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PRELIMINARY FINDINGS ON MANAGEMENT OF PRIMARY CARE FACILITIES IN ODISHA: Can better management work in Odisha?

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Table of Contents

1 Summary of Findings

- Few facility heads have much training in management. While 63% of facility heads reported having any managerial training, most training was brief, lasting a week or less.

- Facilities with higher management scores seem to see more patients and offer more services.

- Facilities with trained managers seem to have more autonomy on average.

- There are limitations in facility manager autonomy, which inhibits the potential value of good management skills.

- We were not able to assess the customer satisfaction components of these facilities due to survey data linkage limitations.

2 Background

Measurement of primary health care facility management and the PRIME-Tool

While there is general agreement that primary health care (PHC) is a core foundational component of Universal Health Coverage (UHC), many countries struggle to improve their PHC systems to deliver quality care. One key area of focus in the past decade is whether better facility management of PHC services can drive improvements. On this question, there have been numerous papers, commentaries, toolkits, white papers, and even online courses developed by groups such as the World Health Organization (WHO), World Bank, and United States Agency for International Development (USAID).

Using the Control Knobs Framework, we focused our analyses on upstream mechanisms that can be utilized to positively impact the three performance goals of Health Status, Customer Satisfaction, and Risk Protection. One of these key strategies that we have recently been researching is the potential of improving facility-level management capacity. This is directly related to the control knobs of Organization and Behavior, with indirect relationships to Financing, Payment, and Regulation.

Work by Nicholas Bloom, Rafaella Sadun, John Van Fleenan and others have recently highlighted the importance of good managerial practices in many different organizations across the world through their World Management Survey (WMS) project. In a paper from 2014, their data from over 2000 hospitals – including hospitals in India – show better 30-day mortality from acute myocardial infarctions in the best managed hospitals. Importantly though, they found that this effect was most pronounced in countries such as the US and UK where managers of hospitals were independent, not politically appointed, and had higher degrees of autonomy to change practices within their hospital. They also showed that publicly managed hospitals scored significantly worse in management scores than private hospitals. While these data are all from hospitals, it begs the question of whether or not improving management in PHC facilities, and specifically public-sector PHC facilities, could ultimately lead to improved performance goals within PHC in Odisha.

Previously, our team had adapted the WMS into a PHC-specific tool, called the PRImary care facility Management Evaluation tool (PRIME-Tool) to address management of PHC facilities specifically. This work was initially developed in partnership with our

colleagues in Ghana and Uganda and has previously been published elsewhere.[1] Our prior work showed that higher management scores were associated with better supply stocks and higher patient-reported experiential outcomes in PHC facilities.

In developing the larger survey in Odisha, we worked to incorporate the PRIME-Tool into the survey, contextually adapting the questions for the local setting and health system from the prior versions of the tool. Based on our prior work, by including these questions into the survey, we aimed to determine:

- What is the baseline status of PHC facility management in Odisha, and how are those management scores associated with other meaningful indicators of performance?
- Can we reasonably make reform recommendations to the government of Odisha for the reform phase of our project that might include targeted improvement programs for PHC facility management?

