> These factors combine to create significant challenges for Odisha to provide equitable health care services to its citizens.

As with other states in India, Odisha has a pluralistic health system where a range of formal and informal providers in both the public and private sectors deliver health care. The public sector facilities are funded and run by the state's and central government's departments of health. These public sector facilities include Sub-Centers, Health and Wellness Centers (HWCs), and Primary Health Centers (PHCs) for primary care delivery, and Community Health Centers (CHCs), Sub-divisional Hospitals (SDHs), District Hospitals, and Medical College Hospitals for secondary and tertiary care. The private sector is heterogeneous and includes a range of providers (super-specialty hospitals with highly-skilled doctors, charitable hospitals and clinics, doctors with small individual practices [or solo providers], traditional healers, and private pharmacies). In addition, outpatient and primary health care are provided by outpatient departments of public and private sector secondary and tertiary hospitals.

## 3. Methods

This case study uses an analysis of data from four different surveys undertaken as a part of the larger Odisha Health System Assessment Study comprised of ten surveys, comprehensively assessing different aspects of the state's health system.<sup>4</sup> The detailed methodologies used for the surveys are presented below (Table 1).

**Clinical Effectiveness:** We used clinical vignettes to interview primary care level providers in public and private sectors on five illness conditions—tuberculosis, childhood diarrhea, pre-eclampsia, heart attack, and asthma—and evaluated their responses against clinical guidelines through 550 unique interactions. The public sector providers were those at government-run PHCs, and the private sector providers included those engaged in solo practice, irrespective of medical qualifications. We examined differences among providers on three parameters: competence to make a correct diagnosis, knowledge of the diagnostic process, and competence to provide the correct treatment. Additionally, we analyzed prescription patterns among providers at the primary level.

**Patient Safety:** We examined patient safety culture in Odisha’s public hospitals with a validated analytical tool, the Hospital Survey on Patient Safety Culture (HSOPS).<sup>5</sup> We interviewed 2,687 patient-facing staff members (physicians, nurses, paramedics, and hospital management staff) in nine public sector hospitals. A limitation of our sample was that we could not undertake safety audits in the private sector, as we did not receive informed consent from any private sector hospital.

**Patient-Centeredness:** The data for this assessment comes from interviews with 1,485 patients in two surveys. The first was an exit survey with 507 patients receiving inpatient care in five hospitals across Odisha. We adapted the Hospital Survey on Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) tool for this survey.<sup>6</sup> The second was an exit survey with 978 patients receiving outpatient care at a range of public and private sector providers, including outpatient departments of hospitals and nursing homes, CHCs, PHCs, and solo providers.

**Table 1: The surveys used to assess quality of care**

Survey	Respondents and Sample Sizes	Objectives
1. In-patient exit survey	In-patients from Medical College Hospitals & Tertiary Hospitals and District Hospitals - 507	Assess patient experience of seeking care, focused on perception of quality
2. Out-patient exit survey	Out-patients from hospital OPDs, CHC, PHC, solo providers – 978	Understand referral patterns Assess healthcare expenses incurred by patients
3. Patient safety culture survey	Providers across Medical College Hospitals & Tertiary Hospitals, District Hospitals, Sub-Divisional Hospitals - 2687	Assess patient safety culture in hospitals
4. Clinical vignette survey	Providers at the primary level (includes Medical Officers in PHCs and solo providers) – 550 interactions with 110 unique providers	Assess clinical effectiveness of providers, understand prescribing behavior of providers (focused on unnecessary/irrational and harmful drugs)

## 4. Results

The main finding from all four surveys from our study is that low quality of care is one of the most significant challenges for Odisha’s health system. There is poor competence among providers to diagnose and treat common conditions, poor patient safety culture in public sector hospitals, and low levels of patient satisfaction, especially among vulnerable groups. In this section, we present the key findings from our surveys on the three aspects of quality: clinical effectiveness, patient safety and patient-centeredness.

### 4.1 Clinical Effectiveness

Clinical effectiveness is the provision of health services based on scientific knowledge, including avoiding the overuse of inappropriate care and underusing effective care. Clinical effectiveness is determined by measuring the extent to which a diagnosis or treatment is based on evidence or standard guidelines and its influence on clinical outcomes.

