

HUMAN RESOURCES FOR HEALTH IN MALI

KEY FINDINGS FROM A PUBLIC SECTOR HEALTHCARE EMPLOYEE SURVEY

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Executive Summary

Mali's health sector faces considerable governance challenges that impact the quality of service delivery and health outcomes. The objective of this study is to focus on human resources for health (HRH) in Mali, analyzing the management, compensation, and attitudinal factors that influence the workforce and ultimately the quality of service delivery to inform the World Bank's engagements, in particular the on-going Performance-based Financing (PBF) program. The study draws on new data collected through a survey of 2326 health workers in primary health facilities and the health administration conducted by the WB (hereafter referred to as the WB HRH survey). The survey explored the quality of management of the health sector at the central, district, and commune levels, the quality of governance of health facilities, and the experiences and perceptions of frontline health personnel on recruitment and selection, performance management, promotion and career advancement, and salary satisfaction. The HRH survey also examined perceptions around political interference in the health sector, health worker motivation, patient satisfaction, and community engagement. The survey followed the baseline sampling frame of the Impact Evaluation (IE) of the on-going PBF program.

The main findings from the survey are:

- There are significant disparities in healthcare access across different regions, with most of facilities lacking doctors and having only one nurse. According to the facility staff, shortages are prevalent, with nurses and midwives being the most understaffed cadres in facilities. These shortages in skilled personnel, apart from their obvious impact on service delivery, are also potentially demotivating for the staff who are in the health facilities as it implies heavy a workload. Most staff state that their workload has increased over the past year.
- Merit-based recruitment, which is a strong predictor of the ability and motivation of public sector workers, is quite limited. The survey revealed that only a minority of facility staff had been recruited through a public competition. Staff also expressed concerns about unethical behavior in the recruitment process.
- Some key elements of performance management are in place in the health facilities, though the evidence suggests that these are largely pro forma exercises. The majority of facility staff had monthly performance evaluations. However, far fewer have regular informal conversations with their managers, and financial and non-financial incentives are rare, both in PBF and control facilities.
- While most facility-level public health workers find their work rewarding and are motivated by a strong intrinsic desire to serve, salary dissatisfaction remains a significant concern among staff. Disparities between expected and current salaries may contribute to this dissatisfaction.
- A large proportion of health workers have received training in the last two years. Eighty-three percent of respondents stated that they had done some training, either provided by the health administration or by an external party. There remains though, a gap between access to training and perceptions of impact of the training on staff skills. The survey reveals that 40 percent of facility staff perceive that their colleagues lack job-related essential skills, and 26 percent of respondents believe that their colleagues do not possess the required knowledge for their roles.
- Unethical behavior is a recognized issue, especially during the selection and recruitment process, yet a difference exists in understanding what is deemed unethical. The additional forms of corruption may be prevalent but not perceived as corruption by most facility staff.

- Facility staff in general receive their salaries on time, with the notable exception of CHWs.
- A significant percentage of facility staff have encountered delays in receiving facility funds. Among those experiencing delays, 51 percent of treatment facilities and 44 percent of all control facilities experienced delays lasting longer than six months. Decisions around facility funding are perceived to be influenced by political pressure, which may impact resource allocation and delay infrastructure improvements.
- Adequate supervision is hindered by obstacles such as limited financial resources and the attitude of supervisors. Additionally, the use of supervisory checklists in assessing healthcare facilities is reported to be infrequent, suggesting subjective evaluations and potential oversight of critical areas.
- Although data collection on the performance of health facilities is standard, there are challenges in the effective use of this data. Over 50 percent of administrative staff report difficulties compiling, interpreting, and utilizing the findings, in part because staff have received limited training on effectively using this data.

These survey findings suggest several short and medium-term recommendations for facility and administration staff that are detailed in this report.

Chapter 1. Introduction

Context

Mali struggles with low access and quality of healthcare. On average, less than half of the population lives within a 5 km distance of a health facility, and close to 30 percent of the population is outside a 15 km reach of a health facility. Mali's health indicators register among the lowest in the world, and the millennium development goals targets for infant, child, and maternal mortality have not been reached. Mali is among the five countries in the world with the largest burden of disease, with communicable, neonatal, maternal, and nutritional disease accounting for about 73 percent of the overall burden.

These poor health outcomes are a result of significant fiscal, security, and governance challenges in the public sector healthcare delivery system. Health financing per capita, at USD 35 per capita in 2018, according to the World Health Organization, is among the lowest in the world, and external and out-of-pocket expenditures represent about 20 percent and 57 percent of current health expenditures. These supply problems are compounded by the volatile political and security situation since the 2012 coup and following the implementation of the Algiers Peace Agreement in 2015. Mali has been classified by the World Bank as a Fragile Conflict and Violence country since 2014 due to the establishment of a United Nations (UN) peacekeeping mission (UN Multidimensional Integrated Stabilization Mission in Mali) in the country in April 2013. In May and June 2015, a peace agreement was signed by the Government and two armed groups to end the conflict in the North of the country. The security situation in North Mali remains volatile, and has also spread to Center Mali. Governance issues afflicting Mali's health sector include mismanagement, delay in the availability of financial resources, lack of accountability, poor allocation of human resources, poor implementation of policies, and lack of incentives for human health resources.

Health functions have been devolved from the central level to the local commune level, but with mixed results. Under the decentralization framework, the local Government replaced the Ministry of Public Health in partnering with Community Health Associations (ASACOs). ASACOs sign a mutual assistance agreement (*Convention d'Assistance Mutuelle*; CAM) with the municipal Government at the commune level. The CAMs determine the package of services the CSCOM will offer and establish mutual contractual responsibilities (both financial and technical) for health service provision between the commune and the ASACO. The frontline operational levels, in conjunction with local authorities, are responsible for planning and managing the health budget at the local level. Local governments—at the commune, cercle, and regional levels—are in charge of formulating policies for creating and managing CSCOMs, maternity clinics, district hospitals (CSRefs), and regional hospitals. ASACOs own and manage the CSCOMs, in collaboration with the technical head of the CSCOM. This decentralization process has had mixed results in the health sector because local authorities are still often unaware of the details of the responsibilities transferred by law; the local commune level has a weak capacity to plan and manage resources; and the transfer of fiscal resources to local governments is insufficient and unpredictable. While the Government committed to transferring 30 percent of fiscal revenues to local and regional authorities, the amounts transferred are below target. As a result, public funding for health needs to be higher at the decentralized level, with local collectivities contributing to less than 0.2 percent of overall current expenditures.

The World Bank has been supporting health sector reforms through a variety of operational and analytical engagements. In particular, the Mali Accelerating Progress Towards Universal Health Coverage program (P165534) builds on these decentralization reforms by providing additional resources and

governance reforms to incentivize improvements in service delivery. The Performance-Based Financing (PBF) component of the project aims to improve health system performance through a package of reforms that includes financial incentives for facilities and staff linked to service delivery quantity and quality improvements, public financial management (PFM) reform, health facility autonomy, and enhanced supervision and data-informed management, and community engagement.

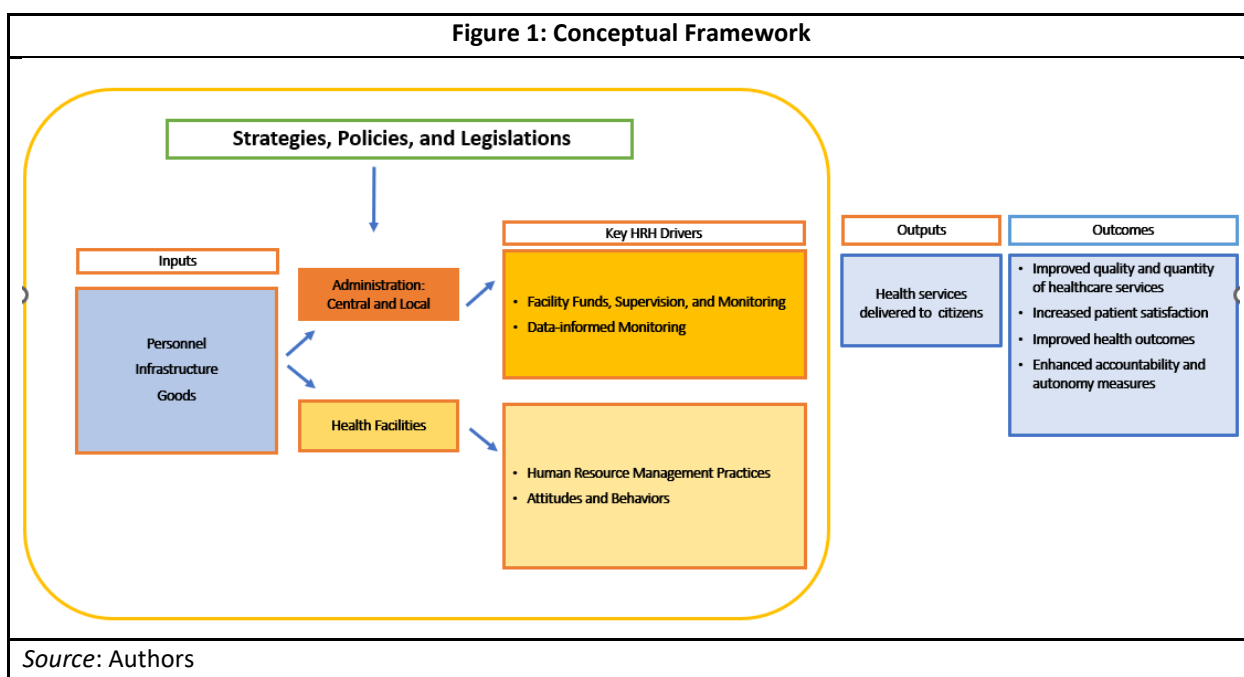
The objective of this study is to focus on human resources for health (HRH) in Mali, analyzing the management, compensation, and attitudinal factors that influence the workforce and ultimately the quality of service delivery to inform the WB’s engagements. The study uses a broad definition of HRH, which includes clinical, administrative and support staff. Since the 1990s, researchers and policymakers globally have highlighted the need for more effective human resources for health as a priority reform in low-income countries (World Health Organization (WHO) 2010, xi, 67; Luoma 2016). Sustainable Development Goal (SDG) 3, target 3.c recognizes the importance of “recruitment, development, training and retention of the health workforce in developing countries” in ensuring a healthier population (United Nations (UN) 2022). PBF reforms center on HRH, as they depend on improved management in the administration and facilities, and improved motivation and effort of health workers resulting from the reforms to the health delivery system, including through financial incentives.

The study draws on new data collected through a survey of the health workforce in primary health facilities and the health administration conducted by the WB (hereafter referred to as the Mali HRH Survey). The survey explored the quality of management of the health sector at the central, district, and commune levels, the quality of governance of health facilities, and the experiences and perceptions of frontline health personnel on recruitment and selection, performance management, promotion and career advancement, and salary satisfaction. The HRH survey also examined perceptions around political interference in the health sector, health worker motivation, patient satisfaction, and community engagement. The survey followed the baseline sampling frame of the Impact Evaluation (IE) of the PBF. Results from the baseline IE highlighted institutional constraints within project areas critical for efficient service delivery. This survey has the potential to accelerate progress towards Universal Health Care and directly address some of the binding constraints on the Malian health system through strengthening health service delivery performance and improving financial protection. The HRH survey complements other facility-level data collection efforts, such as the Service Delivery Indicators (SDI) and the UNICEF Facility surveys, which focus more on resources and staffing rather than human resource management practices.

Conceptual framework

This report and the survey are grounded in a “systems approach” to understanding health outcomes that is gaining prominence in policy and academic literature. WHO (2010) shows that health outcomes are conditional on key factors, such as the health workforce, quality infrastructure, leadership and governance, and financing. Similarly, the WB Health Strategy (2020) underscores the importance of addressing multiple governance challenges at the administrative and facility levels to achieve health outcomes. Academic research on state capability emphasizes organizational and personnel economics and, drawing on randomized control trials and statistical analysis, the literature highlights the significance of several factors that influence the productivity of public sector workers and, consequently, government outputs and overall performance.

The survey design is based on a conceptual framework of a production function of health service delivery, and also draws on the theoretical framework of the PBF program in Mali (Figure 1). The production function categorizes influences on workforce performance in the health sector at the societal, organizational, and individual levels.¹ The PBF theoretical framework, on the other hand, introduces the principle of separation of functions between the administration and frontline personnel to improve autonomy, accountability, and incentives for health service delivery. In the context of this report, which focuses on human resource factors in service delivery, the conceptual framework highlights the factors at the facility and public administration levels that influence the performance of government workers throughout the entire health service delivery chain—both administrators and facility personnel—and their collective impact on the quality of health services. While different administrative levels have distinct functions, roles, responsibilities, and interests, there are shared individual and organizational aspects that shape the actions and behaviors of personnel within these units.



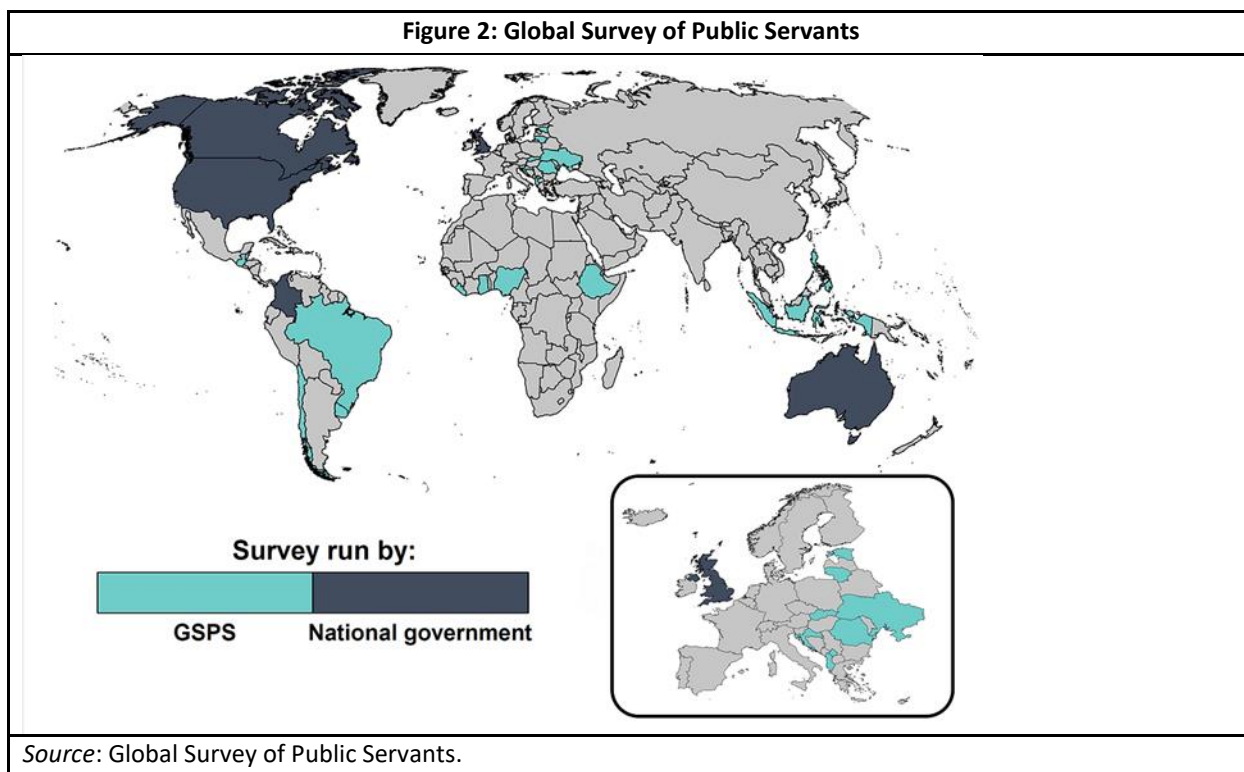
The HRH survey measures a variety of organizational drivers of workforce performance at the administration and health facility level, and attitudes and behaviors of health workers. Public administration-level drivers of the health workforce focus on staff experiences and perceptions of how well core stewardship functions—financing, supportive supervision, and data-informed monitoring—are being performed. At the facility level, the drivers for worker performance include organizational and personnel management practices that shape "organizational culture" or the norms and value systems that underpin employees' routine interactions and practices. The survey explores staffing; merit-based recruitment; performance management; monetary incentives linked to performance; non-financial

¹ A production function refers to the process through which a public sector organization utilizes its available resources (such as infrastructure, staff, and materials) to generate outputs and desired outcomes that are valuable to the public.

incentives such as staff recognition schemes; and training. The survey analyzes staff attitudes and behaviors, focusing on motivation and its sources, and the norms around corruption.

In addition to administrative and facility-level factors, various contextual elements also play a significant role in influencing health service delivery. Among these contextual conditions, the most crucial is the broader political environment, which encompasses policies, regulations, and governance structures, and sets the framework within which healthcare systems operate. The survey explores the extent of political influence on health workforce management but does not delve into the broader context as the instrument is not designed for that purpose. The report also focuses on factors which are within the locus of control of administrators, can be supported by the PBF, thereby potentially yielding service delivery improvements in the short and medium term.