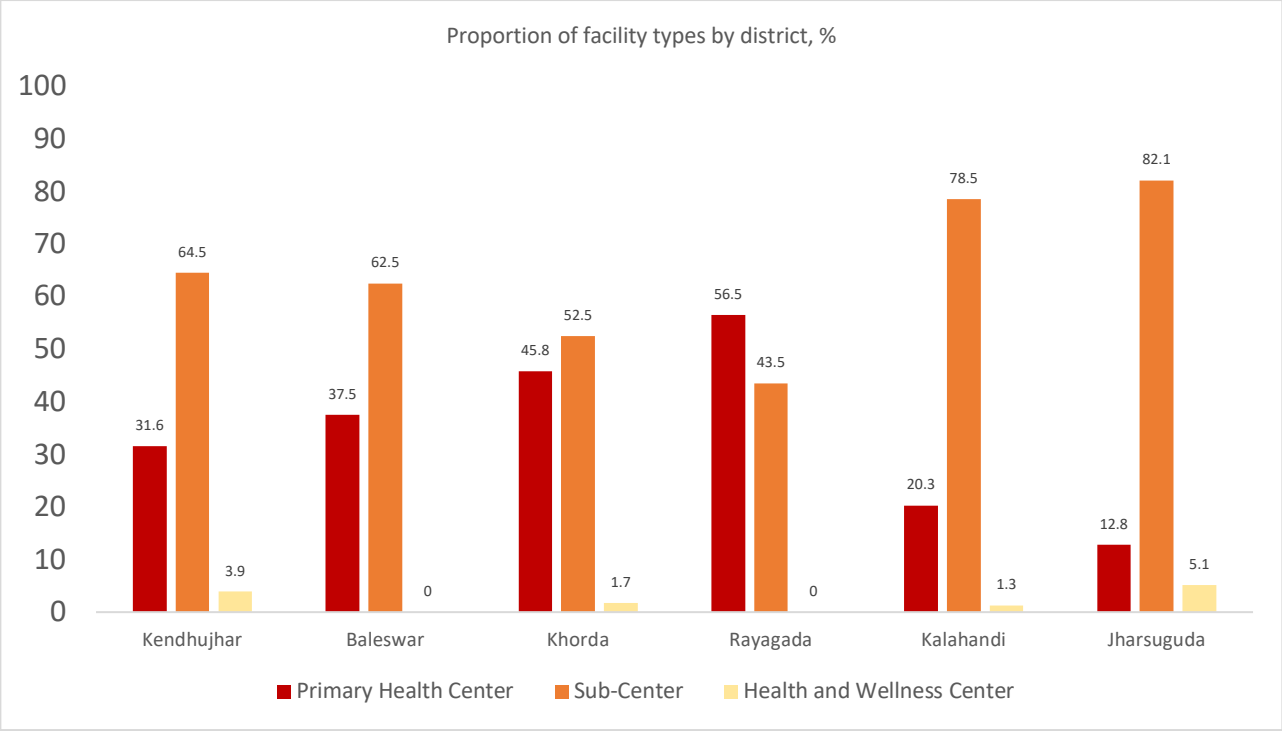
[1] For more detailed discussion of this prior work, including the full PRIME-Tool itself, please see: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0218662 and https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-019-4768-8

3 Results

3.1 Descriptive data regarding the facilities and management training

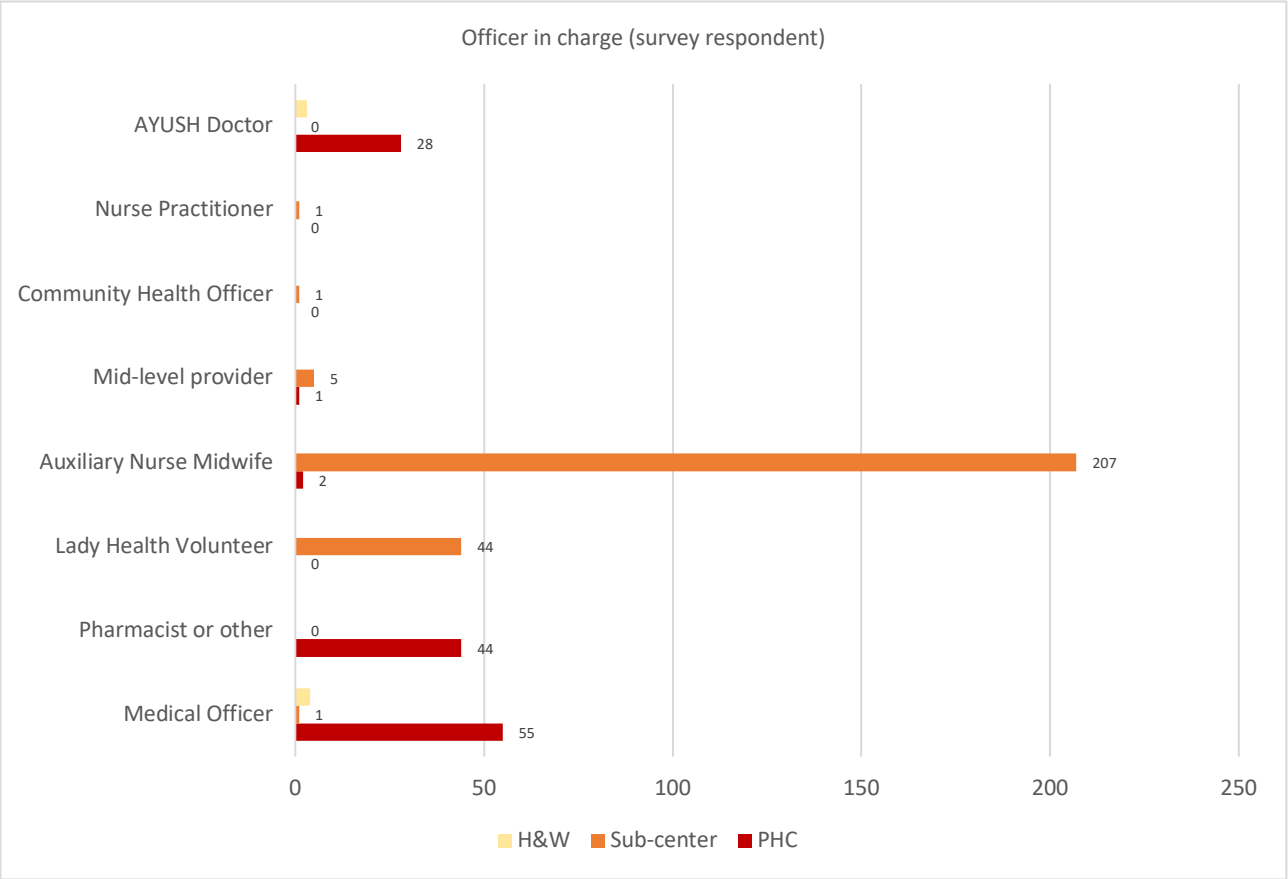
The survey data shows variation in the distribution of facility types by district, as demonstrated in Figure 1.