We found that both public and private providers at the primary care level had poor competence, often making wrong diagnoses and giving incorrect and unnecessary treatments, potentially harming patients. Only 58% of providers made a correct diagnosis across the five illness conditions in our vignettes. We found that provider competence to diagnose and treat conditions across public and private sectors was poor. In most cases, providers did not prescribe the right treatment as recommended by clinical guidelines. Across the different conditions, only 2.2% of providers prescribed the correct treatments without any unnecessary drugs. Not a single provider in our study prescribed the full-recommended treatment for pre-eclampsia, heart attack, and asthma. An average of 40% of providers prescribed *only* unnecessary or incorrect drugs across the five vignette conditions, for example, antibiotics for heart attack or pre-eclampsia or antacids and painkillers for tuberculosis, pre-eclampsia, and asthma.

Analyzing the possible correlates of provider competence, we found that private sector providers, those in urban areas, and those trained at government colleges were significantly more competent to make correct diagnoses. However, medical qualifications (i.e., MBBS or AYUSH), in-service training, years of work experience were not significantly associated with an increase in diagnostic competence. Furthermore, the likelihood of low-value care, or the prescription of incorrect and irrational drugs, was equally prevalent among all providers, irrespective of whether they practiced in the public or private sectors, urban or rural areas, or had MBBS or AYUSH qualifications.

## **4.2 Patient Safety**

The safety of patients is a critical component of quality that has important consequences for health system performance. Patient safety culture is “the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization’s health and safety management.” Yet, patient safety and its consequences are barely studied in India.

We found significant problems with patient safety culture in Odisha’s public hospitals. There was a lack of monitoring systems for routine collection of data on medical errors in public hospitals. Almost no patient safety events were reported in any of the hospitals surveyed. In some facilities, over 90% of respondents reported never submitting an event report. Across public hospitals, only 12% of staff had ever reported an event, compared to an average of around 45% in high-income countries. Because hospitals are not reporting safety events, it is impossible to know how much harm is caused by unsafe services in Odisha’s inpatient settings—and, in turn, it is not possible to address that harm.



The number of events, or error reports, submitted by survey respondents was very low across facilities – in some facilities fewer than 10% of respondents had ever submitted an event report while working in their given facility (regardless of the duration of time spent at the facility). Those working in general medicine or emergency medicine were significantly less likely than their peers to have reported an error. Conversely, staff working in the surgery or pharmacy department were significantly more likely to have had reported a safety event report. This finding was consistent when controlling for staff characteristics, such as: duration of time spent working at a given facility, number of hours worked per week, and position.

In addition, the only provider characteristic that was significantly associated with an individual's overall HSOPS rating was tenure at their given hospital. Individuals who had been at a hospital for longer were more likely to rate their department's approach to patient safety positively.

### **4.3 Patient-Centeredness**

Patient-centered care is health care that is respectful of and responsive to individual patient preferences, needs, and values and allows patients to help guide clinical decisions. Studies show that patient satisfaction is associated with a higher quality of care and better health outcomes. In addition, when patients have negative care experiences, they are more likely to delay seeking necessary medical care and are at higher risk of not adhering to treatment recommendations.

We examined the relationship between each item and patients' overall satisfaction with their visit (which was collected using a 10-point Likert scale). We found that hospital environment items were weakly associated with overall satisfaction, whereas interpersonal care from doctors was most strongly associated. This finding was encouraging and suggests patients value aspects of care other than the physical environment – which is often a concern with subjective satisfaction ratings. These relationships hold when we control for the volume of services received and other relevant patient characteristics.

In both inpatient and outpatient settings, patients with no formal education and those belonging to SC or ST groups received the lowest quality of interpersonal treatment as assessed through objective care experience measures. We found that, within the same facility, more-educated and higher-caste patients reported significantly higher interpersonal treatment from providers. Patients from ST groups were 14 percentage points less likely to report being treated with dignity and respect than patients from other social groups. In addition, one thing that consistently arose throughout the validation process was where responsibility for various aspects of care lies – e.g., is it the hospital or family's responsibility to maintain a clean environment? If patients believed it was the family's responsibility, this issue would unlikely be picked up in overall satisfaction ratings. Unfortunately, when quantitatively evaluating the reporting based on expectations, values, patient needs and entitlement, we find discordance appears to be distributed unequally across the patient population. For example, while patients

across all groups reported that they valued respectful care, when we disaggregate this relationship by patient characteristics, such as education – we see that the relationship between reporting disrespectful interpersonal care and the likelihood of reporting low overall satisfaction is very different. This figure shows the coefficient where overall dissatisfaction is the dependent variable and patient-reported exposure to disrespectful care is the independent (unadjusted).