This survey also builds on similar studies conducted by the World Bank’s Bureaucracy Lab globally. The Bureaucracy Lab is an initiative to ground the WB’s work on public administration reform and the public sector workforce in data and evidence. One key initiatives of the Lab, “[Global Survey of Public Servants](#)”, aims to provides widely utilized survey modules, an avenue to benchmark survey data, and a platform for practitioners and researchers to generate improved diagnostics and a better understanding of public service, currently covering 27 countries and 32 surveys.

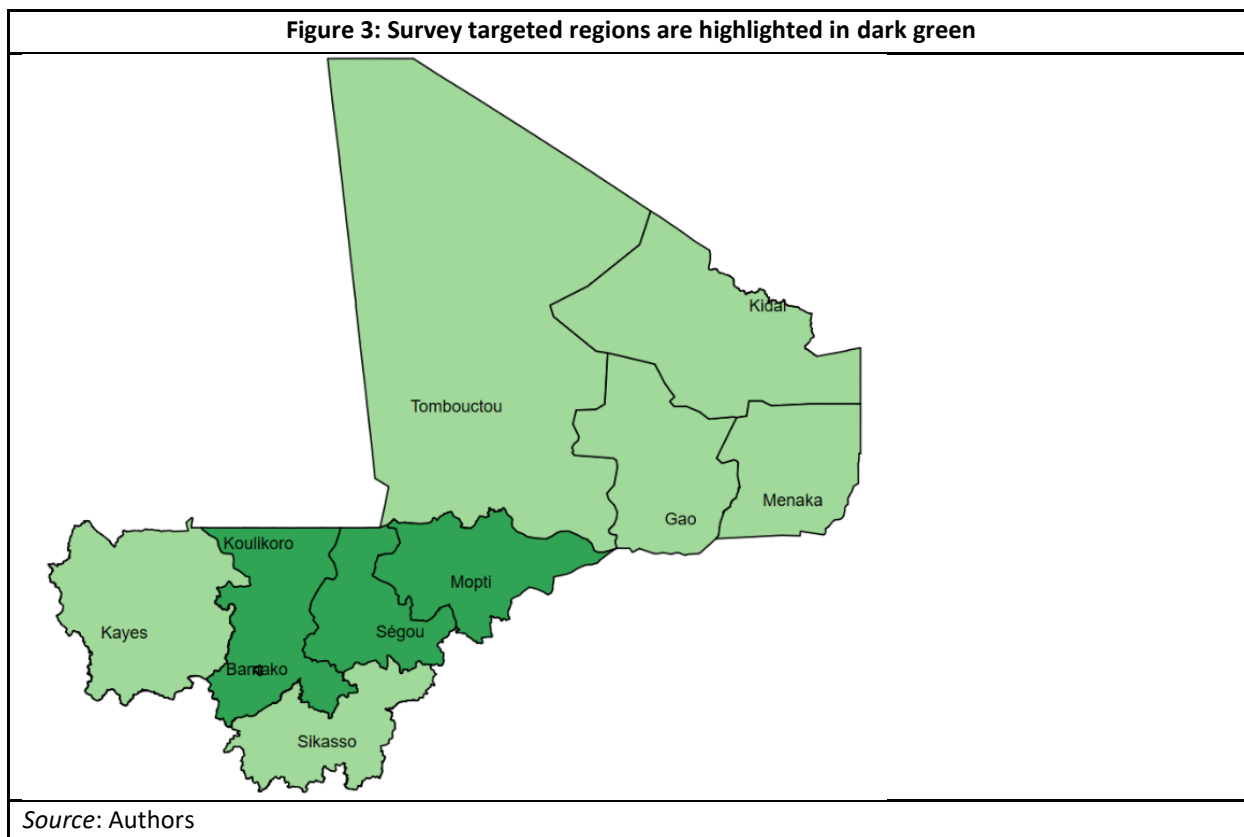


Survey Methodology

The survey followed the IE design used under the PBF in the three regions of Koulikoro, Mopti, and Segou that are within the scope of the WB project. The three intervention arms of the IE include a PBF

component (T1), a PBF component with a community health intervention (T2), and a control arm (C1). For the purposes of this report, the two treatment arms have been combined and are referred to as Treatment facilities. Société de Développement International (SDI) INC, an international survey firm, was contracted to implement face-to-face interviews with healthcare personnel. Originally planned as a single-phase data collection with two tools (facility and administrative), it was split into two phases for better coordination. The facility phase was conducted from October 30 to November 15, 2022. During this phase, data was collected from staff in CSCOMs and CSREFs in the project areas. The administrative phase took place from November 28 to December 6. This phase involved collecting data from central, regional, and district-level Ministry of Health personnel. All data was collected using CAPI (Computer Assisted Personal Interviewing) technology.

The target population for the WB HRH survey included all respondents in the service delivery chain within the health sector in the project areas, from the Ministry of Public Health to staff in CSComs. Respondents at the administrative level (central, regional and commune) and facility level were delivered a face-to-face survey using questionnaires for facility staff, administrators, and public officials. The survey targeted the three PACSU project areas, excluding Gao due to security concerns: all ten districts in the region of Koulikoro, three districts in the region of Mopti (Bandiagara, Bankass, Mopti), and three districts in the region of Segou (Baraouéli, Bla, Ségou) (Figure 3).



The survey had a high response rate of 79 percent with over 2300 interviews completed (Table 1). At the facility level, 2015 respondents participated in the survey, including 386 facility managers, and 1629 facility staff, with an overall response rate of 81 percent. At the administrative level, the team surveyed

311 civil servants at the central, regional, and district levels, with a response rate of 72 percent. The lower response rates at the district level can be attributed to the fact that most districts had only one staff member, while the target for each district was two interviews.

The survey firm reached 397 health centers (381 CSCOMs and 16 CSREFs) out of 415. Table 2 and Table 3 show the data by region. Some of the CSCOMs could not be accessed because of the security situation in that locality.

Table 1: Final sample of respondents and response rates

Facility level	Target	Actual	Response Rate
<i>Facility manager</i>	417	386	92.57 percent
<i>Facility staff</i>	2085	1629	78.13 percent
<i>Total</i>	2502	2015	80.54 percent
Admin level	Total	Response	Response Rate
<i>Central (or national)</i>	20	12	60.00 percent
<i>Regional</i>	60	37	61.67 percent
<i>District</i>	160	78	48.75 percent
<i>ASACO (or commune)</i>	194	184	94.85 percent
Total	434	311	71.66 percent
TOTAL	2936	2326	79.22 percent

Table 2: Number of CSCOMs Surveyed by Region

Regions	Planned CSCOM	CSCOM reached	Rate	Scheduled interviews	Interviews conducted	Response Rate
Koulikoro	240	222	92.5	1440	1231	81.74 percent
Segou	94	94	100	564	454	78.01 percent
Mopti	66	65	98.48	396	326	78.74 percent
Total	400	381	95.25	2400	2011	80.38 percent

Table 3: Number of CSREFs surveyed by region

Regions	Planned CREF	CSREF reached	Rate	Scheduled interviews	Interviews conducted	Response Rate
Koulikoro	9	10	111.11	54	58	107.41 percent
Segou	3	3	100	18	18	100.00 percent
Mopti	3	3	100	18	17	94.44 percent
Total	15	16	106.67	90	93	103.33 percent

The survey followed international research ethics and confidentiality standards, and the data collection activities were subject to the [World Bank's Privacy Policy](#). The responses received were completely confidential, and participation in the survey was optional, implying that public servants could choose to skip any question they felt uncomfortable answering. In addition, no person or entity apart from the survey firm (commissioned by the WB) and WB research team could access individual responses.

The instrument complements existing surveys, including the SDI and surveys implemented by UNICEF, and supports the ongoing IE of the PBF project. This survey aims to complement other data collection activities to support the public health sector in Mali. Among these, the most relevant ones include the Service Delivery Indicators (SDI) surveys in health and a survey implemented by UNICEF in the health facilities targeted by the PBF project in Mali. The latter, henceforth referred to as the UNICEF facility survey, will be utilized as another source of facility level information in this study to understand the staffing levels of doctors, nurses, and Community Health Workers (CHWs) across targeted facilities.

Structure of the report

The next two chapters discuss the main findings of the survey, presenting the HRH drivers at the facility and administration levels respectively. The findings follow the conceptual framework and emphasize, where statistically significant, differences in respondents' experiences and perceptions between treatment and control facilities to gauge whether PBF is associated with changes in management quality, aspects of organizational culture, and worker motivation. The final chapter provides policy recommendations.

Chapter 2: HRH Drivers in Health Facilities

This chapter presents the main findings from on the HRH driver in health facilities, and the attitudes and behaviors of medical workers. The chapter follows the conceptual framework, discussing “inputs”, specifically staffing in facilities; personnel management practices; staff experiences with corruption and undue political interference in facility activities; and attitudes and behaviors, in particular motivation. The chapter presents descriptive statistics, especially comparisons between staff experiences in the PBF treatment and control facilities to explore whether there are differences in management quality, accountability, work culture, and motivation as the PBF theory of change implies.

Staffing of CSCOMs

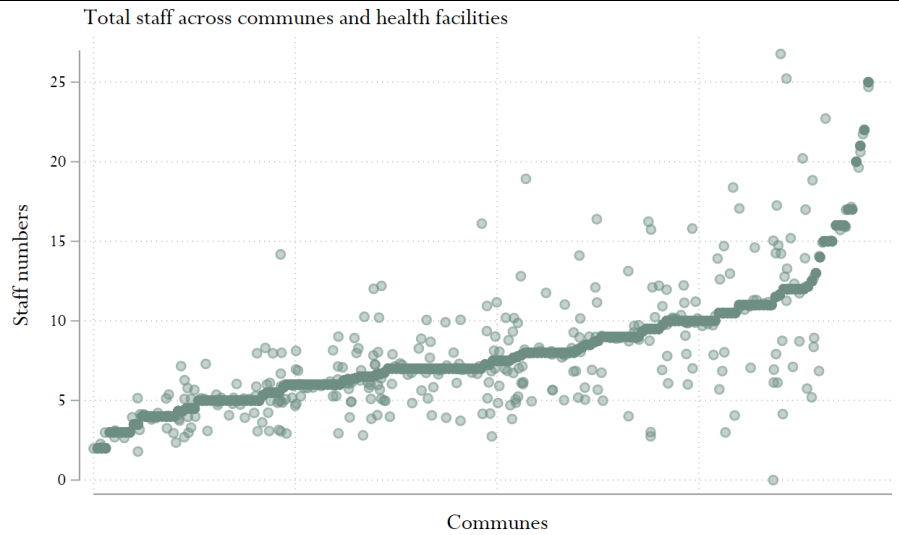
Health facilities, unsurprisingly, face significant shortages of medical staff. Findings from the UNICEF facility survey reveal that there are, on average, 8 staff members across all targeted health facilities, with the median facility having 7 staff members.² There is significant variation in staffing across health facilities, ranging from none to 27, and over 60 percent of facilities have no doctor and over 40 percent have only one nurse (Figure 4). There are also large variations in Community Health Workers across communes, ranging from none to 14, with the Koulikoro region having thrice as many CHWs per 1000 people compared to the other two regions (Figure 5). These variations in staffing may be influenced by geographical location and remoteness, healthcare infrastructure, and resource allocation.

The WB HRH survey reinforced these findings (Figure 6). Nurses, midwives, and nurse assistants make up over sixty percent of facility staff in CSCOMs. Respondents also viewed these cadres as short staffed. Sixty-two percent of respondents stated that their facility was short staffed, and midwives and nurses were viewed as the cadres with the greatest shortages, with similar problems of staffing across treatment and control facilities. Seventy-three percent of respondents also stated that staffing shortages had become worse in the past two years. Low salaries, a lack of facility funding, and remoteness were identified as the three main reasons for these problems.

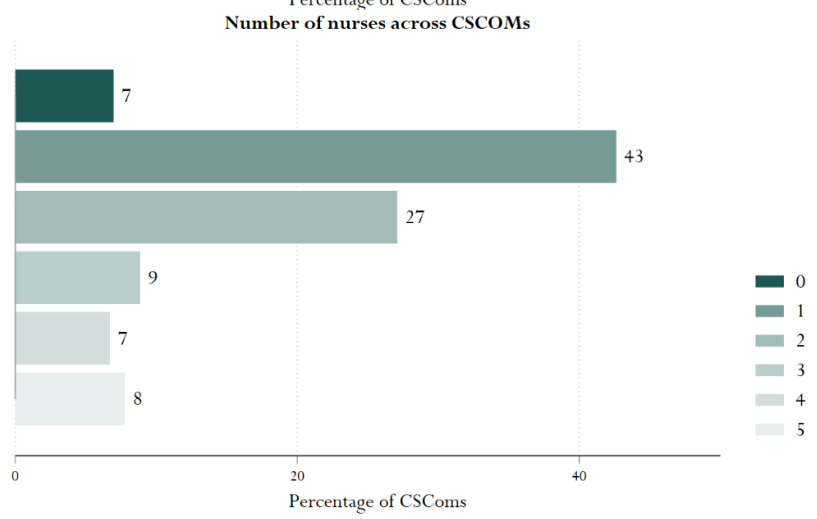
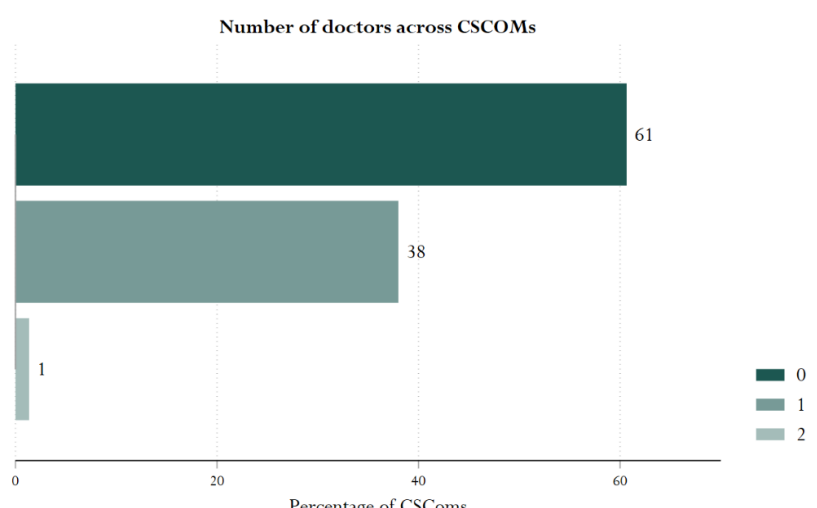
These shortages in skilled personnel, apart from their obvious impact on service delivery, are also potentially demotivating for the staff who are in the health facilities as it implies heavy a workload. Low compensation policies and remote duty locations are cited as the main reason behind these shortages, having significant implications for the capability of the public healthcare sector to attract and retain qualified professionals as they may seek better opportunities elsewhere. This finding partly explains the regional variance in staff shortages, where respondents from more rural regions indicate higher shortages than others. Furthermore, when asked about their workload, nearly everyone, (95 percent), both male and female staff, in the treatment facilities stated that their workload had increased over the past year.

² These staff members consist of doctors, nurses, midwives, Community Health Workers, and health aides.

Figure 4: There is a wide variation in facility staffing across communes and facilities

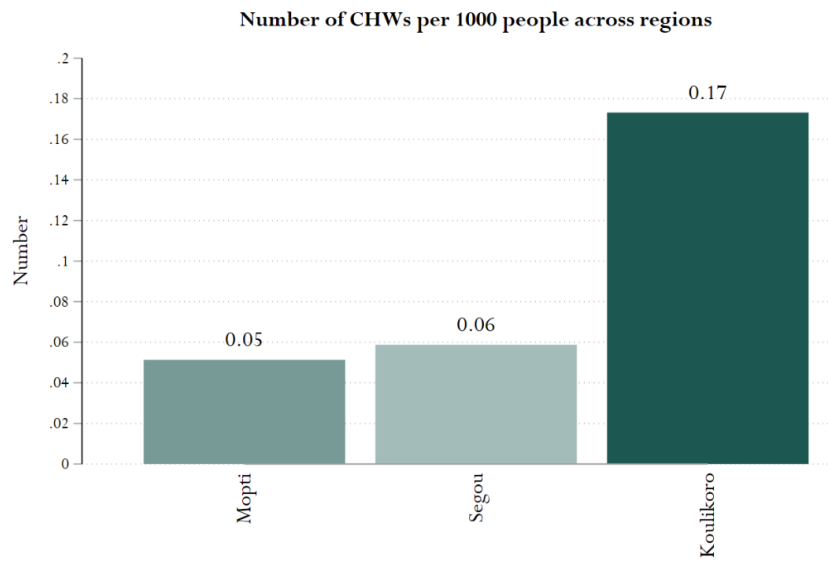
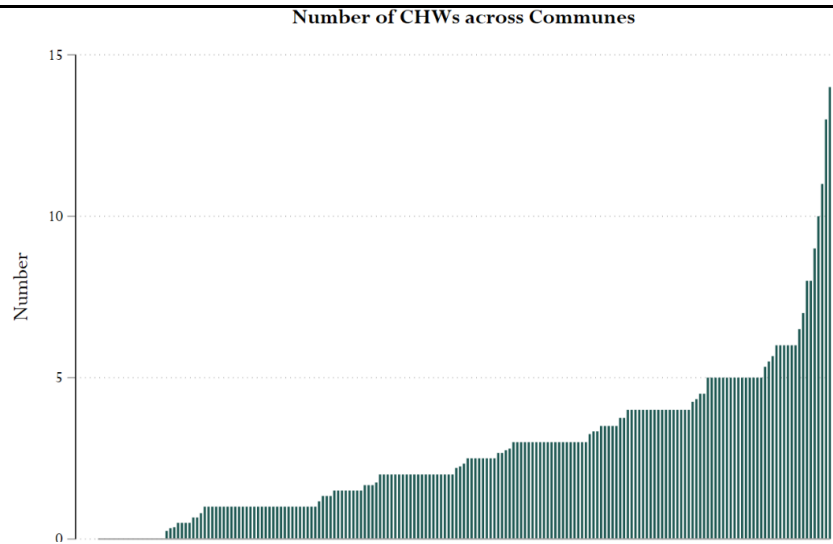


Note: Darker bubbles are commune averages and lighter are staff numbers at the facility level.