Figure 1. Proportion of facility types by district, Odisha



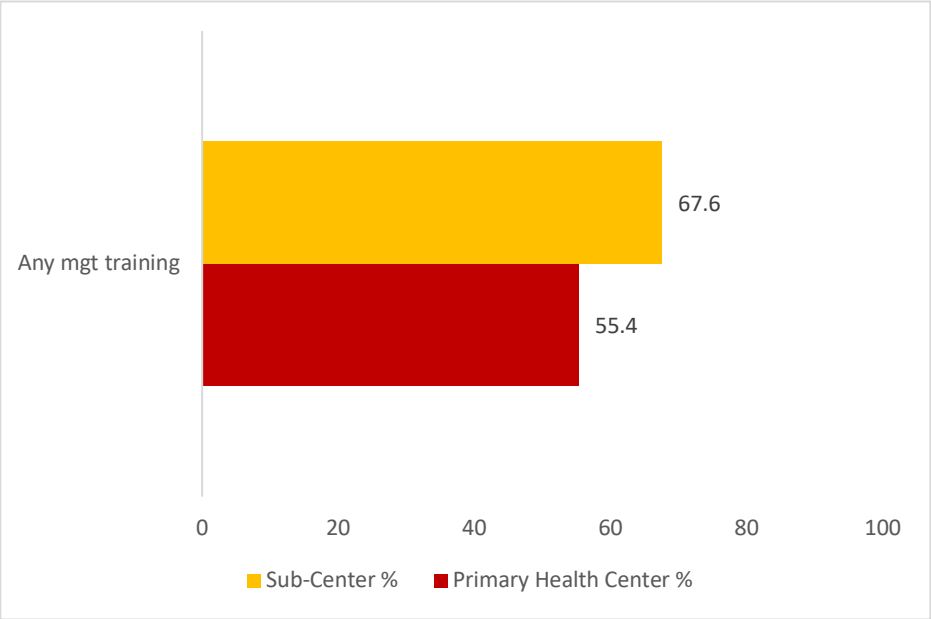
As expected, Sub-Centers were managed by ANMs and Lady Health Volunteers, while PHCs were run by Medical Officers, Pharmacists, or AYUSH doctors. This is illustrated in Figure 2.