## **5. Implications for Broader Health Policy Reform**

Poor quality in India has continued despite policy initiatives. India has undertaken several initiatives to address quality. For example, the National Quality Assurance Standards (NQAS) 2013, LaQshya (Labour Room Quality Improvement Initiative) 2017, and very recently, the Value-Based Purchasing initiative (2022) under the national insurance program, PMJAY are aimed at improving clinical quality. Accreditation through the National Accreditation Board for Hospitals and Healthcare Providers (NABH) and the National Accreditation Board for Laboratories (NABL) aims to standardize and certify quality standards for private sector hospitals and diagnostic laboratories. The National Patient Safety Improvement Framework by the Ministry of Health and Family Welfare (MoHFW) provides a set of excellent strategies for public sector hospitals. While Mera Aspatal and Kaya Kalp are designed to assess patient satisfaction and facility infrastructure. However, the fragmented nature of these initiatives—targeting MBBS doctors, hospitals and public sector facilities versus other providers; weak regulatory enforcement capacities; and not addressing the larger health systems correlates of poor quality—are some of the reasons why they have not had the desired impact.

Below we recommend some reform ideas to address the poor quality of care based on evidence from global experiences and in the context of India’s existing policy initiatives. While we offer ideas for each of the three areas of quality, we focus on improving clinical quality of care. This is because of the very poor levels of care quality (as reported in our results) and the historically low prioritization of clinical effectiveness in Indian health policy.

### **5.1 Provider Training and Clinical Education**

Provider training is one of the most commonly used interventions to improve clinical competency. Our findings indicate that most providers had not received in-service training throughout their careers of ~20 years. Evidence, including our analysis from this project, shows that formal qualification is not necessarily a significant predictor of clinical effectiveness among Indian providers. Provider training and refresher courses are important and have been found to positively impact clinical effectiveness. For example, in India, training pharmacy staff on correct diagnosis and recommended referral patterns have been effective for tuberculosis;<sup>2</sup> training solo providers improved the diagnostic and treatment competencies.<sup>3</sup> It is essential that providers, not limited to physicians in the public sector but non-physician and private sector providers must be

trained regularly. However, global evidence shows that one-time trainings do not always produce sustainable improvement in quality.<sup>4,5</sup> Training needs to be combined with other measures, such as incentives, a supportive environment, and peer influence through provider associations.<sup>4,6</sup>

Improving formal medical and other clinical education is another important reform to improve quality.<sup>4</sup> Our assessment showed that variable quality of medical education between the government and some private colleges lead to significant differences in provider competence. There is an urgent need to focus on evidence-based medicine and standardized education for health personnel. Several studies and media articles have reported the widespread corruption involved in accrediting private medical colleges and the consequent lack of quality standards in medical education.<sup>7,8</sup> These problems need to be addressed with strong, enforceable regulations. Close engagement with the National Medical Council (NMC), the Indian Medical Association (IMA), and state chapters of physicians' associations could help in bringing about these challenging reforms.

## **5.2 Clinical Guidelines and Digital Decision-Support Tools**

Clinical guidelines and decision-support tools could be made available on digital platforms to guide providers. Several countries, including the US, China, Kenya, and India, have used these tools in recent years. The first step is to make clinical guidelines widely available across different providers in both public and private sectors. At present, clinical guidelines are focused on hospitals and MBBS doctors. However, given that a large proportion of the population access primary health care from private sector providers, including solo practitioners and private pharmacists, it is important that clinical guidelines for common illnesses are shared with all providers, formal and informal, and not just with large hospitals or public sector physicians.

In addition to clinical guidelines, digital innovations could be used to offer clinical decision-support systems for private providers. These could help them make correct diagnoses, treatments, and referrals for their patients. These systems could be linked with provider-to-provider telehealth interfaces (like e-Sanjeevani and others) to help providers consult specialists for complications. With India's unprecedented progress on digital technologies and digital health, such platforms seem highly feasible. Digital platforms of PMJAY, ABDM, and private sector aggregators like Practo could help monitor private providers' prescriptions and patient outcomes.