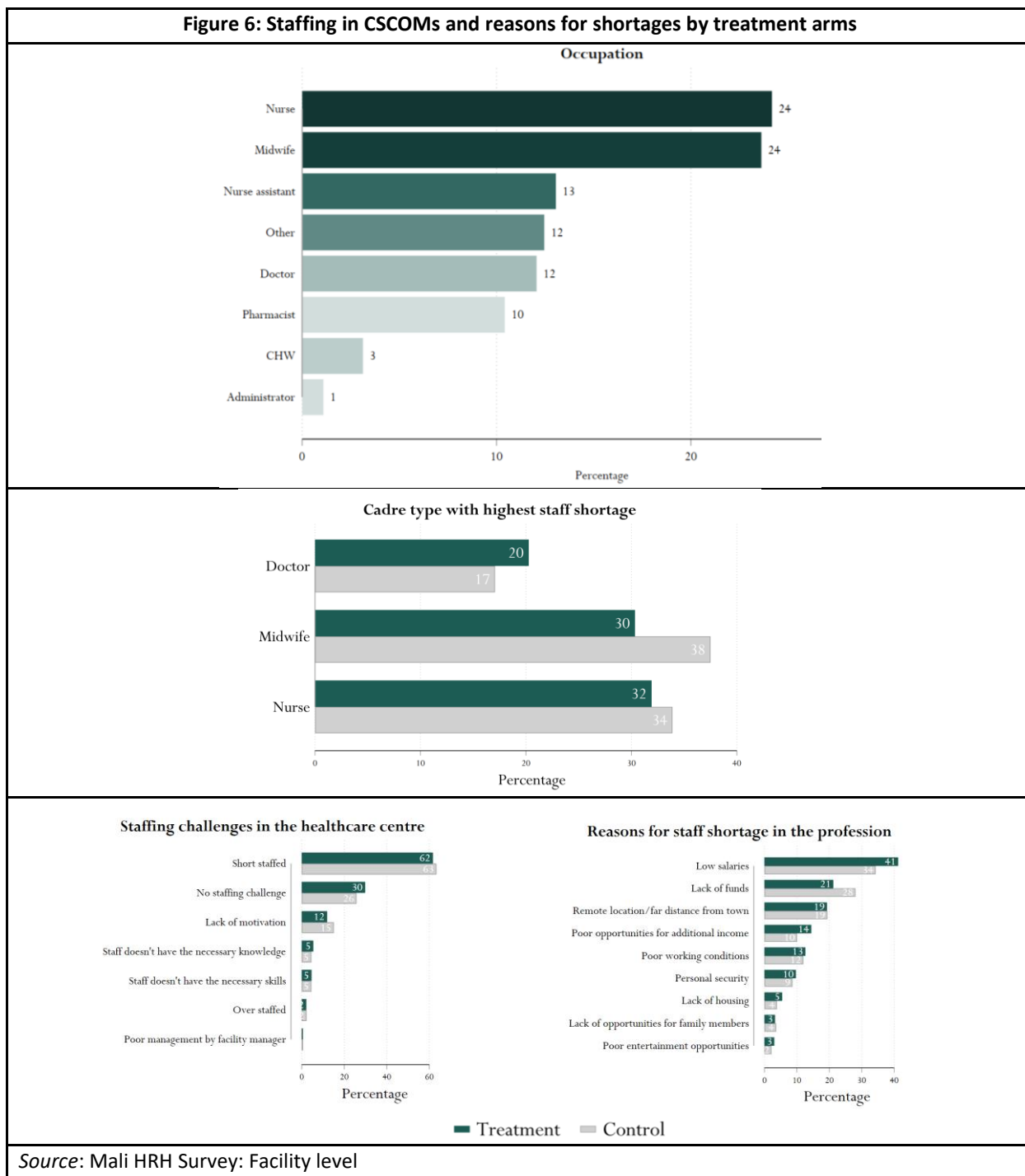
Source: UNICEF Facility Survey (2020)

Figure 5: There is wide variation of Community Health Workers across localities



Source: UNICEF Facility Survey (2020); Regional population figures from the Global Data Lab

Figure 6: Staffing in CSCOMs and reasons for shortages by treatment arms



Source: Mali HRH Survey: Facility level

Examining the educational attainment of different occupations reveals significant variations. Findings suggest that 45 percent of facility staff have secondary education or less, while 42 percent hold undergraduate degrees, and 13 percent have advanced degrees. Doctors typically hold advanced degrees (79 percent), while nurses and midwives primarily have secondary degrees or below (88 percent and 83 percent respectively) (Table 4). The data indicates that doctors have undergone extensive academic

training, while among nurses and midwives the emphasis on formal education appears to be relatively lower..

Table 4: Educational attainment by occupation

Occupation	Secondary degree or below	Undergraduate degree	Master’s degree and above
Doctor or medical off	14%	7%	79%
Nurse (SEN/SRN)	88%	9%	3%
Midwife (SCM/SEM)	83%	14%	4%
Pharmacist	99%	1%	0%
Public Health Officer	77%	0%	23%
Community Health Work	98%	2%	0%

Note: Numbers might not add up to 100 due to rounding.

Source: Mali HRH Survey

The survey confirmed gender segregation by occupation. Women make up 48 percent of the workforce, which is due to the relatively high numbers of nurses and midwives. Most doctors (87 percent) are male, while most nurses (58 percent) and almost all midwives are women (98 percent). Gender segregation is even more pronounced in the administrative level, with 87 percent of administrative staff being men.

These staffing shortages also point to limitations of human resource management reforms. Sufficient resources, skills, and support are a necessary prerequisite to high performance, without which even the highest motivation levels will not lead to adequate performance. This was most recently illustrated in the context of an umbrella analysis of evidence on PBF (de Walque et al. 2022). Specifically, an analysis of the can-do gap in antenatal care in five Sub-Saharan African countries revealed that at maximum, one third of poor performance can be attributed to substandard effort, whereas two thirds of poor performance related to gaps in knowledge or structural capacity. Accordingly, interventions to enhance what health workers will do might be effective in improving quality of care to some extent, but they cannot be expected to act as silver bullets without improvements in what health workers can do.

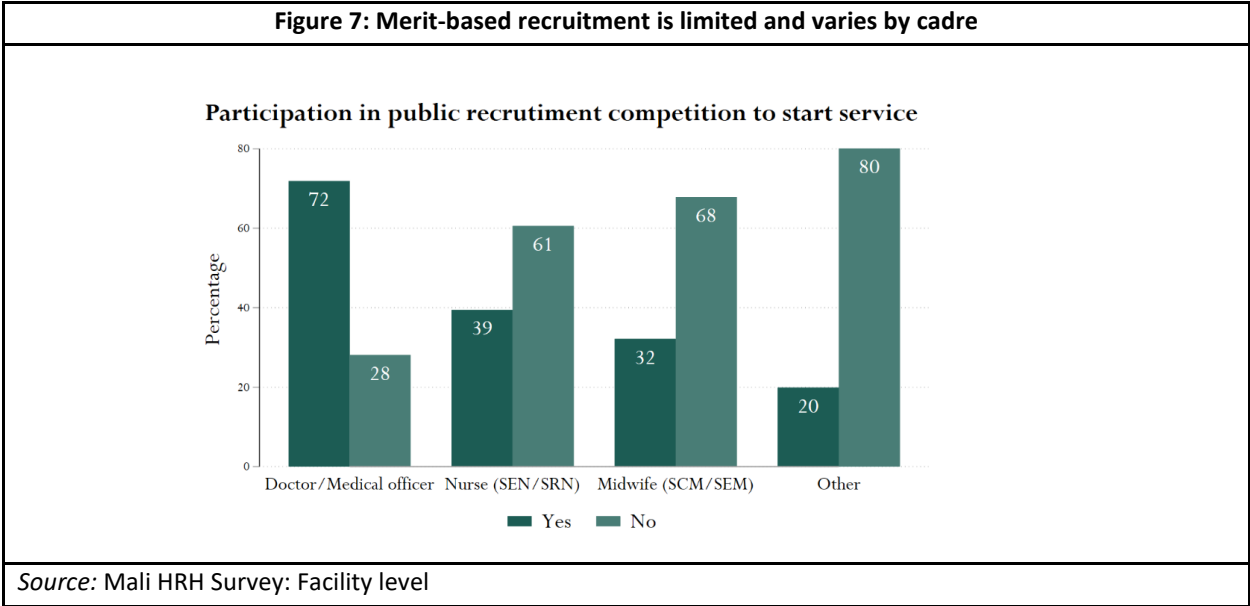
Human resource and management practices at the facility

Recruitment, Performance Evaluation, and Performance Bonuses.

Merit-based recruitment strongly predicts high public-sector performance. Hiring based on the quality of the candidate, rather than personal or political connections, forms a fundamental pillar in a performance-oriented bureaucracy model. Meritocracy correlates with economic growth and lower levels of corruption and nepotism, which is associated with greater motivation and higher performance of civil servants (Meyer-Sahling, 2018). There is a small, and growing, literature on other service delivery personnel, notably teachers and school principals, on the importance of hiring based on competencies rather than political affiliation that is relevant for HRH. Much of this literature is on Latin America where several countries implemented over the past couple of decades teacher hiring reforms that selected new teachers based primarily on candidates’ scores on standardized exams. Evaluations of these reforms in Colombia, Ecuador, and Mexico found that teachers hired through examinations had higher technical ability (as measured by grades in university) than those hired through discretionary mechanisms (such as

selection by trade unions), though the effects on student learning outcomes were mixed (Araujo et al. 2020; Bruti & Torres, 2022; Busso et al. 2023). While there isn't an equivalent literature on HRH, by extension rigorous recruitment criteria are expected to result in both higher ability and better motivated health workers.

Merit-based recruitment is quite limited for health workers in Mali. The survey measured merit by asking respondents if they had been hired through a public competition and, if so, the type of assessment criteria—written test and interview—they underwent. The survey revealed that only a third of health workers had participated in a recruitment competition to enter the public service, with similar proportions in both the treatment and control groups. Among those who went through a competitive hiring process, a vast majority (83 percent) had group interviews. Of those who had group interviews, 23 percent of the applicants also faced a written examination, while 18 percent had the added experience of individual interviews. There are differences in the competitiveness of recruitment across the health professions, with 72 percent of doctors undergoing a public competition and most nurses and midwives not going through competitive selection (Figure 7). The relatively lower participation of nurses and midwives in competitive selection processes may have implications for the ability and motivation of these staff, which is important given that in most facilities these are the only medical personnel.

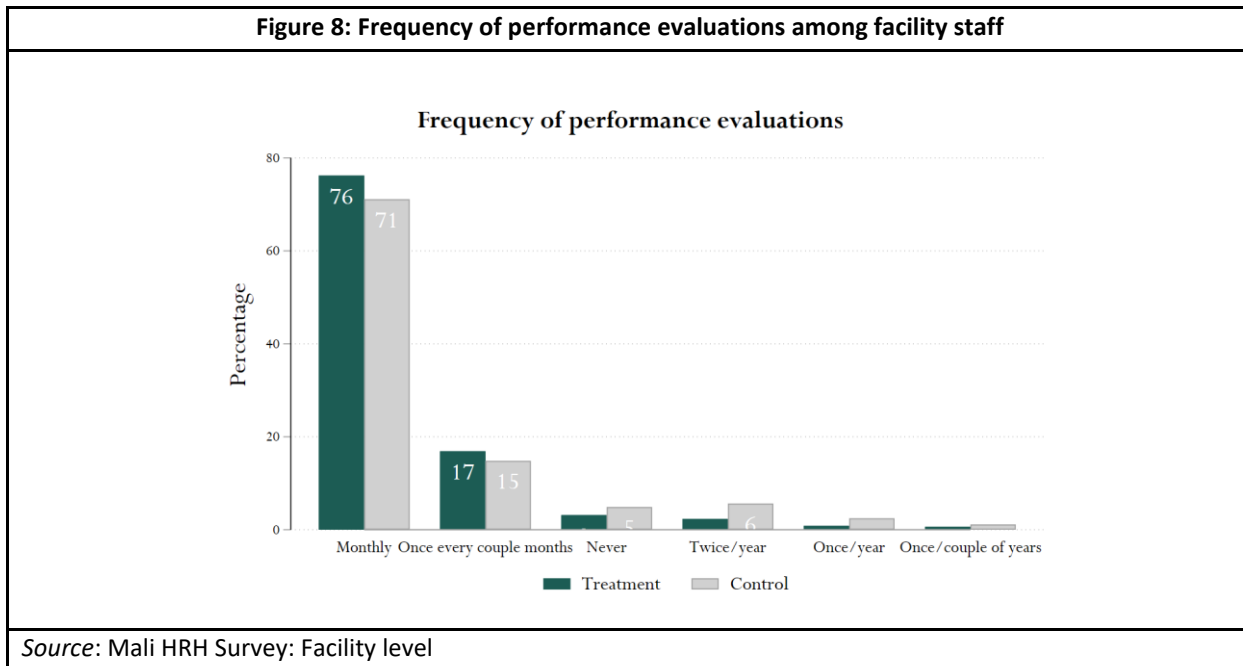


Personnel management, particularly robust performance evaluations, regular conversations between managers and staff, and coaching and mentoring are important influencers of worker performance. Case studies in health from Sub-Saharan African countries indicate that organizational cultures where flexibility, problem-solving, participation, teamwork and shared professional norms were valued and the entity held a strong sense of mission, were more important determinants of performance than an entity's remuneration or control structures (Grindle and Hilderbrand 1995). Other studies from South Africa and Taiwan linked transformational leadership and award systems that challenge employees with interesting work and make them feel valued and a sense of belonging, to higher job satisfaction (Castro and Martins

2010; Tsai 2014; York, Colasanti, and Josephson 1988). Studies have also found highly variable management capacity both at health facility and district level, as well as variation in health worker or institutional performance as a function of managers' capacity. The PBF theory of change is also anchored on improved personnel management linked to monitoring, mentoring, and incentives to improve worker motivation.

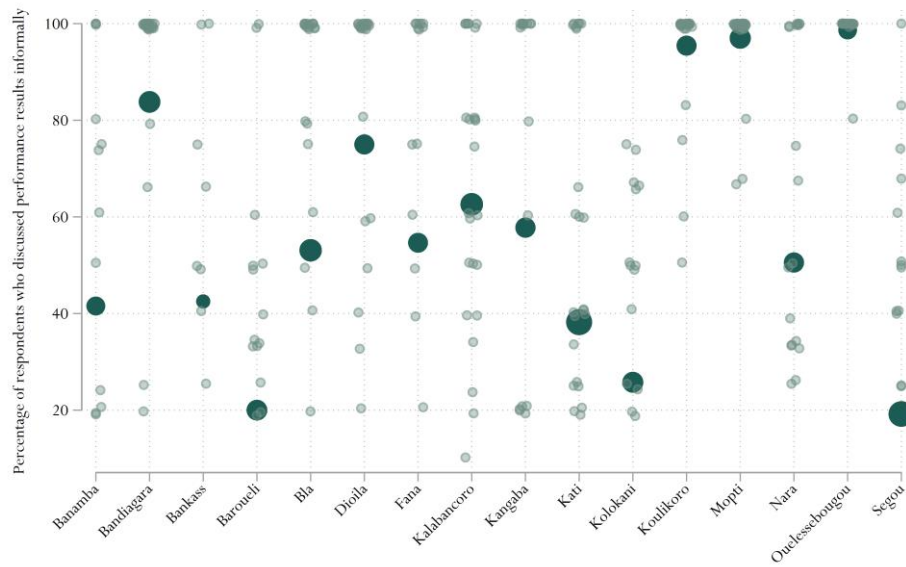
In Mali, some key elements of performance management are in place in the health facilities, though the evidence suggests that these are largely pro forma exercises. Most facility staff (74 percent) have monthly performance evaluations, with similarly high proportions in treatment and control facilities, which is encouraging and suggests that this foundational aspect of personnel management is in place (Figure 8). Fewer staff (55 percent), however, report having regular informal conversations with their manager, suggesting a gap between what is required on paper and what is being done in practice, as these informal conversations not only provide valuable insights into individual performance but also contribute to fostering a sense of engagement, motivation, and professional development among staff members. On average, the percentage of individuals who reported having these regular conversations ranges widely, from 20 percent to 100 percent across communes and across facilities within communes (Figure 9).