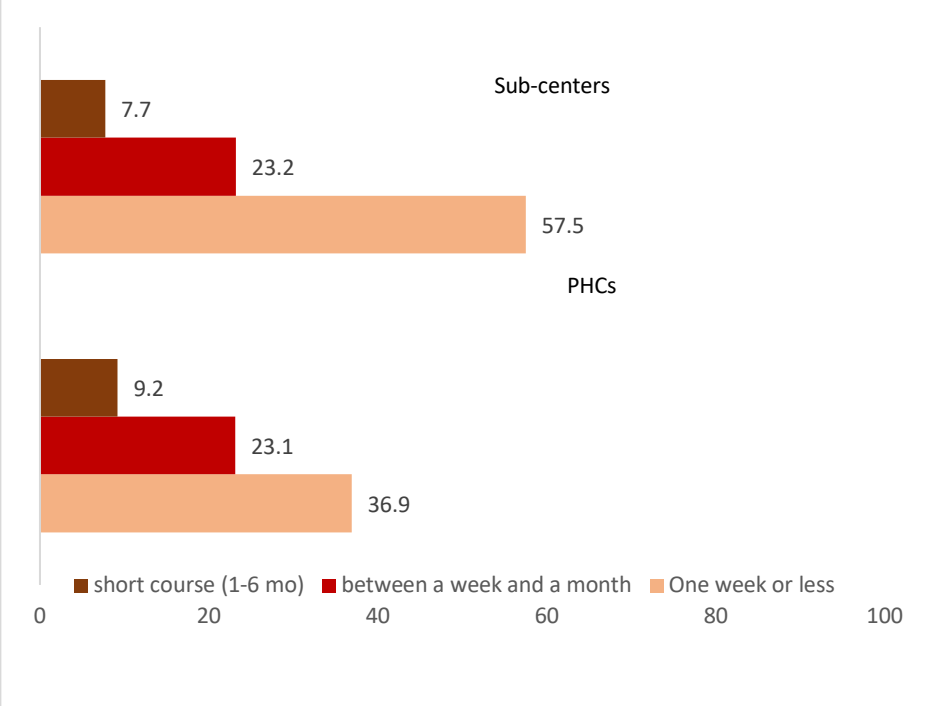
Figure 2. Occupation of the survey respondent (the facility head)



Regardless of the facility type, the officers in charge of the health facilities generally did not have high levels of managerial training. This is demonstrated in the two parts of Figure 3 below. Interestingly, on the top of Figure 3, those at the sub-centers reported higher levels of any training. On the bottom of Figure 3, among those who reported some level of managerial training, the actual amount was minimal. Most had a week or less of training, and less than 10% reported taking a short course. While it was not within the scope of this survey to assess the quality or contents of these trainings, it is relevant to note that such short-course trainings are unlikely to provide much experiential component, and thus rely on more academic didactic pedagogies. Whether or not such short trainings, with predominantly didactic components can truly impact real-world management remains unclear.

Figure 3. Amount of managerial training reported by facility heads





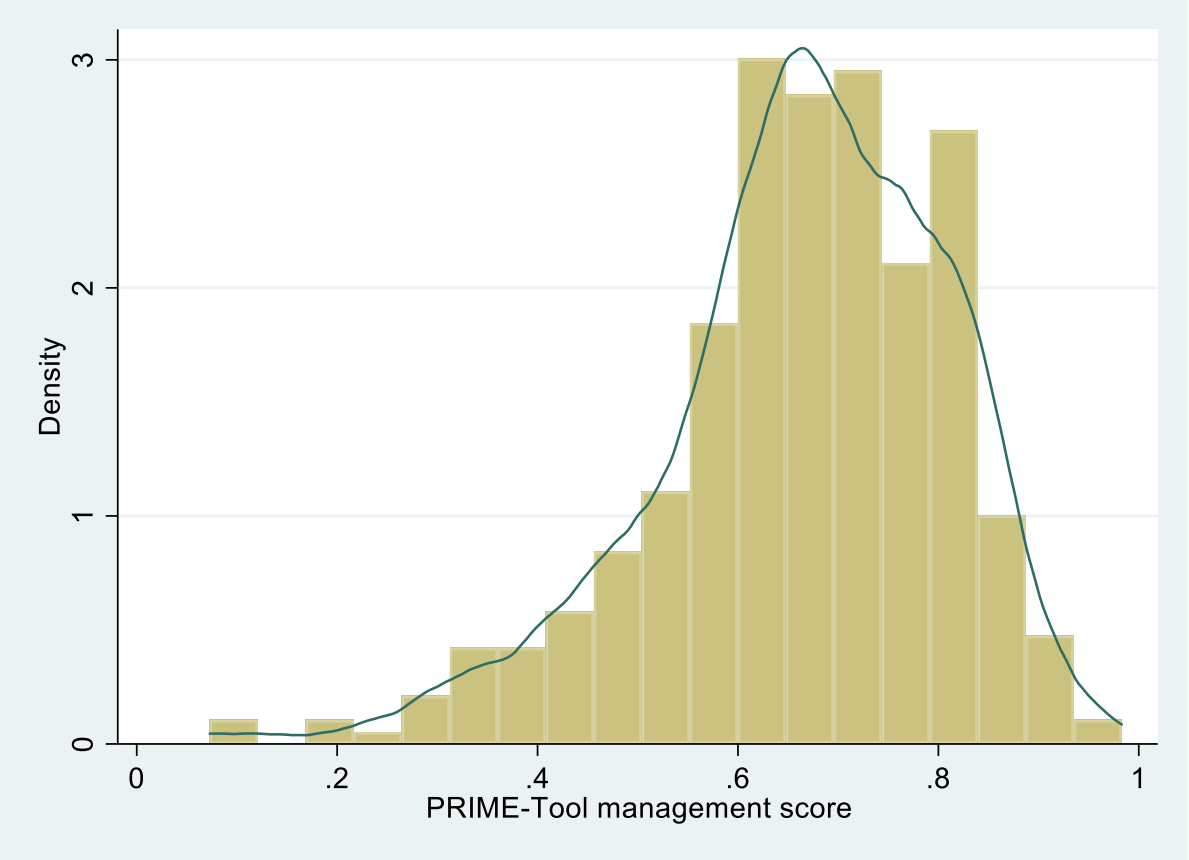
3.2 Management scores and related process indicators