India could consider building awareness among providers about clinical guidelines and low-value care through initiatives like the Choosing Wisely Campaign. The Choosing Wisely campaign,<sup>9</sup> a set of interventions aimed at reducing the provision of medical services that do not improve patients' health, was launched in 2012 across 28 countries around the world (including in India for cancer care in a few specialty hospitals). In practice, this involves targeted messaging (e.g., when dosage is incorrect) or active holds on dispensing medicines (e.g., when a new medicine might interact dangerously with an existing drug in the patient's chart), or unnecessary prescriptions, especially for drugs and diagnostics (e.g., unnecessary antibiotics or imaging tests). Although used mostly in

high-income countries, Choosing Wisely has shown some promising impact on reducing low-value care, especially when point-of-care information or alerts were combined with clinical decision support systems and when awareness about low-value care was generated both for providers and patients.<sup>10</sup>

### **5.3 Strategic Purchasing and Provider Incentives**

Evidence shows that training and decision tools are successful in improving quality when accompanied by the right provider incentives.<sup>4,11</sup> Provider Payment Mechanisms (PPMs), the level of payment and structure of PPMs, could disincentivize providers' supply of services, influencing access and quality.<sup>12–15</sup> In India, both the level and structure of PPMs are impediments to quality. Our findings show that public sector providers earn half as much as their peers in the private sector. This has been stated as a reason behind dual practice, supplementing earnings through commissions from private pharmacies or diagnostics, or the public sector's ability to attract and retain providers, especially physicians, and specialists. Besides, most public sector providers are paid fixed salaries or line-item budgets, which do not incentivize increased productivity or quality. The absenteeism or lower time spent with patients among salaried public sector doctors in India and other LMICs is a good example of the effects of salary payments.<sup>16–18</sup> In the private sector, fee-for-service (FFS) is the most common PPM, and this is shown to incentivize the overprovision of services, often due to supply-induced demand, and might lead to poor quality/low-value care.<sup>14,15</sup>

To change provider behavior and incentivize high-quality care, India needs to rethink its PPMs, and consider adopting mechanisms like blended PPMs, combining a fixed “prepayment” (salary or enrollment-based capitation) with output-based DRGs or bundled payments and global budgets.<sup>14,19–21</sup> Like several other countries, India's national insurance program, PMJAY, and the National Health Authority (NHA) are well-positioned to use strategic purchasing as a lever to encourage the delivery of quality services,<sup>22–26</sup> including determining criteria for the selection of health care providers; implementing mechanisms to monitor provider performance and quality of health services; and imposing sanctions and penalties for delivering sub-standard care. The recent announcement of using a value-based care model<sup>37</sup> that aims to tie payment at the hospital level with healthcare performance based on five indicators<sup>1</sup> and also display performance on those indicators within an accessible dashboard, i.e., public reporting, is a step towards strategic purchasing. Portions of direct government budgets to empaneled health facilities and salaries of public sector staff could be tied to easily measurable and achievable performances. These could include the number of patient visits, ratings from patient satisfaction surveys, following standards of care for a selected list of common conditions, regular training and use of clinical guidelines. To incentivize the expanded scope of primary health care, a proportion of HWC budgets could be linked to the percentage of the population in their catchment screened for chronic conditions and the correct management of NCD patients. Given the importance of having providers share data on ABDM, completeness and regular updates of their

---

<sup>1</sup> The indicators include: beneficiary satisfaction, hospital readmission rate, out of pocket expenditure, confirmed patient grievances and improvement in patient's health-related quality of life.

profiles on the ABDM provider portal could be selected as one of the performance indicators. As PMJAY considers expanding coverage to outpatient care and could require regular training and observation of quality standards for empanelment, as seen in other countries like South Africa and Indonesia.<sup>27,28</sup>

To be effective, non-financial incentives that satisfy providers' need for recognition/reputation need to accompany PPMs,<sup>14</sup> especially when providers work in sub-optimal environments, areas with limited infrastructure, and do not have peer and supervisory support. Support and endorsement by provider associations like NMC and IMA for improved clinical quality standards could effectively motivate both public and private sector providers. Experiences from the UK and the US show that peer influence through physician associations and non-financial incentives are impactful mechanisms to improve quality of care.<sup>4,29,30</sup>

#### **5.4 Facility Autonomy and Flexibility to Respond to Outcome-Based Incentives**

Increased autonomy of hospitals and their flexibility to respond to clinical outcome-based incentives are key factors in improving quality of care. Evidence shows that provider payment mechanisms and strategic purchasing arrangements are successful when facilities have autonomy to change their practices and processes and respond to these incentives.<sup>31-33</sup>