Figure 8: Frequency of performance evaluations among facility staff



Source: Mali HRH Survey: Facility level

Figure 9: Frequency of informal discussions on performance between staff and managers



Note: Bubble sizes represent sample size. Darker bubbles are average and smaller bubbles are for the centres.

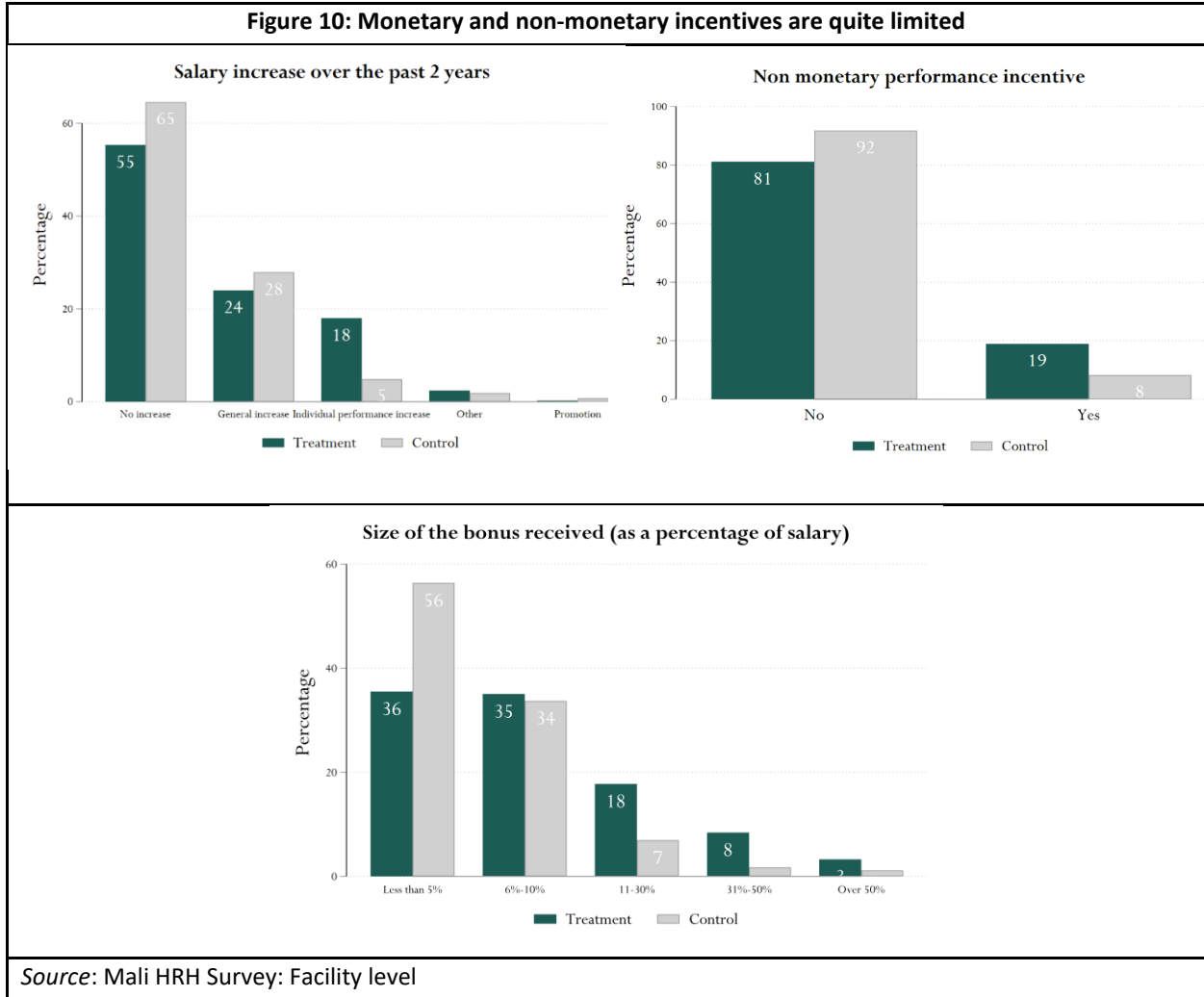
Source: Mali HRH Survey: Facility level

A core design feature of the PBB is financial incentives linked to facility and individual performance. PBF aims to improve utilization and quality of health care services by motivating healthcare providers to align their service provision population and health system interests by signing performance contracts stipulating financial reward the attainment of defined performance standards, while also increasing facilities’ management autonomy and strengthening the supervisory system (Renmans et al. 2017; Fritsche, Soeters, and Meessen 2014). Performance is defined both in terms of service volume and service quality. Rewards are paid upon verification of results, usually as quality-adjusted case-based provider payments. Ideally, facilities are autonomous in how to spend the PBF revenue, although it is often prescribed that part of the PBF revenue need to be reinvested in facility infrastructure and resources or savings, while part can be disbursed to staff as performance bonuses.

The Mali HRH survey found limited use of financial and non-financial incentives tied to performance for facility staff. Sixty percent of facility staff did not receive any salary increases in the past year, with 55 percent of staff in the treatment facilities receiving no salary increases (Figure X). Treatment facilities did provide more performance-based bonuses (18 percent) compared to control groups (5 percent), while unconditional salary increases were the most common form of financial incentive in both treatment and control facilities. (24 percent and 28 percent, respectively).

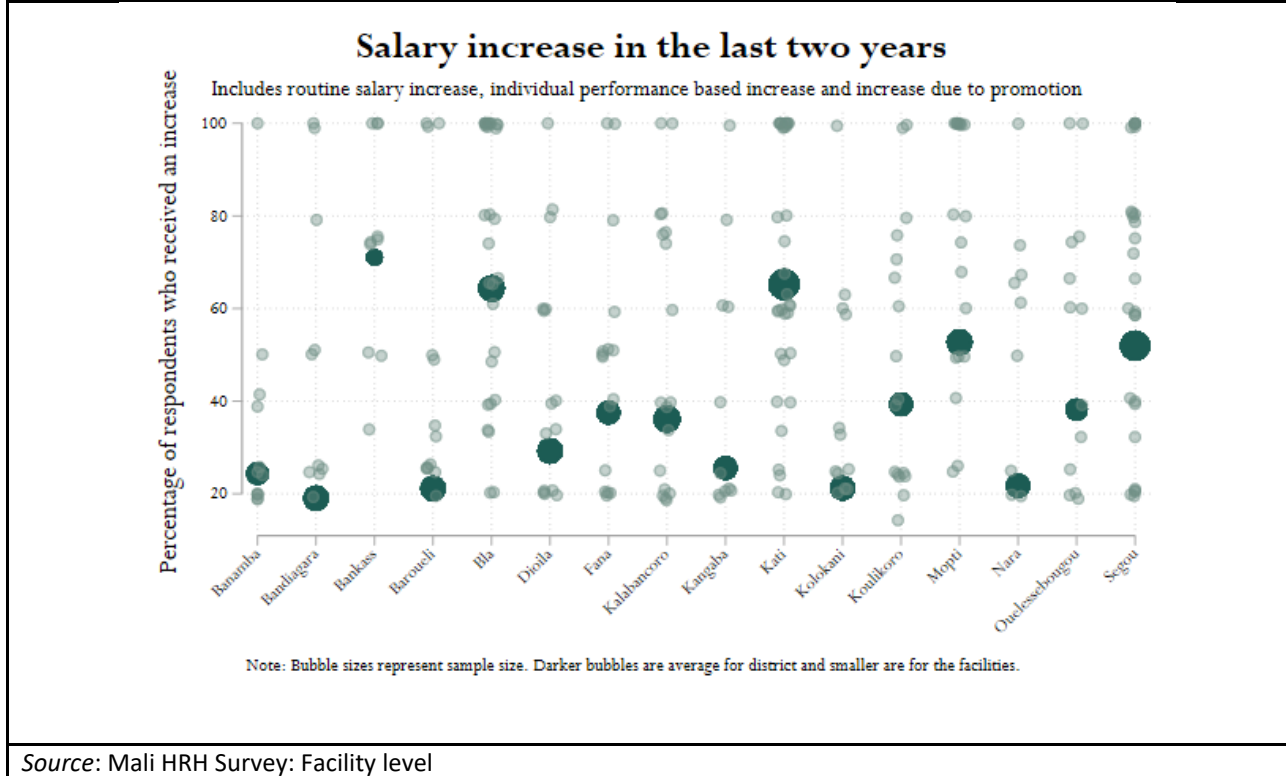
A significant portion of facility staff (86 percent) did not receive any non-monetary bonus either. Staff at the treatment facilities reported a higher level of receiving non-monetary bonuses than the control facilities, with 19 percent and 8 percent, respectively. Many studies have underlined the critical importance of non-financial incentives or social motivators. For instance, a study in Zambia found that rewarding public health extension workers with public recognition for selling contraceptives, with stars rewarded for each sale, was more effective than financial incentives to keep staff motivated (Ashraf et al., 2014)

When received, bonuses are a small proportion of salary and treatment facility staff are more likely to get larger bonuses compared to their counterparts in control facilities. When asked about the size of the most recent monetary bonus, 36 percent of respondents from treatment facilities, and 56 percent from control facilities, stated that it was less than 5 percent of their salaries. By contrast, in treatment facilities, 30 percent of respondents reported receiving bonuses ranging from 11 to over 50 percent, while only 10 percent of staff in control facilities indicated receiving bonuses of the same magnitude.



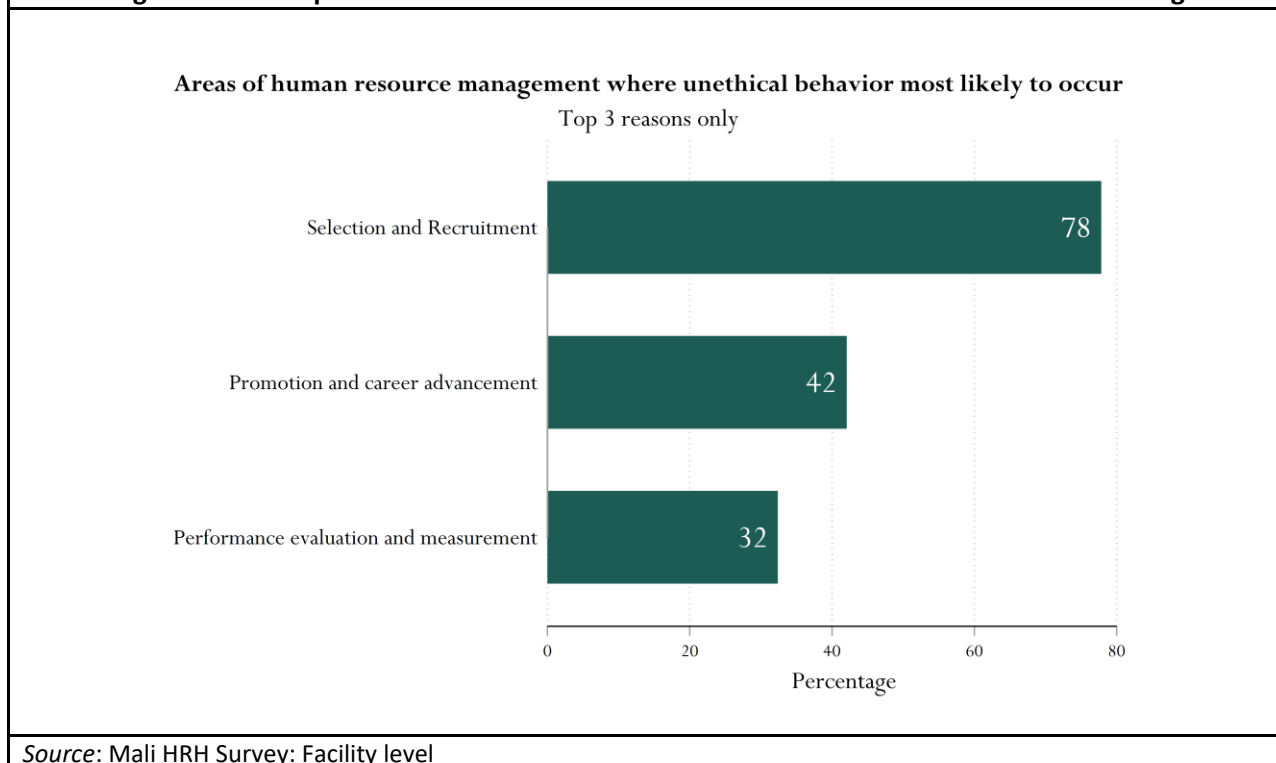
The data reveals significant variation in salary increases—routine, performance bonuses, or promotion-based increases—at the district and facility levels. Specifically, in the districts of Bankass and Kati, a minority of respondents got these increases, with less than 40 percent of facility staff receiving them. In contrast, in Bandiagara, Baroueli, and Kolokani districts, an average of 80 percent of facility staff has salary increases (Figure 11). There is also considerable variation in these increases in the facilities within districts.

Figure 11: Facility and district level variance on salary increases



Staff are also the view that the core areas of human resource management are vulnerable to unethical behavior. 51 percent of all facility staff acknowledged the presence of corruption within the healthcare sector. Among those who shared this view, a significant majority (78 percent) pointed out that unethical behavior is commonly observed during the selection and recruitment process, while 42 percent expressed concerns about corruption in promotion and career advancement practices, and 32 percent pointed to these problems in performance evaluation and measurement. It's worth noting that there are some gender differences in these perceptions, with 9 percentage more male staff believing in the presence of corruption compared to female employees. The unethical behavior in recruitment is consistent with the data showing that only a third of facility staff underwent a competitive recruitment process for their positions.