Now, in the subsequent data, we will describe the management scores at each facilities, as determined by the PRIME-Tool scoring from the survey questions.

In Figure 4 below, we present the distribution of scores across the surveyed facilities. PRIME-Tools scales from 0-1, with 0 being the lowest and 1 being the highest. The mean score on the PRIME-Tool was 0.71, which is very similar to what was reported in our

prior work, in a nationally representative sample in Ghana (0.76), although Ghana included a wider variety of facility types.

Figure 4. Distribution of PRIME-Tool (management) scores across all facilities



In Figure 5, we see the different management scores for each domain, and further broken down by how much management training each facility head reported. Overall, we see that more management training is not associated with higher management scores. Overall, the amount of management training appears to have little to no relationship with management scores.

Figure 5. PRIME-Tool domain score by amount of managerial training reported.

Next, we divided the facilities by tertile of management score to see how they looked across different measures of efficiency. These are presented below in Figure 6.
In the upper left panel of Figure 6, it appears PHCs in the highest management tertile reported seeing more average patients per day than in other tertiles, but the impact is not large. There does not seem to be any trend at all within the sub-center data. While the exact reasons for this finding are not clear, this is consistent with the global management literature showing that larger firms (facilities) tend to have better management scores.

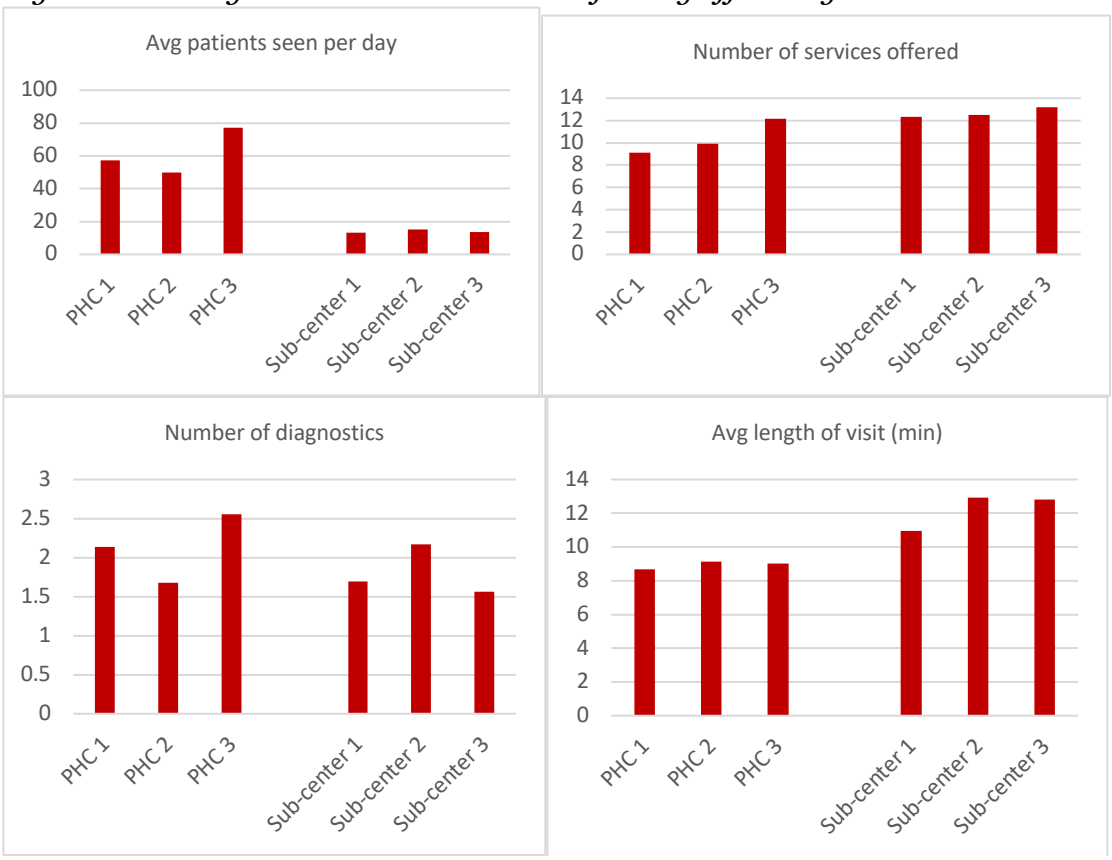
In the upper right panel, we see a trend with higher management tertiles offering more services than those in the lower tertile. Interestingly the sub-centers seem to report higher levels of services offered than the PHCs. While the exact reasons for this are not entirely clear, this phenomenon may represent reporting bias or survey respondents who do not perfectly understand the questions and/or the definition of how to count particular "services" that were being discussed.