Most public sector facilities in India have very limited managerial and administrative autonomy due to pre-existing bureaucracy and regulations surrounding decision-making. Along with outcome-based financing and strategic purchasing, we suggest organizational reforms for these facilities. Hospital leaders could be empowered with increased autonomy in staffing and human resource management, including responsibilities such as corrective action proceedings for absenteeism and hiring local staff to fill vacancies. Staff at public health facilities are currently hired through the state administrative services, and increasing the decision space of decentralized staff would require governance reforms. Increase autonomy in financial management through changes in provider payments and "untied" funds (that already exist under NHM). Autonomy in managing a larger amount of untied funds would help facility managers purchase new essential supplies and drugs when stock-outs occur or when equipment is broken; make repairs to buildings and basic infrastructures like toilets, electrical units, and water sources; or purchase computers and internet connections that will be critical for integration with ABDM and digital health. As mentioned under reform ideas for provider payments, linking a portion of "untied" funds to some easily measurable and achievable performance indicators like operational hours in the evenings, following standards of care for common conditions, screening for NCDs in the catchments areas could be valuable shifts in increasing autonomy while maintaining accountability for results. We recognize that greater autonomy requires strong capacities among facility administrators and managers. Given that several primary care level facilities in India still face severe capacity challenges, increasing financial and organizational autonomy could first start with the secondary/tertiary facilities, i.e., CHCs, sub-divisional and district hospitals, and medical college hospitals. New policies of the Indian government

offer scope for increasing autonomy—decentralization through the Fifteenth Finance Commission (2021), strategic purchasing through PMJAY, and bureaucratic reforms through Mission Karmayogi.

## **5.5 Accreditations and Ratings**

There is consistent evidence that shows that accreditation programs improve clinical outcomes and patient safety.<sup>34</sup> India's accreditations like NABH and NABL could improve quality of care; however, these are voluntary and only cover limited categories of providers, leaving out public sector facilities, solo providers, and pharmacists. Additionally, providers have to pay for accreditation which is often prohibitive. Nevertheless, hospital accreditation remains a cornerstone for ensuring a basic level of quality, at least for things that the healthcare system assesses. Patients want to know that a hospital provides safe and effective care, and if done right, accreditation can be a powerful tool to offer that assurance. The problem, it seems, is that accrediting organizations and ratings often focus on infrastructure, administration, or the number of personnel – things that are not directly linked to clinical quality or patient safety. We need to reexamine the standards required for accreditation to ensure that they are promoting what's actually important: patients' health, safety, and optimal experience. What approach can policymakers take to ensure that accreditation achieves the goals we want? First, there must be a clear delineation of high-quality care (good outcomes, good experience), which must be the guiding principle behind accreditation. Hospitals should be held accountable for those outcomes. Accrediting bodies should focus on those processes and structural factors that have been convincingly shown to be associated with good outcomes. For accreditation to be impactful, India needs to expand its accreditation programs, incentivize providers to get accredited and revisit accreditation standards to include quality outcomes, not just inputs. The other important issue is to ensure that these accreditations are objective, free from corruption, and regulatory captures.

## **5.6 Promoting a Non-Punitive Culture and Peer Monitoring for Patient Safety**

For safety culture, our most concerning finding was near zero reporting of adverse events within the hospitals examined. This has concerning implications for the potential of underreporting measures. Few hospitals in India, including reputable medical colleges, have institutionalized adverse event reporting processes. Instituting formal processes for reporting adverse events and monitoring these through peer-support committees in non-punitive ways is the first step toward promoting patient safety. According to the Agency for Healthcare Research and Quality (AHRQ),<sup>7</sup> one of the most important interventions is for hospital leadership and the governing board to be involved with safety and quality. Accordingly, the board must make safety and quality a top priority explicitly. Boards are typically comprised of mostly nonclinical individuals, so hospital leaders and staff will need to educate them. Other key strategies include the designation of champions with authority to facilitate change and the incorporation of safety and quality goals into both organizational strategic plans and executive compensation. These could be clinicians, executives, or board members. Promoting a

just culture supports and encourages open and honest reporting of medical errors. It has a system in place to fairly consider clinicians' actions when incidents occur, often using algorithms. Changing culture takes the most work, but it is the foundation for any safety improvement work. Efforts to promote a safety culture require persistence and involvement from all areas; no one person or department is exempt due to the complexity of processes and the ever-present interdependencies in the provision of care.<sup>8</sup> India's National Patient Safety Implementation Framework (2018–2025) launched by the MoHFW is a comprehensive policy, but there will be organizational and political challenges in its implementation, and rather than a top-down approach, several of the initiatives need to be provider-led.