Figure 12: Perceptions on the occurrence of unethical behavior in HRM decision-making

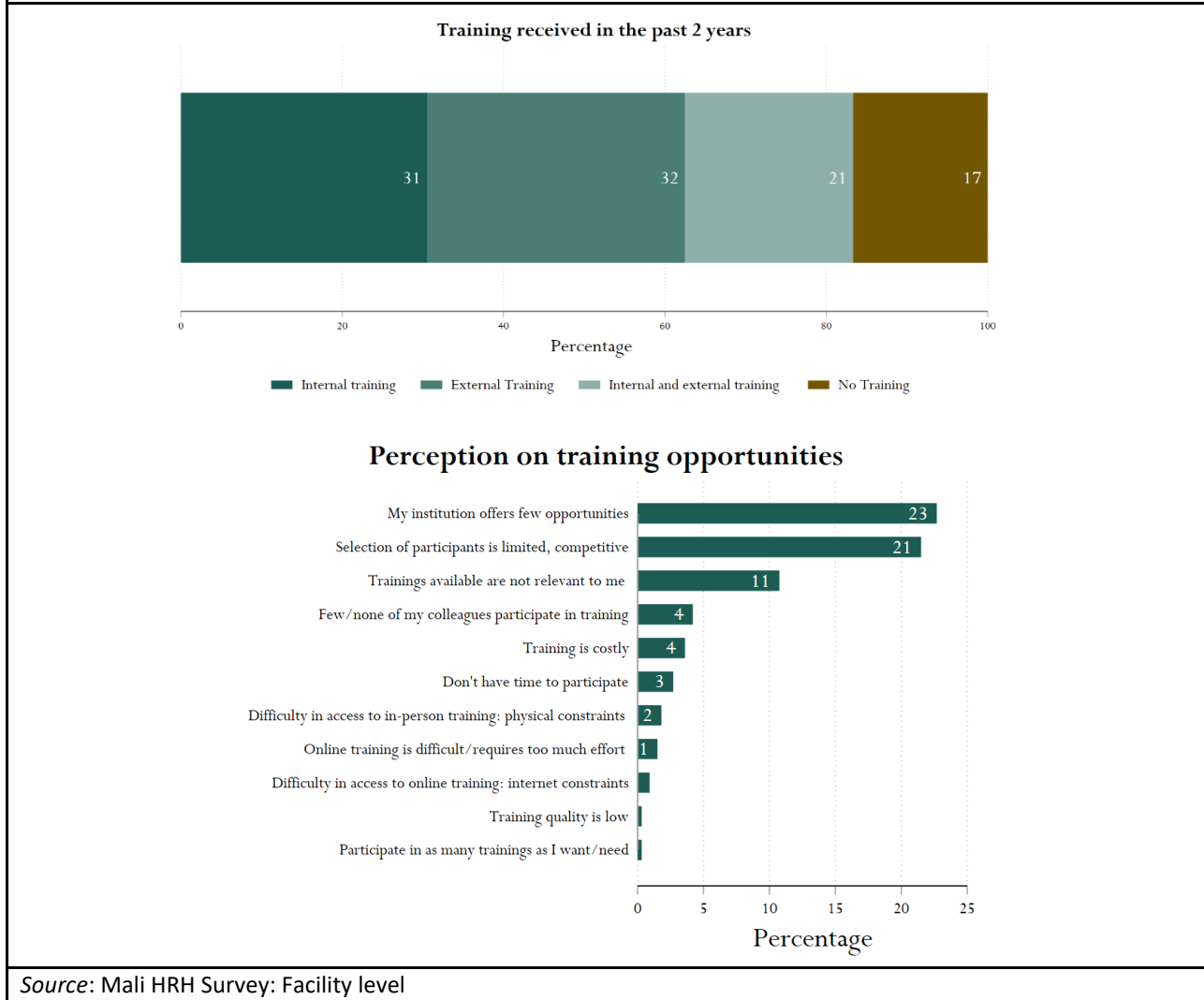


Skills, Training, and Development

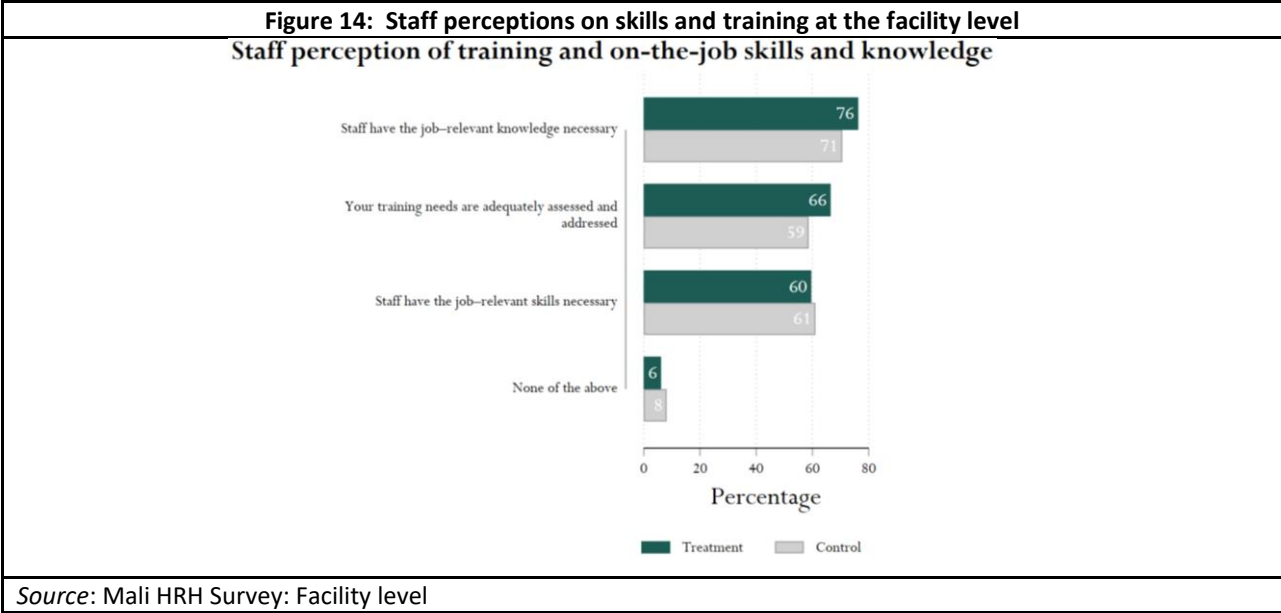
In-service training of public workers can improve their technical skills and motivate them. Surveys of private and public sector staff in Africa, Asia, and Europe found that training can strengthen workers' skills, engagement, and performance and increase morale and motivation (Manzoor et al., 2019). A systematic review of health system strengthening interventions highlighted how training on the job could motivate workers and even reduce attrition rates (Murray et al., 2019). Another recent systematic review of strategies to enhance health worker performance in LMICs specifically found that in-service training is consistently compelling, particularly when coupled with supervision or group problem solving, and targeting health care professionals, less so for community and other lay health workers (Rowe et al., 2018; 2021). Nevertheless, some critique the available evidence of training's impact on performance as being mainly from higher-income countries, the private sector, of low quality, non-experimental, or at times indicating only limited or no effectiveness (Ayeleke et al., 2016).

A large proportion of health workers have received training in the last two years. Eighty-three percent of respondents stated that they had done some training, either provided by the health administration or by an external party (Figure 13). The minority of health workers who did not undertake any training stated that the reasons were limited training opportunities provided by their facility (23 percent), not being selected for the training (21 percent), or the lack of relevance of the training (11 percent).

Figure 13: Training of facility staff



There remains though, a gap between access to training and perceptions of impact of the training on staff skills. The survey reveals that 40 percent of facility staff perceive that their colleagues lack job-related essential skills, and 26 percent of respondents believe that their colleagues do not possess the required knowledge for their roles, raising concerns about the overall competency and preparedness of the facility staff in fulfilling their job responsibilities (Figure 14). A higher proportion of staff in treatment facilities state that their training needs are adequately assessed and addressed (66 percent compared to 59 percent), though there remains a perception of significant unmet need.



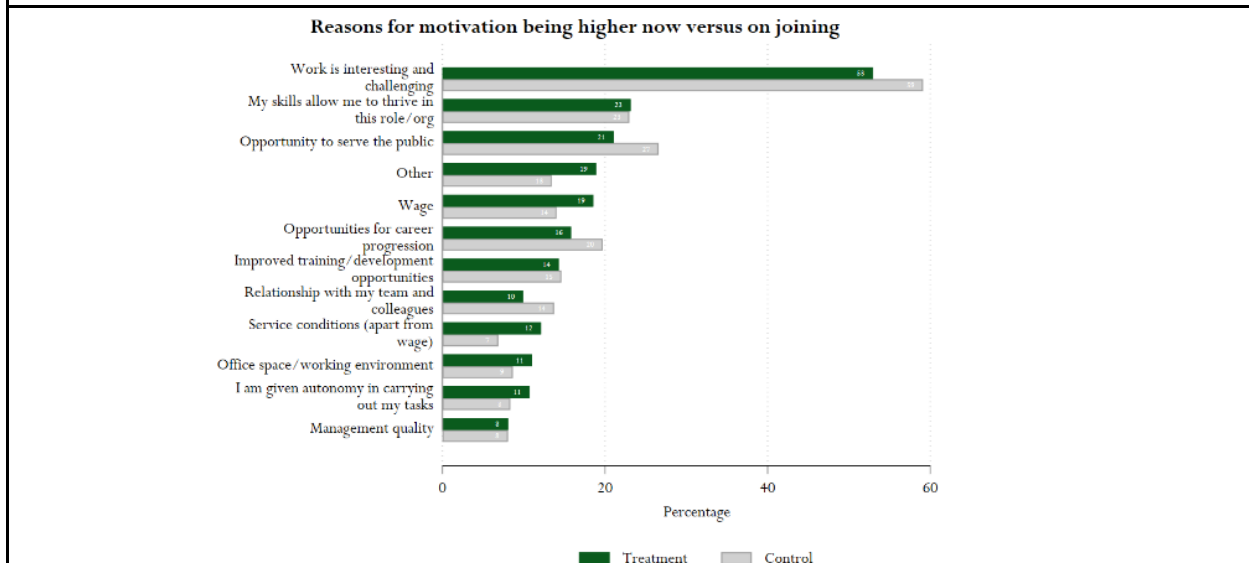
Attitudes and Behaviors

Motivation

An important distinction in the research on motivation is the intrinsic-extrinsic motivation taxonomy. Extrinsic motivation is derived from an external stimulus or 'driver,' such as financial or non-financial incentives. In contrast, intrinsic motivation is motivation 'originating from within' without such an external stimulus. Research has shown that although motivation of any type can be effective in driving performance, intrinsic motivation tends to have favorable properties over extrinsic in that it is more stable over time and generalizes better across settings, situations, and behavior (Van den Broeck et al., 2021). Recent empirical studies confirm the importance of intrinsic motivation and mission orientation for health worker performance. In Pakistan, doctors that score higher on an index measuring public service motivation were less likely to be absent from work or to fabricate health reports (Callen et al., 2018).

An overwhelming majority (70 percent) of facility staff reported being more motivated than when they initially joined. Those who indicated a higher level of motivation highlighted intrinsic factors like the exciting and challenging nature of the work, alignment of skills to the work, and the opportunity to serve the public (Figure 15). Only 9 percent of respondents indicated their motivation had decreased since joining, and for this group extrinsic factors such as wages, service conditions, and their work environment were the most significant factors contributing to their decreased motivation.

Figure 15: Reported reasons for changes in motivation levels

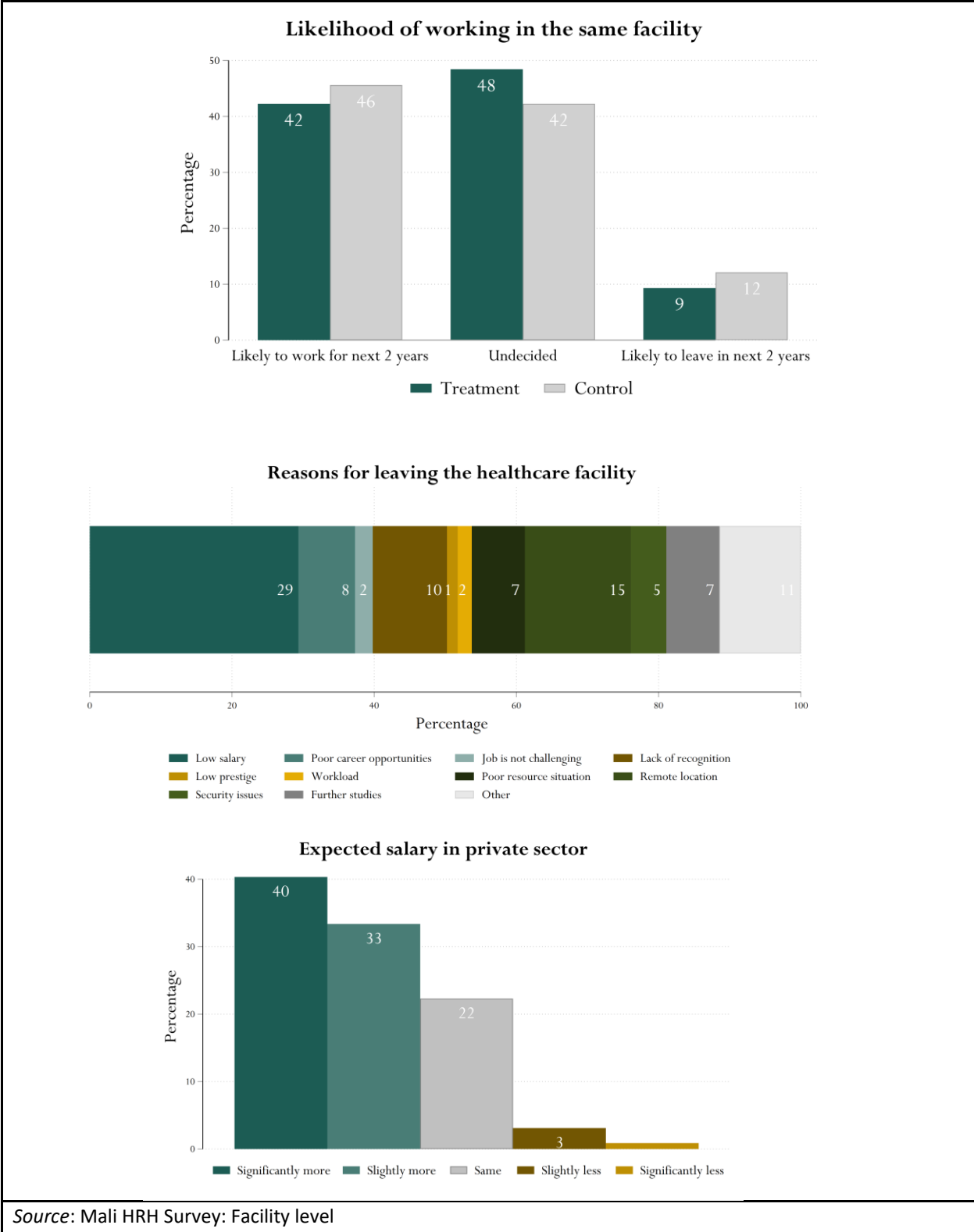


Source: Mali HRH Survey: Facility level

Facility staff showed varying intentions concerning their plans at the facility, with a notable percentage planning to stay and a small fraction considering leaving due to low motivation. When asked about their likelihood of remaining in the same facility over the next two years, 42 percent of treatment respondents and 46 percent of control respondents expressed their intention to continue working in their current facility (Figure 16). However, a substantial proportion (46 percent) remained undecided about their plans. Furthermore, a small percentage of facility staff indicated the possibility of leaving within the next two years. The reasons for potential departures align with factors that contribute to low motivation, including low salaries, limited career prospects, and the challenges associated with remote work locations. This level of commitment, with some indecision, raises concerns about the effectiveness of retention strategies and highlights the importance of addressing these issues to ensure higher motivation and long-term retention.

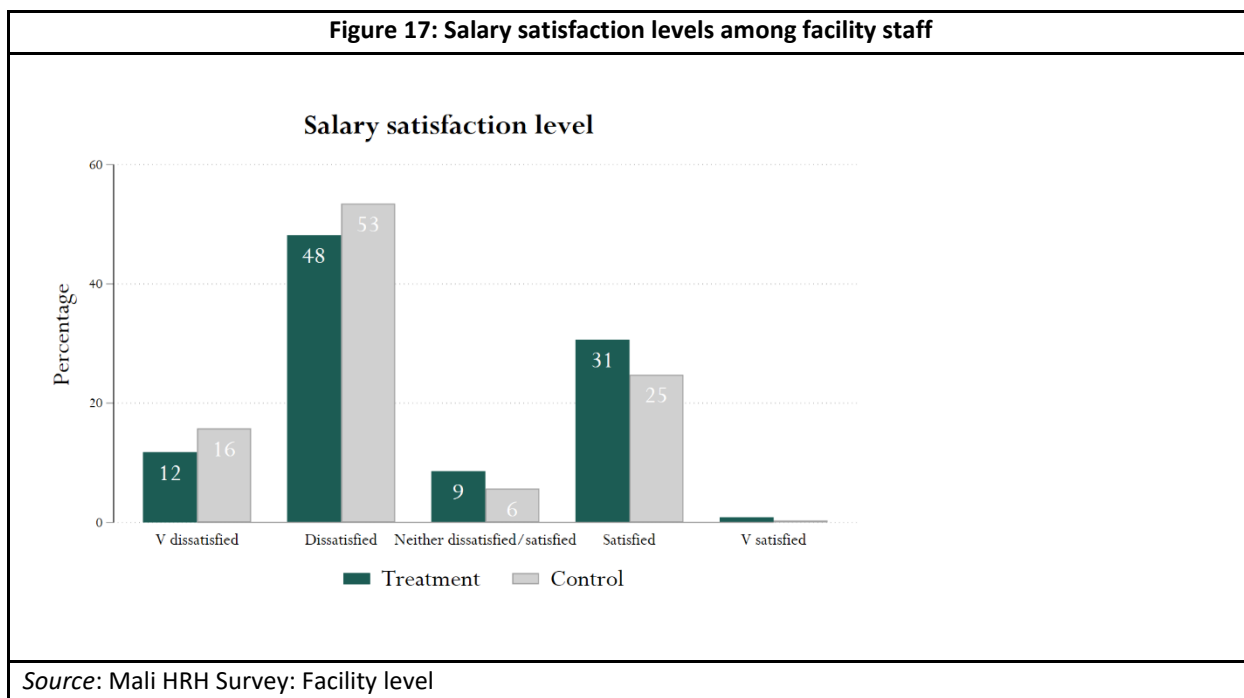
The belief that facility staff can earn more in the private sector may contribute to their intention to leave the public sector. The survey findings indicate that a significant majority, precisely 73 percent of facility staff, believe they would receive higher salaries if employed in the private sector than their current positions in the public sector. This perception may pose challenges in maintaining a skilled and motivated workforce within the public sector.