In the bottom right panel, we see again that PHCs in the highest tertile seem to have the most diagnostics available, but not a strong trend.

Finally, in the bottom right panel, the reported average length of visit is similar across the tertiles. Notably, the reported duration of visits here (8-12 minutes) is much longer than studies by Jishnu Das and others that show much shorter visits in Indian PHC facilities, many on the order of 1-2 mins or less. Thus, regardless of the lack of differences across facilities and tertiles, we caution that this data may not truly be

accurate, and that these facility managers may be significantly overstating the amount of time spent with patients.

Figure 6. Management score tertiles and facility efficiency



3.3 Autonomy and its relationship to management scores

Next, we will discuss our assessment of the autonomy of facility managers, and how autonomy relates to the management scores and process indicators described above. To understand the quality of management, it is important to examine the details of what facility managers are empowered to decide on. If our assumptions are that better facility management could improve health status or customer satisfaction, that would require an environment in which the facility managers can make decisions that are tailored to the circumstances of their own facility, or, in other words, an environment in which the managers have autonomy and control over their own management decisions.

In our survey, we assessed autonomy so as to better understand the environment in which Odisha PHC facility managers are working. From the data, it seems that many facility managers have limited autonomy to make even the most basic decisions. Table 1 shows that some facilities don't seem to have the authority to paint a wall or fix a refrigerator in the facility.

Table 1. Reported decision-making authorities "According to you, which of these groups has the most say in…?"

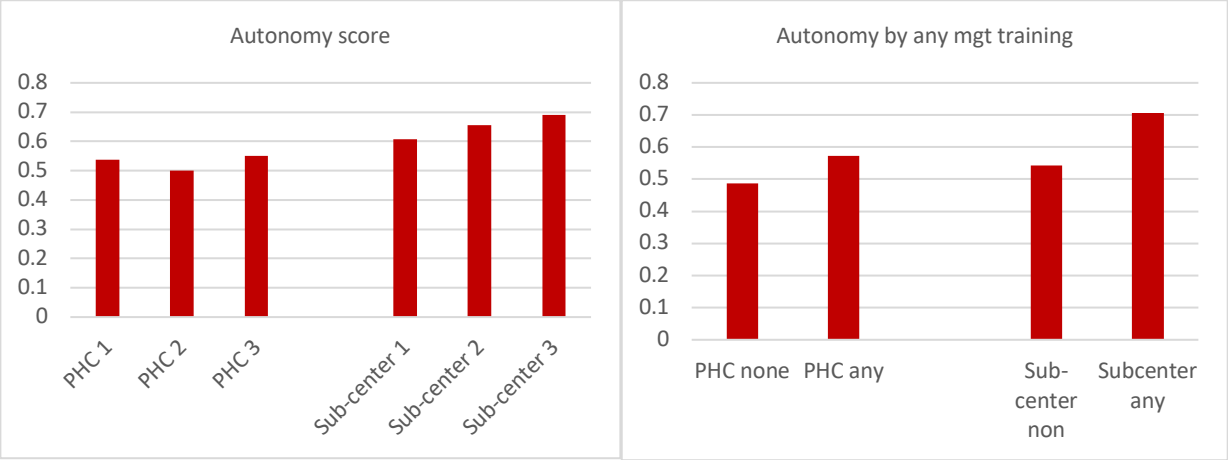
	Dept of Health	Facility in charge	Doctor/facility staff	ANM	Community	Other	No response
Ordering drugs	0.10	0.22	0.08	0.53	0.01	0.05	0.01
Recruitment of clinical staff/health workers	0.52	0.23	0.04	0.14	0.03	0.01	0.03
Deciding which staff get promoted	0.58	0.23	0.03	0.11	0.01	0.02	0.02
Taking disciplinary action against clinical staff/health workers	0.39	0.36	0.03	0.15	0.01	0.02	0.04
Deciding to paint a wall or fix the refrigerator in the facility	0.15	0.24	0.06	0.44	0.03	0.08	0.01
Approving clinical staff/health worker absence	0.24	0.43	0.04	0.22	0.02	0.04	0.01
Setting service delivery priorities for the clinical staff/health facility	0.30	0.35	0.06	0.24	0.01	0.02	0.03
Spend internally generated funds at the facility	0.15	0.24	0.05	0.39	0.06	0.08	0.03