### **5.7 Reforms for Patient-Centeredness**

Patient-centeredness is the domain most well represented within India's policies on quality, given the inclusion of indicators, such as beneficiary satisfaction, confirmed patient grievances, and quality of life (patient-reported). The Mera Aspatal (My Hospital) initiative aims to elicit patient feedback on their hospital visit and make care more patient-centered. Our primary concern regarding this is the discordant patient ratings and low patient expectations of care. For example, patients from Scheduled Tribes and those with no formal education had no statistically significant relationship between being treated with disrespect and reporting dissatisfaction *at all*. As a result, financial incentives tied to hospitals' performance on satisfaction ratings may mask non-patient-centered care provided to certain patients. Looking at the Hospital Consumer Assessment of Health Providers Survey (HCAHPS), which is used to inform value-based payment in the US, there are several key lessons. For example, research has found that racial/ethnic disparities in US HCAHPS scores may be driven by measurement error, suggesting patients from disadvantaged backgrounds may value different aspects of interpersonal interaction with their providers. As a result, it might be useful for Mera Aspatal to carefully interpret satisfaction scores by adjusting for case mix, ensuring a clear third party administers the survey tool, and augmenting overall satisfaction scores with a more robust set of (less subjective) metrics that may counter issues of differential reporting bias.

## **6. Conclusion**

In this case study, we report findings from our assessment of the quality of care across its core three aspects: clinical quality, patient safety, and patient-centeredness. Our findings show disconcertingly low quality in each of these aspects. Poor quality of care contributes to poor health outcomes from treatment, which can lead to increased morbidities and mortalities as well as undermine people's confidence in the health system. Additionally, poor quality contributes to inefficiencies and wastage of scarce resources, both for individual households and for the health system. As India expands access to care through programs like Ayushman Bharat HWC and PMJAY, it will be important to implement measures that improve clinical quality and patient safety to ensure that tax resources are utilized to purchase high-value care and that these programs achieve their maximum potential. Based on a thorough review of global experiences, we offer some reform ideas for the Indian health system to improve quality of care and advance the country's progress on UHC goals.



## 7. References

1. Kruk ME, Gage AD, Arsenault C, et al. High quality health systems—time for a revolution. *Lancet Glob Health* 2018; 6: pp. e1196-e1252.
2. Registrar General of India. Census of India. New Delhi: Ministry of Home Affairs, Government of India; 2011
3. NSSO. Key indicators of household consumption on health in India (NSS 75th Round). National Sample Survey Office (NSSO). New Delhi: Ministry of Statistics and Program Implementation, Government of India; 2019
4. Yip W, Kalita A, Bose B, Cooper J, Haakenstad A, Hsiao W, Woskie L, & Reich, MR. Comprehensive Assessment of Health System Performance in Odisha, India, *Health Systems & Reform*. 2022; 8:1
5. Kalita A, Bose B, Woskie L, Haakenstaad A, Cooper J, Yip W. Private pharmacies as healthcare providers in India's health system: analysis and implications for universal health coverage. *BMJ Global Health* 2023 (forthcoming)
6. Delivering Quality Health Services: A Global Imperative for Universal Health Coverage. WHO; 2018. Accessed February 25, 2019. <http://apps.who.int/bookorders>.
7. Daftary A, Satyanarayana S, Jha N, et al. Can community pharmacists improve tuberculosis case finding? A mixed methods intervention study in India. *BMJ Glob Health*. 2019;4(3):e001417. doi:10.1136/bmjgh-2019-001417
8. Das J, Chowdhury A, Hussam R, Banerjee AV. The impact of training informal health care providers in India: A randomized controlled trial. *Science*. 2016;354(6308):aaf7384. doi:10.1126/science.aaf7384
9. Rowe AK, Rowe S, Peters D, et al. Effectiveness of strategies to improve healthcare provider practices in low-income and middle-income countries: a systematic review. *Lancet Glob Health*. 2018;6(11):e1163-e1175.
10. Kruk ME, Gage AD, Arsenault C, et al. High-quality health systems in the Sustainable Development Goals era: time for a revolution. *Lancet Glob Health*. 2018;6(11):e1196-e1252. doi:10.1016/S2214-109X(18)30386-3
11. Montagu D, Goodman C. Prohibit, constrain, encourage, or purchase: how should we engage with the private healthcare sector? *Lancet Lond Engl*. 2016;388(10044):613-621. doi:10.1016/S0140-6736(16)30242-2
12. Nagral S. We need to discuss India's reliance on private medical colleges. *BMJ*. 2015;350:h237. doi:10.1136/bmj.h237