Figure 16: Intention of facility staff to remain in their current facility and reasons for leaving



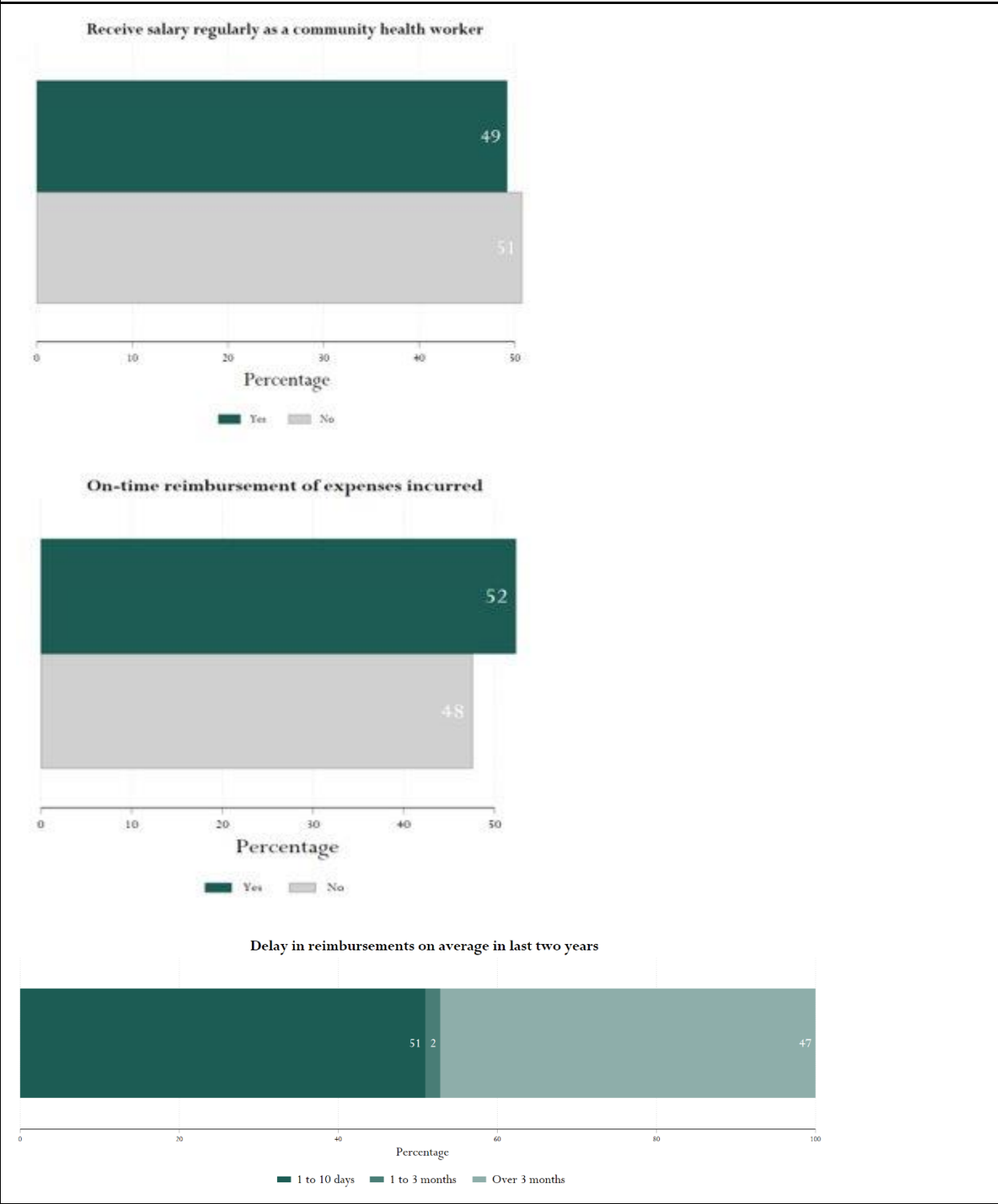
Source: Mali HRH Survey: Facility level

Most facility staff express dissatisfaction with their salaries, while regional variation in salary satisfaction levels emphasizes varying motivation levels across regions. The survey findings indicate that most facility staff (70 percent) expressed dissatisfaction with their salaries (Figure 17). Only 30 percent of the respondents reported being satisfied with their current salary levels, with salary satisfaction levels slightly higher in the treatment arm (see Figure X). This suggests a wide disparity between the salary expectations of the facility staff and their actual compensation. The findings also revealed regional-level and gender related variation in salary satisfaction among facility staff. The highest level of satisfaction was observed in Mopti, where 35 percent of respondents expressed contentment with their salaries. Among staff who are satisfied with their salaries, female employees are slightly more satisfied compared to their male colleagues satisfied (34 and 30 percent, respectively). Despite this salary dissatisfaction, the fact that only a small proportion of workers have a stated desire to leave their current work suggests that other factors likely contribute to the overall job satisfaction and commitment of the staff, such as a sense of purpose or job security. Moreover, it is worth considering that the low percentage of staff intending to leave their current positions could also be influenced by the limited availability of alternative options in the job market.



Facility staff in general receive their salaries on time, with the notable exception of CHWs. Health workers who are government employees reported minimal delays in receiving salaries, with only 12 percent stating delays and only six percent stating that they did not receive their full salary (Figure 18). By contrast, only 48 percent of CHWs reported regularly receiving salaries as part of their work. Concerning their expenses (travel costs etc.) incurred, only 40 percent of CHWs reported that they were reimbursed on time. Furthermore, among those who experienced delays in reimbursements, a substantial 47 percent indicated delays exceeding three months.

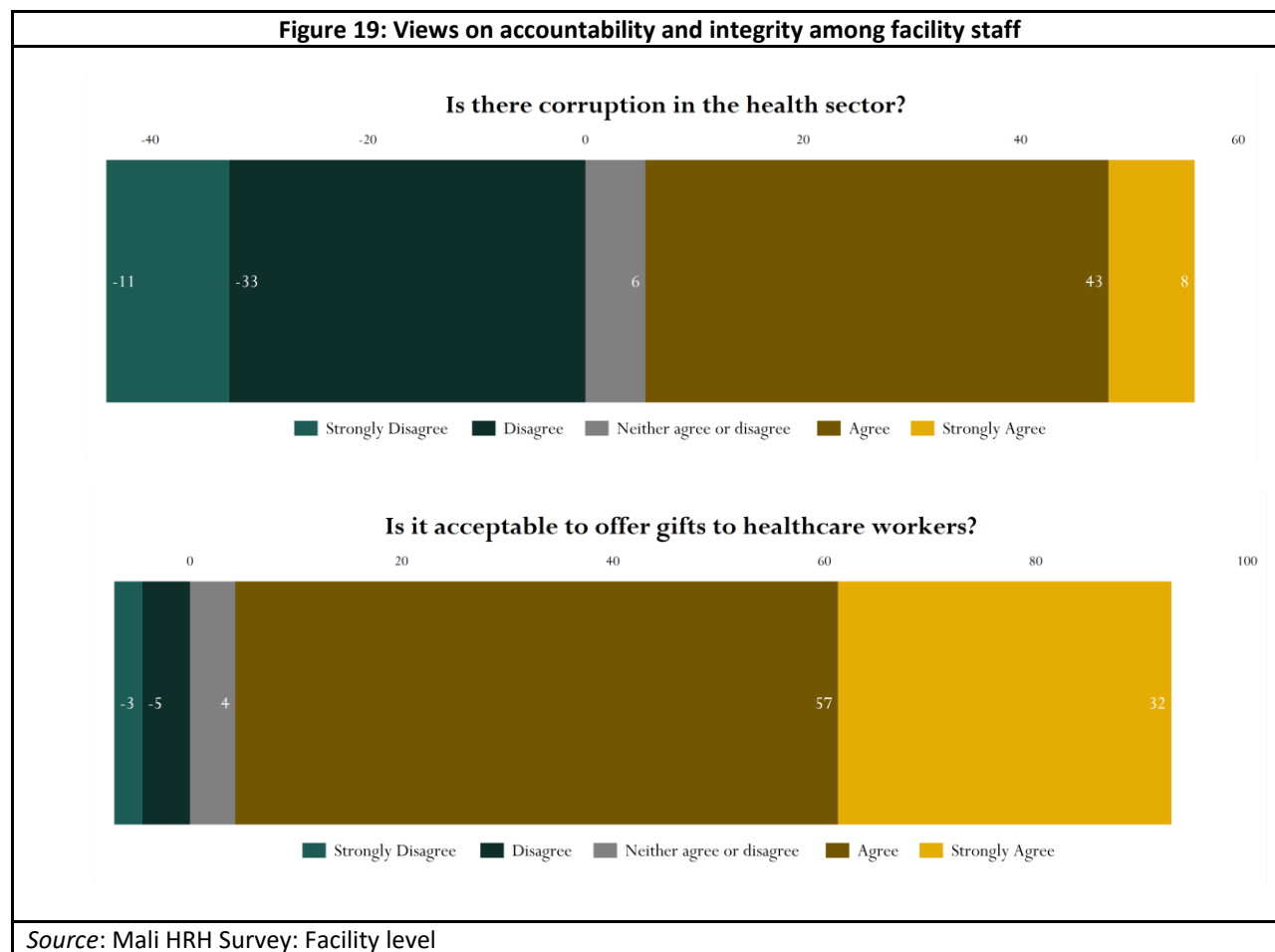
Figure 18: Delayed reimbursements for CHWs



Source: Mali HRH Survey: Facility level

Ethics

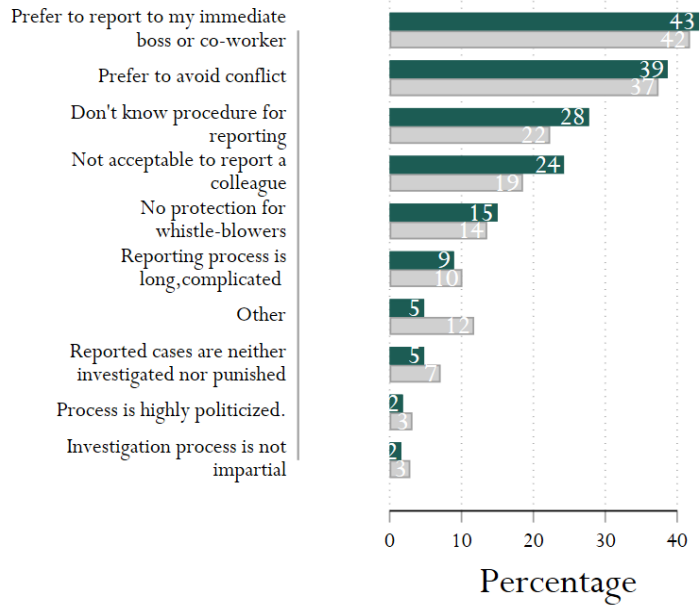
Healthcare staff acknowledge corruption in the system but differ in perception of in-kind gifts. Fifty-one percent of facility staff believe there is corruption in the healthcare system, while 89 percent of facilities do not consider in-kind gifts corruption (Figure 19). This finding highlights a distinction in understanding corruption among the staff members. While they may acknowledge the corruption in the system, their perception of what constitutes corruption differs regarding in-kind gifts. The additional forms of corruption may be prevalent but not perceived as corruption by most facility staff.



Fear of repercussions hinders reporting of misconduct in healthcare. Twenty-two percent of the facility staff reported feeling uncomfortable reporting misconduct within the healthcare system, pointing to possible fear of repercussions (Figure 20). Among the reasons for not reporting misconduct, 43 percent of respondents preferred reporting to their immediate supervisor, followed by the desire to avoid conflict (38 percent) and a lack of knowledge about reporting procedures (26 percent). The overall reluctance to engage in confrontation may stem from concerns about potential repercussions.

Figure 20: Whistleblowing and reasons for not reporting

Reasons for not reporting corruption cases



Source: Mali HRH Survey: Facility level

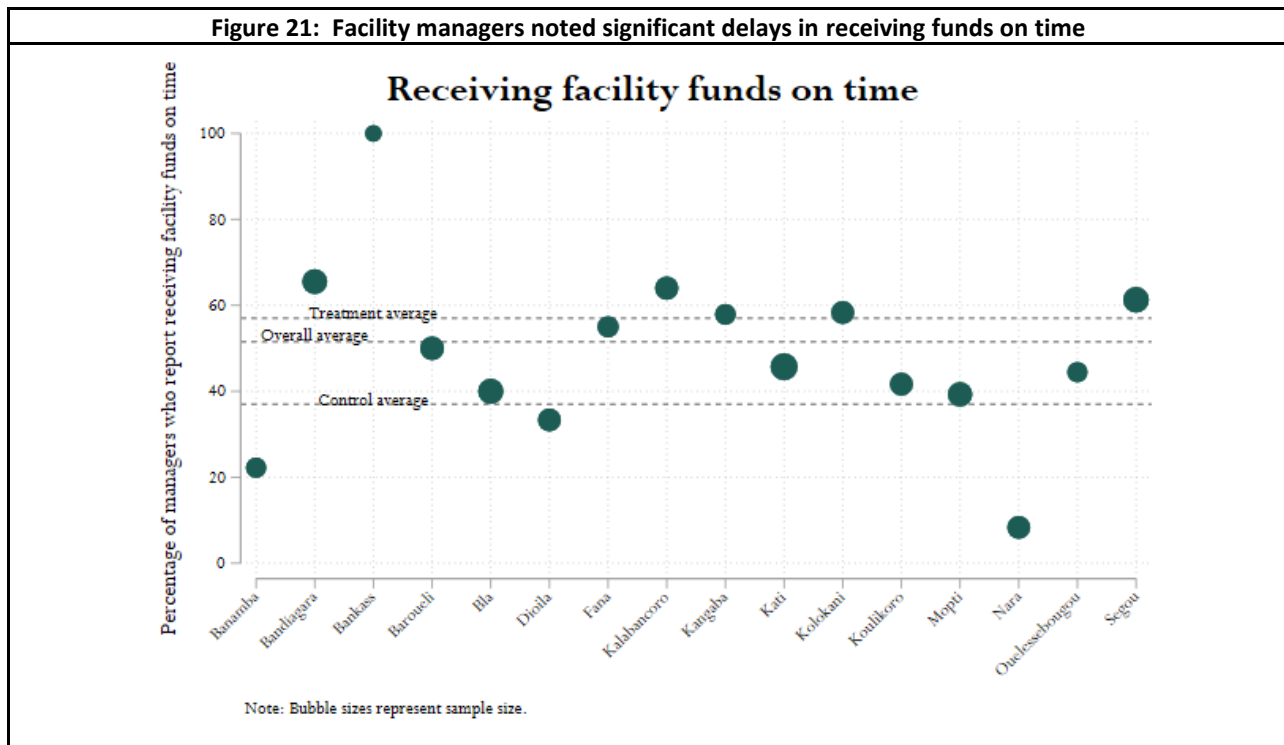
Chapter 3: HRH Drivers in the Health Administration

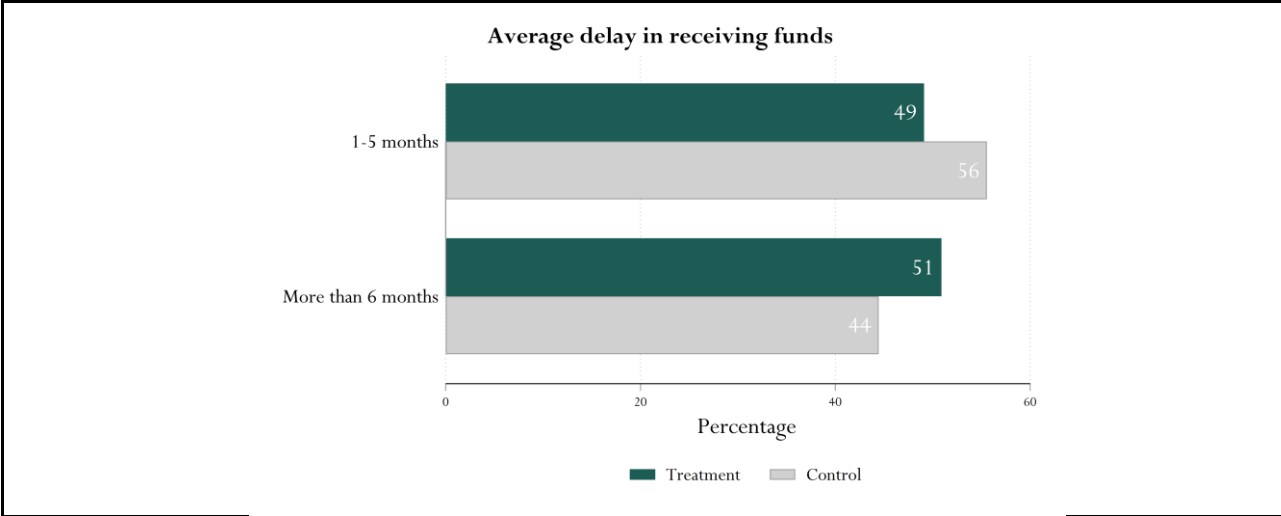
This chapter presents the main HRH drivers of personnel working in the central and local health administration, focusing on how these drivers influence the core stewardship functions like facility financing, supervision, monitoring, and data informed management.