From these questions about decision-making and autonomy, we calculated an "autonomy score" which looked at the number of decisions where the deciding authority was either the officer in charge of the facility or resided within the facility in some way.

(i.e. decisions not made by the Dept of Health, community, or other body). These data are presented below in Figure 7.

Generally speaking, we do not see much difference in autonomy by management tertile. However, we do see that facilities where the officer in charge has any management training seem to have more autonomy. While not verifiable, one potential way to interpret this would be that there are certain decisions that *could* be made by facility managers but generally are handled by an outside entity. In the data presented in Table 1, these might be decisions where *officially* the responsibility lies with an outside agency, but sometimes, in real life, there may be flexibility. For example, if the facility manager feels strongly or empowered to champion their position, these decisions might go their way, but if not, another (outside) authority will handle it regardless. Thus, we could hypothesize that management training may boost a facility manager's confidence and insights, enabling them to make more decisions on these "gray" areas where they *can* influence the decision, but do not necessarily have to.

Figure 7. Autonomy by PRIME-Tool tertile and amount of management training



3.4 Provider absenteeism and retention

In this next section, we will present data regarding facility absenteeism rates, control mechanisms, and how those data relate to management scores and other associated indicators, as described above.

Simply put, in order to provide high-quality primary care services, providers must be present in the facility. Many doctors in India are assigned to work at public clinics, but spend much of their time in more lucrative private practice. Various incentives have been developed, and policy and improvement projects have been undertaken; yet, there has been little progress in many areas throughout India. This has been documented repeatedly in many prior studies.

Having said that, within our survey, we wanted to assess the possibility of whether or not improved facility management could help to address these absenteeism challenges. In order to improve the problem of absenteeism, there would first need to be

accountability mechanisms. Having no consequences for absenteeism and inadequate incentives for working at assigned facilities creates a difficult environment that even improved managerial capacity may not be able to address. Management improvement in productivity depends on an engaged and present workforce. Thus, we investigated the rates of absenteeism and associated staff in our survey.

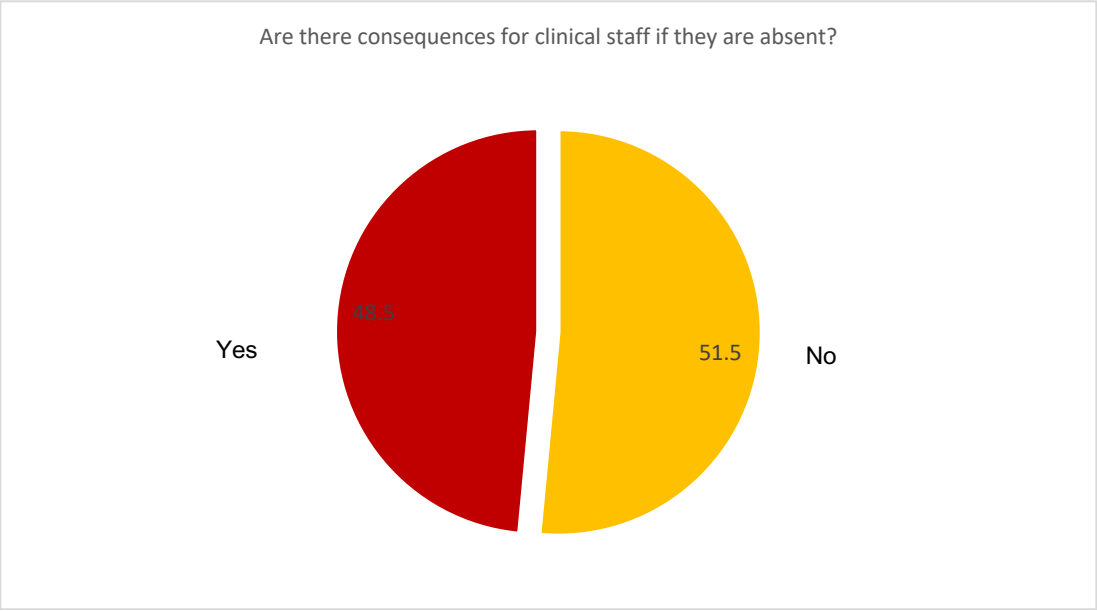
Table 2 shows that officers in charge of these facilities overwhelmingly agree that absenteeism is a big problem.