13. D'Silva J. India's private medical colleges and capitation fees. *BMJ*. 2015;350:h106. doi:10.1136/bmj.h106
14. Bhatia RS, Levinson W, Shortt S, et al. Measuring the effect of Choosing Wisely: an integrated framework to assess campaign impact on low-value care. *BMJ Qual Saf*. 2015;24(8):523-531. doi:10.1136/bmjqs-2015-004070
15. Cliff BQ, Avanceña ALV, Hirth RA, Lee SYD. The Impact of Choosing Wisely Interventions on Low-Value Medical Services: A Systematic Review. *Milbank Q*. 2021;99(4):1024-1058. doi:10.1111/1468-0009.12531
16. Agarwal S, Glenton C, Tamrat T, et al. Decision-support tools via mobile devices to improve quality of care in primary healthcare settings. *Cochrane Database Syst Rev*. 2021;7(7):CD012944. doi:10.1002/14651858.CD012944.pub2
17. Robinson JC. Theory and practice in the design of physician payment incentives. *Milbank Q*. 2001;79(2):149-177, III. doi:10.1111/1468-0009.00202
18. Conrad DA. The Theory of Value-Based Payment Incentives and Their Application to Health Care. *Health Serv Res*. 2015;50(Suppl 2):2057-2089. doi:10.1111/1475-6773.12408
19. Dranove D. Chapter Ten - Health Care Markets, Regulators, and Certifiers. In: Pauly MV, McGuire TG, Barros PP, eds. *Handbook of Health Economics*. Vol 2. *Handbook of Health Economics*. Elsevier; 2011:639-690. doi:10.1016/B978-0-444-53592-4.00010-4
20. Gosden T, Forland F, Kristiansen IS, et al. Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians. *Cochrane Database Syst Rev*. 2000;2000(3):CD002215. doi:10.1002/14651858.CD002215
21. Chaudhury N, Hammer J, Kremer M, Muralidharan K, Rogers FH. Missing in Action: Teacher and Health Worker Absence in Developing Countries. *J Econ Perspect*. 2006;20(1):91-116. doi:10.1257/089533006776526058
22. Muralidharan K, Chaudhury N, Hammer JS, Kremer M, Rogers FH. Is There a Doctor in the House? Medical Worker Absence in India. In: ; 2011.
23. Banerjee A, Duflo E. Addressing Absence. *J Econ Perspect*. 2006;20(1):117-132. doi:10.1257/089533006776526139
24. Tangcharoensathien V, Limwattananon S, Patcharanarumol W, Thammatacharee J, Jongudomsuk P, Sirilak S. Achieving universal health coverage goals in Thailand: the vital role of strategic purchasing. *Health Policy Plan*. 2015;30(9):1152-1161. doi:10.1093/heapol/czu120