Facility Funds, Supervision, and Monitoring

Many facility managers' report delays in receiving facility funds, which has implications for healthcare facilities' financial management and operations, and the PBF results chain. These delays vary considerably across communes and were on average lower in the treatment facilities (57 percent stated they received funds on time) compared to control facilities (38 percent, Figure 21). However, the duration of these delays was similar across treatment and control facilities. Among those experiencing delays, 51 percent of treatment facilities and 44 percent of control facilities experienced delays lasting longer than six months, with a significant variance at the district level. Such prolonged delays have clear adverse effects on the functioning of healthcare facilities, as it affects their ability to procure necessary supplies, equipment, and services in a timely manner.

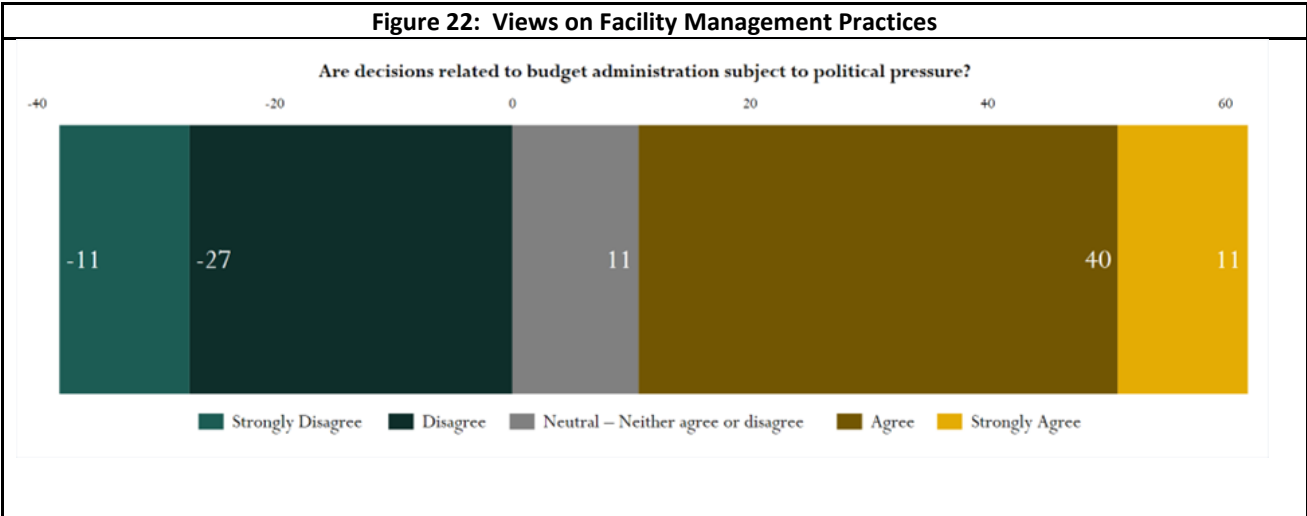
Figure 21: Facility managers noted significant delays in receiving funds on time

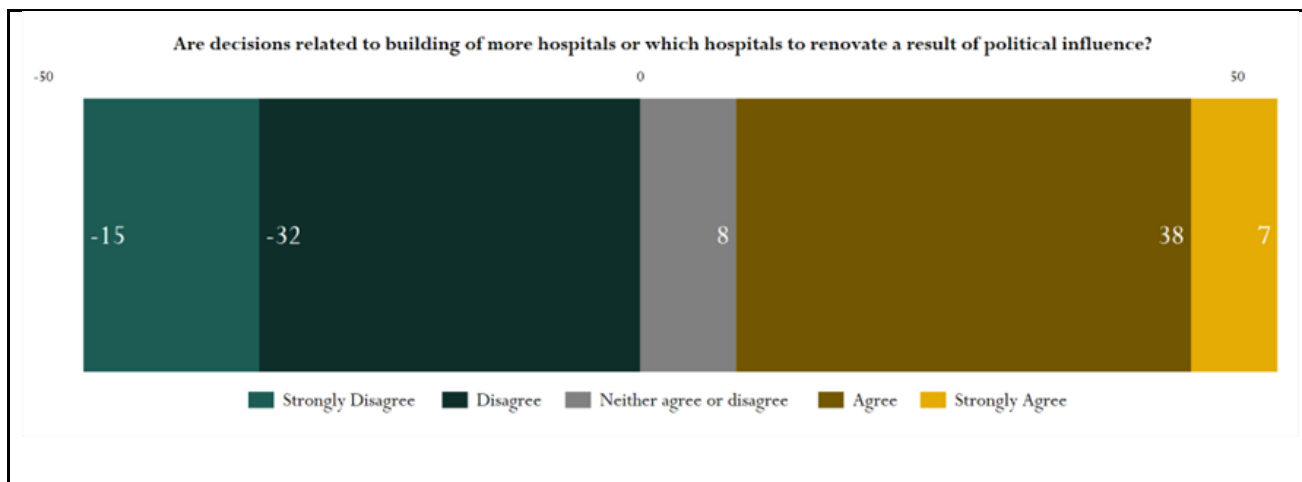




Source: Mali HRH Survey: Facility level

Staff also reported significant political influence in the use of facility funds. The survey asked facility staff their views on whether decisions regarding budget administration and facility construction and renovation were subject to political influence. Fifty-one percent of facility staff (45 percent) agreed or strongly agreed that budget administration—budget allocations and activities to be funded—were subject to political pressure (Figure 22). Staff in treatment facilities higher share of respondents saying that there was this political interference compared to staff in control facilities (54 percent compared to 45 percent). Similarly, 45 percent stated decisions on facility construction and renovation were influenced by politics. These findings may imply possible misallocation of resources, delayed or inadequate infrastructure improvements, and compromised patient care. Ensuring transparency in financial processes can help to mitigate concerns about political pressure.





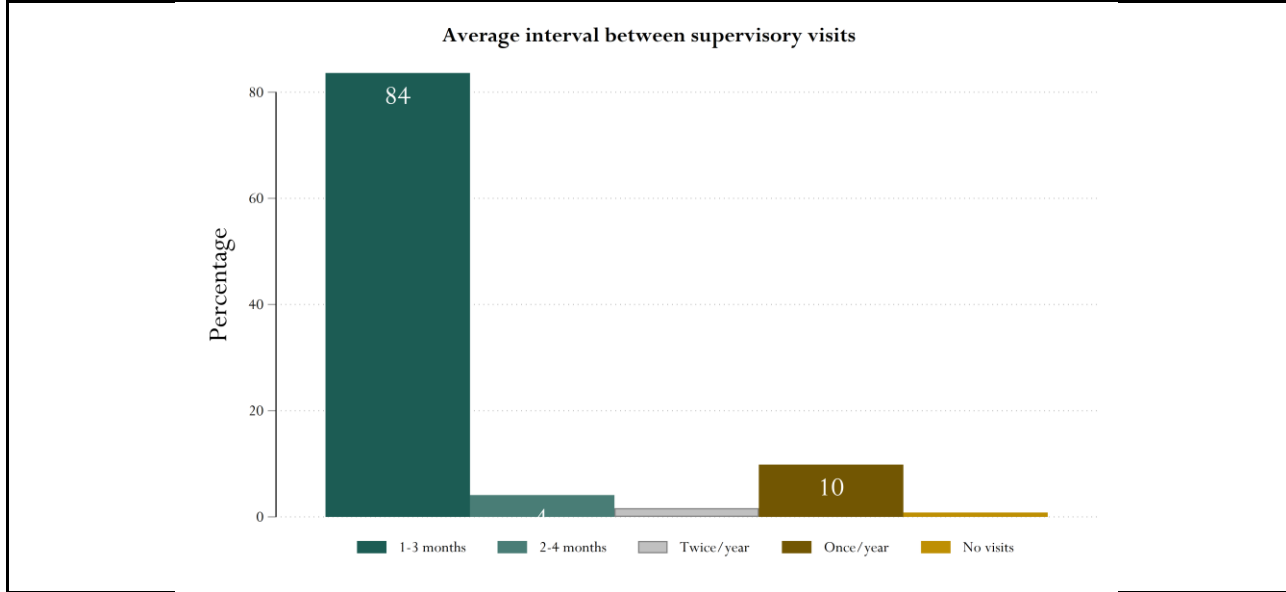
Source: Mali HRH Survey: Facility level

Supportive supervision has long constituted a key pillar in healthcare management, particularly in PBF.

In addition to ensuring compliance with regulations and monitoring of results, supportive supervision also provides a mechanism for interpersonal and emotional support and recognition of effort and achievement, thereby enhancing motivation and building a sense of belonging and commitment, all of which are of particular importance to frontline healthcare providers who operate primarily in isolation (Rabbani et al., 2016; Kok et al., 2018). High-quality supportive supervision offers opportunities to directly enhance both what health workers can do by improving their technical competence and resolving environmental barriers to high performance; and what health workers will do by positively influencing both external (e.g., working conditions, social incentives) and internal drivers (e.g., self-efficacy) of motivation. In frequency, evidence points to monthly supervision being more effective than quarterly supervision. However, the quality of supervision is more important than the frequency. Given the dual role of technical and emotional support, a certain level of continuity and frequency in the supervisory relationship is essential to building a mutual understanding of interests, priorities, and trust.

Health administration staff stated that supervision was linked to facility performance and that there were regular facility supervisory visits. Over 80 percent of public administration staff believe that poorly performing facilities receive more supervision, and staff within these facilities receive additional training and coaching to address the identified areas of improvement. The admin-level respondents indicate that supervisory visits occur regularly and at relatively frequent intervals, typically ranging from 1 to 3 months (84 percent), which is also encouraging.

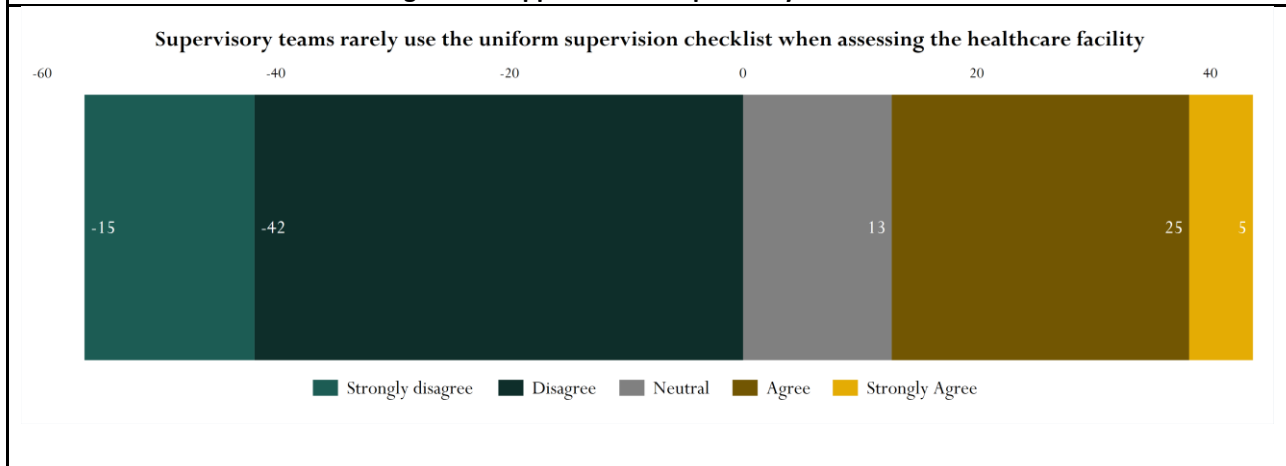
Figure 23: Views on supervisory visits



Source: Mali HRH Survey: Admin level

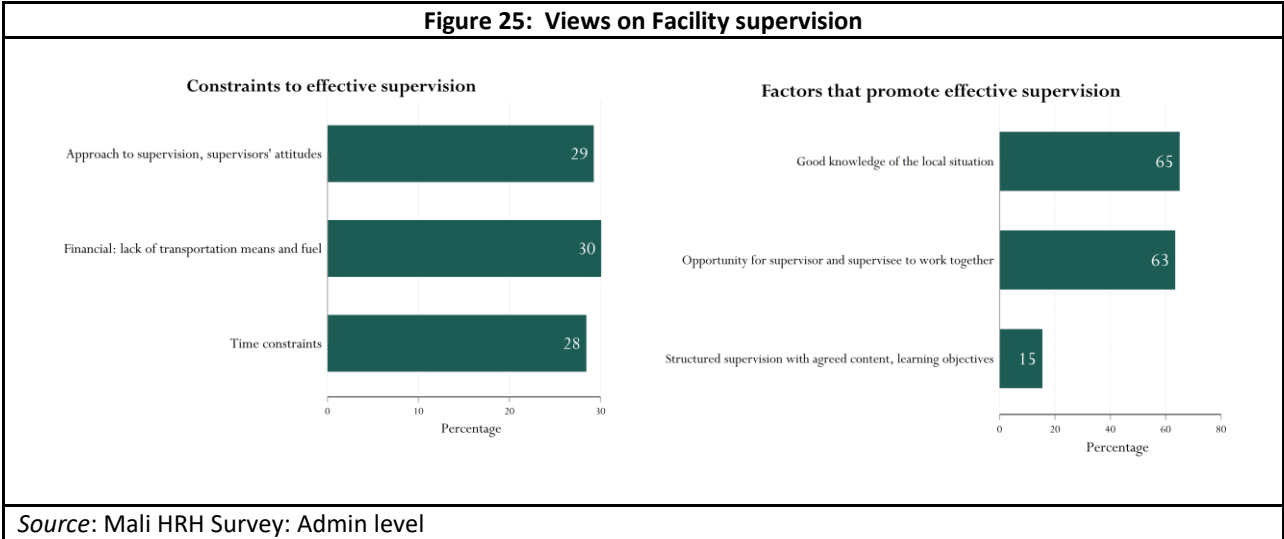
Disconcertingly, however, 30 percent of respondents said supervisory checklists are rarely used when assessing healthcare facilities. Supervisory checklists serve as standardized tools that outline specific criteria and guidelines to evaluate various aspects of facility performance. They offer a comprehensive and objective approach to facility evaluation, leaving minimal room for subjective interpretations or oversight. Survey findings point to a lack of utilization of this critical tool in evaluating and monitoring facility performance, raising concerns about the efficacy of the evaluation process. The reliance on subjective evaluations without the support of supervisory checklists can lead to variations in assessment outcomes, potentially compromising the overall quality and safety of healthcare facilities.

Figure 24: Application of supervisory checklists



Source: Mali HRH Survey: Admin level

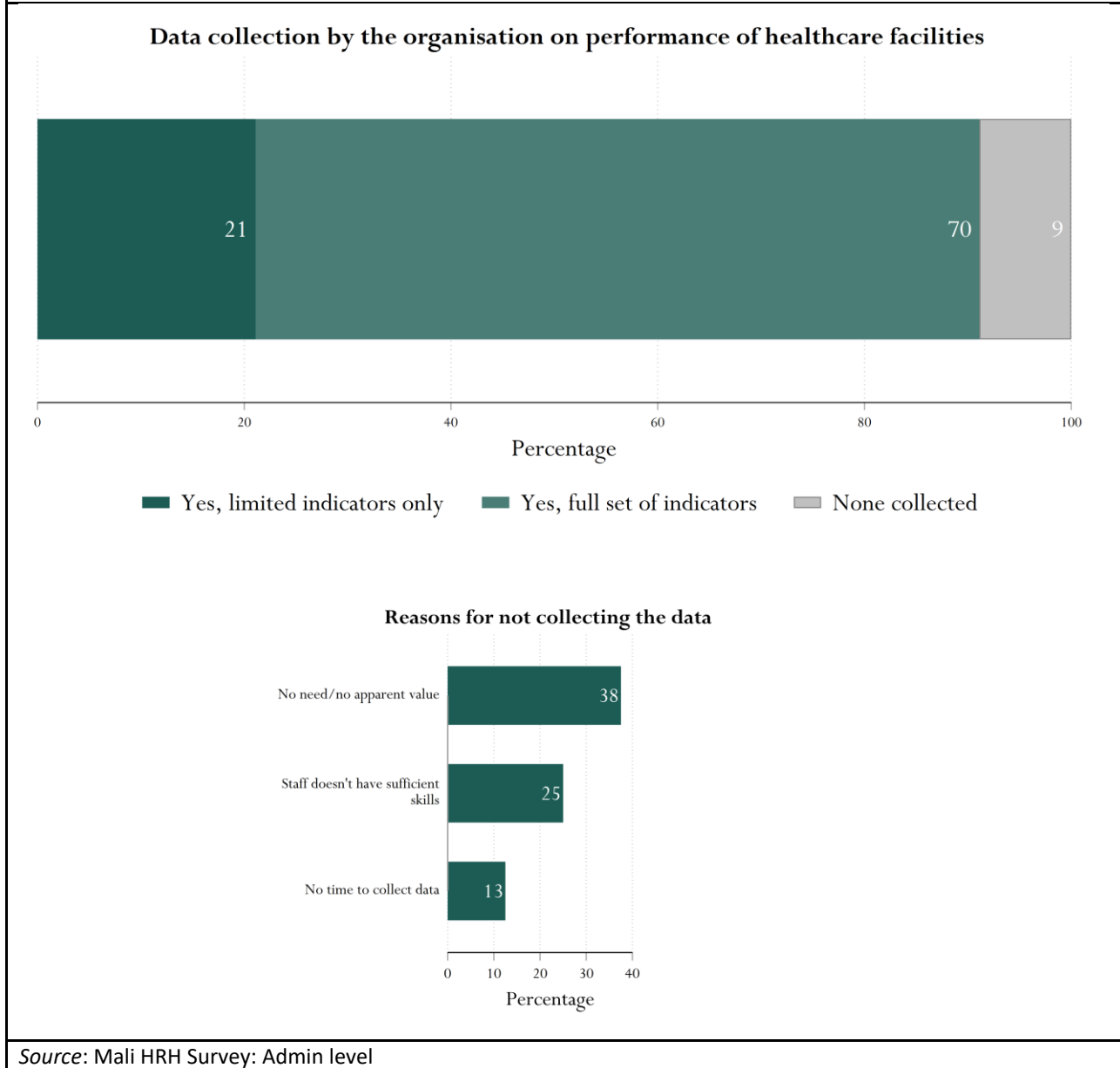
Administration staff identified a variety of constraints to effective supervision. Thirty percent of respondents at the admin level identify the lack of financial resources and the attitude of supervisors as primary obstacles to adequate supervision within healthcare facilities. On the other hand, 65 percent of respondents recognized understanding the local context as a critical driver of adequate supervision. These findings emphasize the significance of contextual knowledge in tailoring supervisory approaches to the specific needs and challenges of the healthcare facility and the surrounding communities. Understanding local dynamics, cultural norms, and healthcare practices enables supervisors to make informed decisions and provide relevant guidance. Moreover, effective collaboration between supervisors and facility staff was identified as a supportive factor for supervision, emphasizing the importance of teamwork and shared decision-making.