Table 2. Absenteeism among ANMs or doctors is a big problem at this facility

	ANMs	Doctors
Strongly agree	63.1%	49.7%
Agree	15.9%	14.4%
Disagree	11.0%	8.8%
Strongly disagree	2.0%	2.6%
Not Applicable	7.1%	24.5%

Clearly, both absenteeism and retention of ANMs and doctors are a problem at these facilities. Part of the problem in recruiting, retaining, and keeping clinical staff invested in their work seems to be that there are no consequences for absenteeism among staff at many facilities, as shown in Figure 8. Without consequences for absenteeism, the conditions are unlikely to improve.

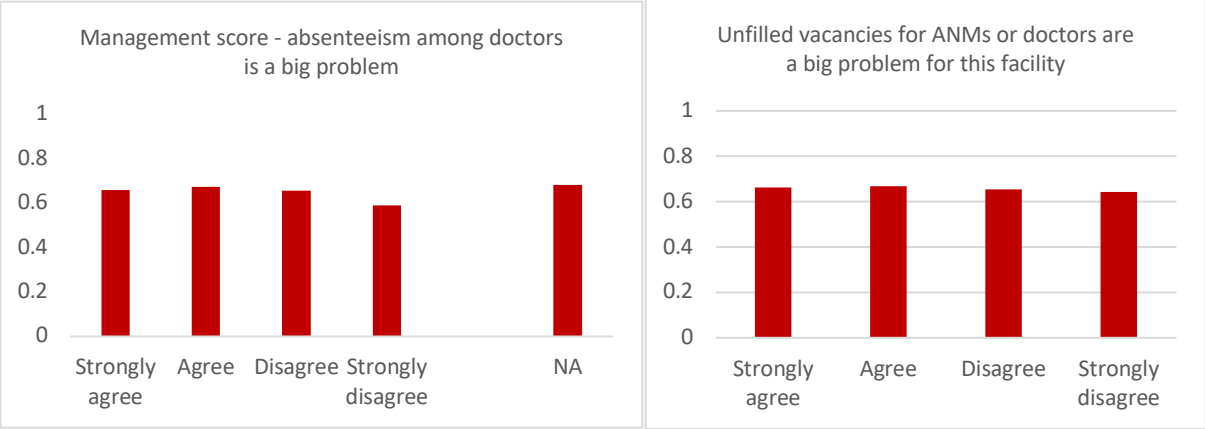
Figure 8. Consequences for clinical staff absenteeism



With that background, the question then is: can better management affect absenteeism rates in Odisha PHC facilities? Unfortunately, it would seem that is unlikely in the current state of facility management. In Figure 9 below, we present data comparing the management scores of facilities reporting varying degrees of absenteeism and unfilled vacancies. These data show that higher management scores do not seem to result in more or less challenges (by self-report of the manager) in absenteeism or unfilled vacancies.

We suspect that most likely, this may be related to issues of autonomy. Since, as described above, facility managers frequently have very little ability to implement their own accountability measures for absenteeism, it is unlikely to expect that even the best managers would be able to impact absenteeism or unfilled vacancies. Moreover, managers rarely have control of hiring (recruitment) of new providers, who must be posted by the government to their facility. For these reasons, it's not surprising that we do not see any improvement in absenteeism reporting in even the higher-scoring management facilities.

Figure 9. Absenteeism and unfilled vacancy problems in Odisha



4 Conclusions

In summarizing our findings, we conclude that:

- Better managed facilities may be able to treat more patients and offer more services.
    - Further research needed to determine if this would impact customer satisfaction since we were unable to link experiential data to these management data.
- Odisha has low levels of managerial training in their facility supervisors and might benefit from higher levels of managerial training in their workforce.
- However, in order for better management to be valuable, managers would need both more autonomy and a more reliable, present workforce.