25. Counte MA, Howard SW, Chang L, Aaronson W. Global Advances in Value-Based Payment and Their Implications for Global Health Management Education, Development, and Practice. *Front Public Health*. 2019;6. Accessed February 4, 2023. <https://www.frontiersin.org/articles/10.3389/fpubh.2018.00379>
26. Kazungu JS, Barasa EW, Obadha M, Chuma J. What characteristics of provider payment mechanisms influence health care providers' behaviour? A literature review. *Int J Health Plann Manage*. 2018;33(4):e892-e905. doi:10.1002/hpm.2565
27. Mathauer I, Dale E, Meessen B. Strategic Purchasing for Universal Health Coverage: Key Policy Issues and Questions: A Summary from Expert and Practitioners' Discussions. World Health Organization; 2017. Accessed February 4, 2023. <https://apps.who.int/iris/handle/10665/259423>
28. Kutzin J, Yip W, Cashin C. Alternative Financing Strategies for Universal Health Coverage. In: *World Scientific Handbook of Global Health Economics and Public Policy*. World Scientific Series in Global Health Economics and Public Policy. WORLD SCIENTIFIC; 2016:267-309. doi:10.1142/9789813140493\_0005
29. Hanson K, Barasa E, Honda A, Panichkriangkrai W, Patcharanarumol W. Strategic Purchasing: The Neglected Health Financing Function for Pursuing Universal Health Coverage in Low-and Middle-Income Countries Comment on "What's Needed to Develop Strategic Purchasing in Healthcare? Policy Lessons from a Realist Review." *Int J Health Policy Manag*. 2019;8(8):501-504. doi:10.15171/ijhpm.2019.34
30. Langenbrunner JC, Cashin C, O'Dougherty S. *Designing and Implementing Health Care Provider Payment Systems : How-To Manuals*. World Bank; 2009. doi:10.1596/978-0-8213-7815-1
31. Gatome-Munyua A, Sieleunou I, Sory O, Cashin C. Why Is Strategic Purchasing Critical for Universal Health Coverage in Sub-Saharan Africa? *Health Syst Reform*. 2022;8(2):e2051795. doi:10.1080/23288604.2022.2051795
32. Naidoo V, Suleman F, Bangalee V. Roles and reimbursement of pharmacists as South Africa transitions towards Universal Health Coverage (UHC): An online survey-based study. *PLOS ONE*. 2021;16(9):e0257348. doi:10.1371/journal.pone.0257348
33. Patouillard E, Goodman CA, Hanson KG, Mills AJ. Can working with the private for-profit sector improve utilization of quality health services by the poor? A systematic review of the literature. *Int J Equity Health*. 2007;6:17. doi:10.1186/1475-9276-6-17
34. Navathe AS, Volpp KG, Bond AM, et al. Assessing The Effectiveness Of Peer Comparisons As A Way To Improve Health Care Quality. *Health Aff (Millwood)*. 2020;39(5):852-861. doi:10.1377/hlthaff.2019.01061

35. Pany MJ, McWilliams JM. Physician-Peer Relationships and Patient Experiences With Specialist Care. *JAMA Intern Med.* Published online January 3, 2023. doi:10.1001/jamainternmed.2022.6007
36. Sanderson J, Lonsdale C, Mannion R. What's Needed to Develop Strategic Purchasing in Healthcare? Policy Lessons from a Realist Review. *Int J Health Policy Manag.* 2018;8(1):4-17. doi:10.15171/ijhpm.2018.93
37. Matovu F, Gatome-Munyua A, Sebagala R. Has Strategic Purchasing Led to Improvements in Health Systems? A Narrative Review of Literature on Strategic Purchasing. *Health Syst Reform.* 2022;8(2):2151698. doi:10.1080/23288604.2022.2151698
38. Preker AS, Harding A. Innovations in Health Service Delivery : The Corporatization of Public Hospitals. *World Bank;* 2003. doi:10.1596/0-8213-4494-3
39. Alkhenizan A, Shaw C. Impact of Accreditation on the Quality of Healthcare Services: a Systematic Review of the Literature. *Ann Saudi Med.* 2011;31(4):407-416. doi:10.4103/0256-4947.83204
40. Desveaux L, Mitchell JI, Shaw J, Ivers NM. Understanding the impact of accreditation on quality in healthcare: A grounded theory approach. *Int J Qual Health Care.* 2017;29(7):941-947. doi:10.1093/intqhc/mzx136
41. Gupta A, Fonarow GC. The Hospital Readmissions Reduction Program—learning from failure of a healthcare policy. *Eur J Heart Fail.* 2018;20(8):1169-1174. doi:10.1002/ejhf.1212
42. ANI. National Health Authority introduces new system to measure performance of hospitals under Ayushman Bharat PM-JAY. *ThePrint.* Published January 9, 2023. Accessed January 10, 2023. <https://theprint.in/india/national-health-authority-introduces-new-system-to-measure-performance-of-hospitals-under-ayushman-bharat-pm-jay/1306029/>
43. Larson E, Sharma J, Bohren MA, Tunçalp Ö. When the patient is the expert: measuring patient experience and satisfaction with care. *Bull World Health Organ.* 2019;97(8):563-569. doi:10.2471/BLT.18.225201