Data-informed Management

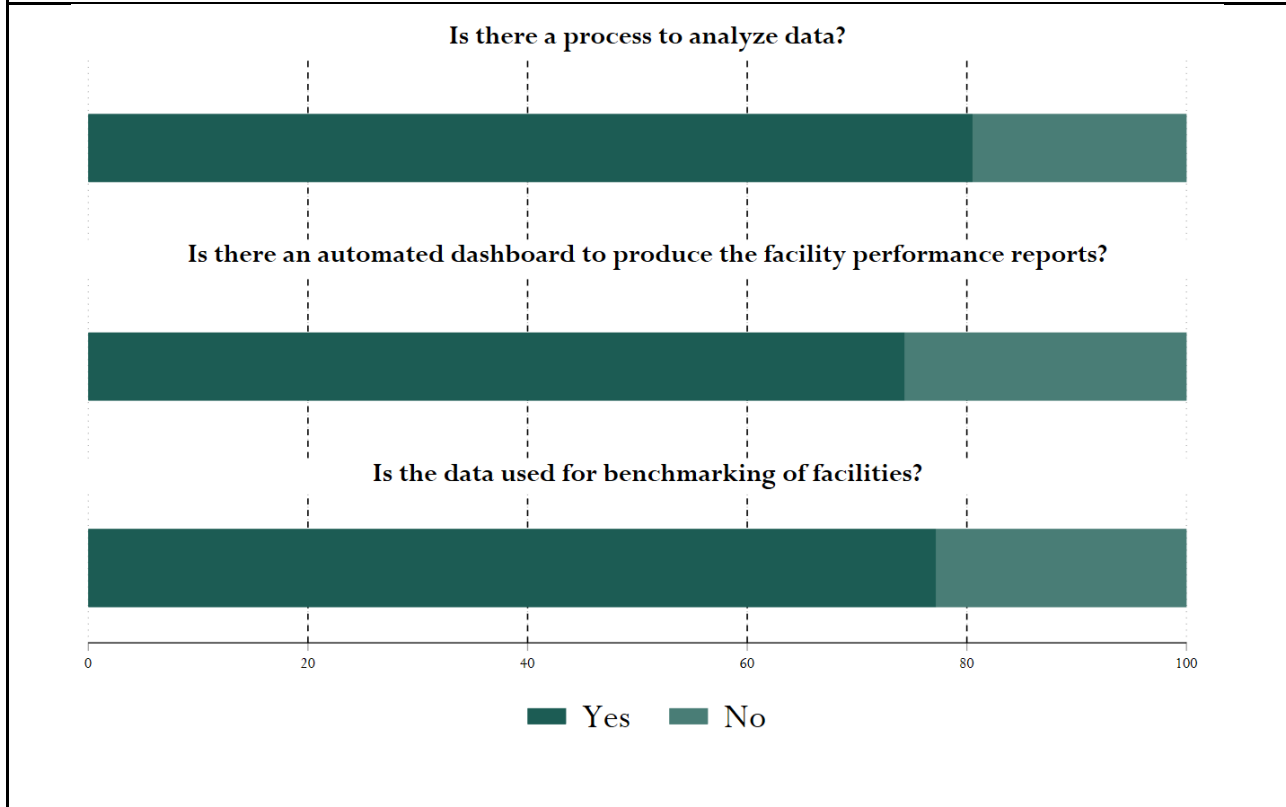
Overall, the survey found regular data collection on facility performance. Over 90 percent of public administration staff report that data is regularly collected on the performance of health facilities. This widespread data collection indicates the recognition of the importance of monitoring and evaluation among healthcare facilities, which is a key pillar of the PBF. However, a small percentage of staff who do not collect data cited the lack of perceived value as the main reason for not engaging in data collection.

Figure 26: Data collection on healthcare facility performance



In addition to collecting data on the performance of health facilities, tools are available to support the analysis of this data, such as automated dashboards. These tools offer valuable functionalities that enable facilities to benchmark their performance against each other, providing insights into areas of strength and opportunities for improvement. According to 70 percent of respondents, an automated dashboard generates facility performance reports, facilitating easy access to key performance indicators and facility performance trends over time. Furthermore, data collected is also utilized for benchmarking purposes, as 70 percent of respondents reported.

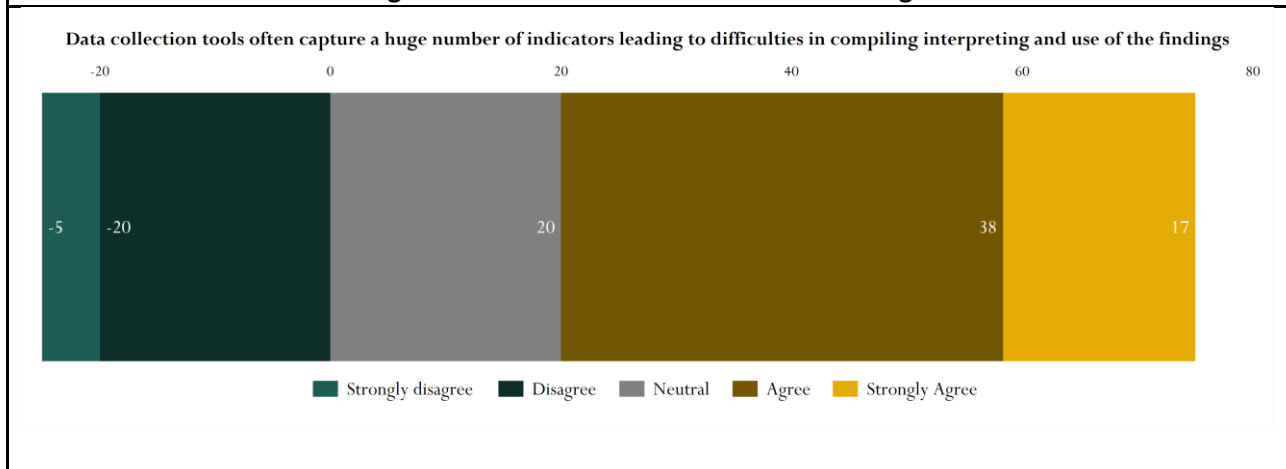
Figure 27: Using data for benchmarking



Source: Mali HRH Survey: Admin level

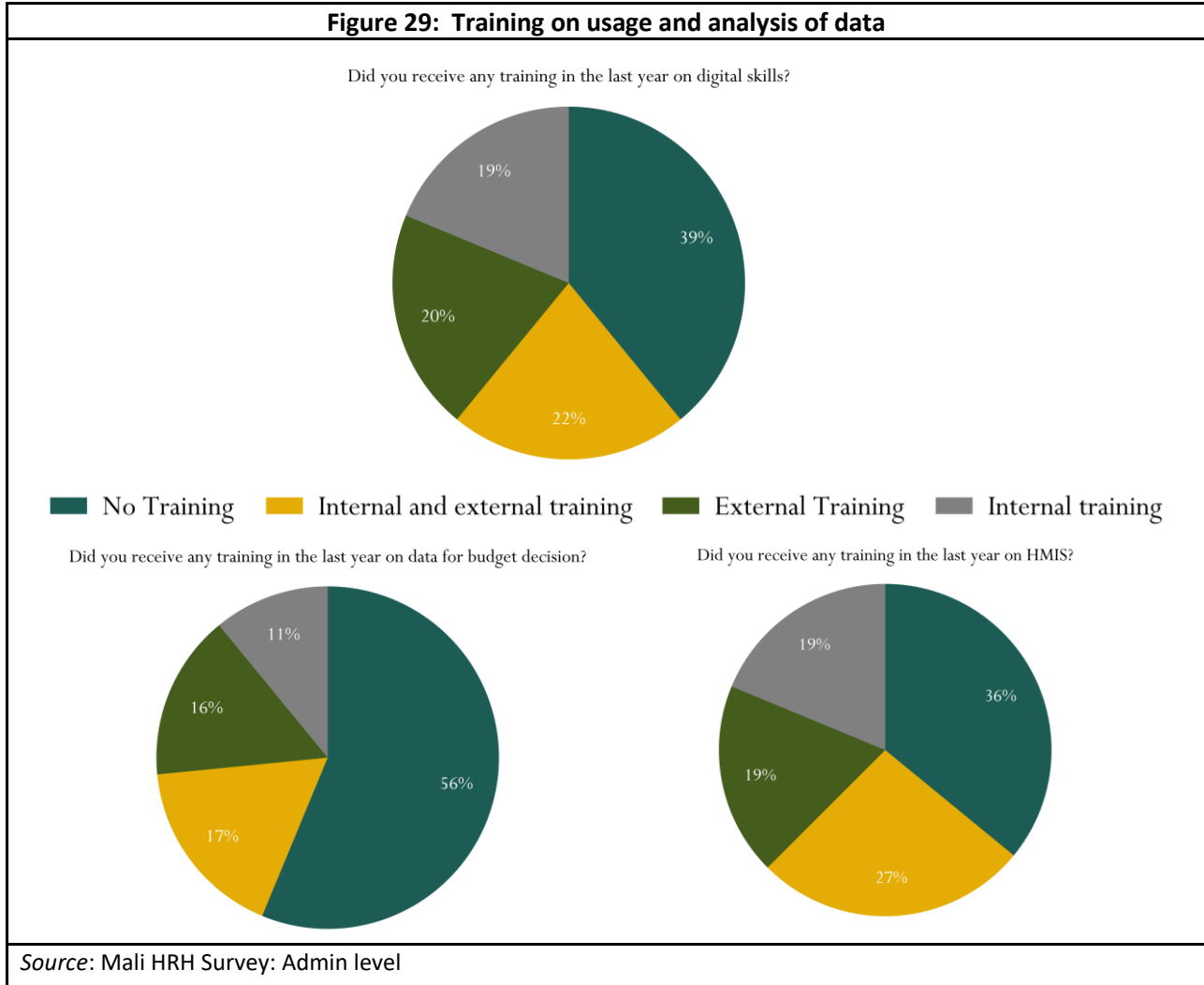
Administration staff did voice concerns about having the ability to effectively use the large amount of data being collected for decision-making. Over 50 percent of respondents report that the data often captures a substantial number of indicators, which presents challenges when compiling, interpreting, and effectively utilizing the findings. While the intention behind capturing a comprehensive set of indicators is to ensure a quality assessment of facility performance, it can inadvertently lead to information overload and hinder the ability to derive actionable insights.

Figure 28: Views on data collection and usage



At the administration level, staff have received limited training on effectively using this data. Forty percent of staff lacked training in digital skills, indicating a significant gap in their ability to utilize digital tools and platforms. Additionally, 60 percent did not receive training on utilizing data for budget decisions, and 36 percent did not receive training focused on HMIS. The absence of comprehensive training in these critical areas hampers the ability of staff to effectively analyze, interpret, and leverage the collected data for informed decision-making and optimal resource allocation.

Figure 29: Training on usage and analysis of data



Chapter 4. Policy Recommendations

This study has revealed several challenges regarding HRH in health facilities and the health administration. These include significant shortages of key medical personnel like doctors and nurses; a high and increasing workload for the facility staff who are working; limited merit-based recruitment; limited use of financial and non-financial incentives, and undue political influence in the use of facility funds and personnel management. The survey also revealed that the architecture of performance management is in place, with widespread collection of data, but that the effective use of this data faced challenges of information overload and limited staff training in data management.

These findings suggest a set of short, medium, and long-term recommendations detailed in the table below.

Facility-Level Recommendations:

Recommendations	Action to be taken	Timeline
Addressing Staffing Shortages:	Conduct an assessment of the healthcare infrastructure and staffing gaps in underserved regions, utilizing geographic mapping and population needs analysis.	Short-term
	Conduct a review of successful recruitment incentive programs from similar contexts, offering incentives to attract healthcare professionals to understaffed facilities.	Short-term
	Design a workforce planning strategy and plan recruitment efforts accordingly.	Medium-term
	Collaborate with medical schools and professional associations to develop and implement targeted training programs, such as residency programs, to increase the number of healthcare professionals in underserved regions.	Medium-term
Recommendations	Action to be taken	Timeline
Enhancing Salary Satisfaction and Workforce Motivation:	Conduct a comprehensive benchmarking analysis of healthcare staff salaries, considering regional disparities and cost of living.	Short-term
	Design and implement structured professional development programs, such as continuous medical education and mentorship initiatives to enhance job satisfaction.	Medium-term
	Establish channels for staff feedback, such as regular surveys or suggestion boxes, to identify	Short-term

	issues related to salary satisfaction and working conditions.	
Recommendations	Action to be taken	Timeline
Improving Skillset and Knowledge of Facility Staff:	Conduct a need-based assessment, before implementing a training program.	Short-term
	Develop and implement a robust training program for healthcare professionals, focusing on upgrading skills and promoting evidence-based practices. Collaborate with academic institutions, experts and international organizations, to incorporate evidence-based practices, emerging healthcare trends, and the latest research findings.	Medium-term
	Collaborate with local institutions to provide specialized training and capacity building initiatives	Medium-term
	Establish online platforms or communities of practice where healthcare professionals can share best practices, lessons learned, and success stories.	Short-term
	There need to exist clear standards for trainings for all facility staff through requirements on the number of hours and direction from management for staff to complete trainings.	Short-term
Improve strategic and managerial competencies of facility managers	Establish a competency framework for leaders that includes of strategic thinking, organizational goal setting, change management, human resource management, and community engagement as required competencies	Medium-term
	Implement a mix of different types of capacity building approaches for managers, including traditional curriculum-based training and peer-based exchanges	Short-term
	Use the task-setting component of performance evaluations to incentivize acquisition of strategic and managerial competencies through clearly defined KPIs for such exercises.	Short-term

Admin level Recommendations:

Recommendations	Action to be taken	Timeline
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Ensuring Transparent and Equitable Facility Funding:	Develop clear criteria and guidelines for facility funding allocation, ensuring transparency and accountability	Short-term
	Streamline administrative processes for fund disbursement to healthcare facilities	Short-term
	Develop a comprehensive monitoring and reporting system to track fund utilization and assess impact on service delivery outcomes	Medium-term
	Establish an auditing mechanism to regularly review financial management practices of healthcare facilities. Conduct regular audits to ensure compliance with these guidelines.	Short-term
Recommendations	Action to be taken	Timeline
Enhancing Supervision and Quality Assurance:	Conduct a financial needs assessment to determine the required resources for effective supervision and monitoring. Allocate adequate funds to support regular supervisory activities	Short-term
	Promote a supportive supervision approach that encourages regular feedback, mentoring, and coaching for facility supervisors to enhance supervisor motivation levels for effective supervision. Implement training programs for supervisors on effective feedback and mentoring techniques.	Short-term
Recommendations	Action to be taken	Timeline

Improving Data Collection and Utilization:	Provide training and resources to civil servants to enhance their capacity for data collection, analysis, and utilization.	Short-term
	Design and implement user-friendly data management tools, such as electronic health records systems, and establish centralized data repositories to streamline data storage and access	Short-term
Recommendations	Action to be taken	Timeline
Fostering collaboration in the work environment	Strengthen collaboration among subnational level institutions using the modality of participatory budgeting.	Short-term

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