

Process Evaluation of the Internal Performance Agreement for Secondary Care Services in Meghalaya's Public Health System: Lesson from Early Implementation

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Introduction:

Despite allocating about 3.7 percent of its gross domestic product (GDP) to healthcare, India's health outcomes lag behind other South Asian and African nations (Maurya & Asher, 2021). There are several reasons behind India's persistent poor health outcomes despite considerable healthcare spending. Economically, these reasons are linked to “allocative efficiency and technical efficiency” (Maurya & Asher, 2021:95). Allocative efficiency refers to the allocation of healthcare funds in a way that meets the health needs of the population effectively, thereby optimizing health outcomes. Technical efficiency, on the other hand, involves producing the maximum output at the lowest possible cost (Maurya & Asher, 2021). An effective healthcare financing system should prevent individuals from falling into poverty due to catastrophic healthcare costs and help reduce inequality (Maurya & Asher, 2021).

A systematic review by Prinjal et al. (2017) found that, although the utilization of healthcare services has increased, out-of-pocket expenditures (OOPE) remain high, even after the implementation of health insurance schemes. In other words, Publicly Funded Health Insurance Schemes (PFHIS) have not succeeded in providing financial protection to the intended beneficiaries (Prinjal et al., 2017). Therefore, it is argued that PFHIS alone is insufficient to achieve Universal Health Coverage (UHC). Instead, it is crucial to focus on aligning health financing schemes to strengthen the public health system (Prinjal et al., 2017).

A notable example is the introduction of the results-based financing (RBF) mechanism, which has garnered significant interest from politicians and policymakers worldwide. In India, RBF has gained the spotlight in the budget speech of 2023-24 presented by the Honourable Union finance minister, Nirmala Sitharaman. She stated, “To better allocate scarce resources for competing development needs, the financing of select schemes will be changed on a pilot basis from *input-based* to *results-based*” (Government of India, 2023). The RBF initiative aims to enhance health outcomes, strengthen the health system, and advance universal health coverage (UHC) (Ma-Nitu et al., 2018).

RBF has been widely adopted in many low- and middle-income countries (LMICs), particularly in Africa, where it serves as a strategic measure to improve health outcomes, strengthen health systems, and promote universal health coverage (UHC) (Ma-Nitu et al., 2018). In Meghalaya, the World Bank funded-RBF initiative, known as the internal performance agreement (IPA), was piloted between January and June 2023 in two districts — West Garo Hills and Ri Bhoi districts. Subsequently, in October 2023, IPA was expanded across the state and implemented in selected entities at different health institutions and facilities levels.

As performance-based financing (PBF) and RBF programs evolve, it is crucial to evaluate and refine them through action research or impact evaluation studies. This study adopts an action research approach, a method focused on improving practice through action, evaluation, and reflective analysis, leading to modifications based on collected evidence (Koshy et al., 2010). For instance, a mid-term review of PBF in Nigeria identified implementation challenges, resulting in modifications to the RBF/PBF design (Ma-Nitu et al., 2018). Hence, this action research aims to identify and implement feasible strategies to enhance the performance of district hospitals. The research objectives are as follows:

- i. To evaluate the performance of district hospitals where RBF schemes are being implemented in Meghalaya.
- ii. To identify strategies for each hospital to strengthen its services.

Methodology:

In Meghalaya, district hospitals are categorized into three types- Maternal and Child Health (MCH) hospital, District Hospital with MCH services, and District Hospital without MCH services. The Internal Performance Agreement (IPA) implementation included all district hospitals in the state, except for the MCH hospital in West Jaintia Hills, which did not meet the requirement of having a land document. The names of the district hospitals and the corresponding bed capacities are detailed in Table 1 below.

Table 1 Hospitals where RBF is implemented

Sl. No.	Hospital Names	Number of beds
1.	Ganesh Das Hospital (MCH hospital)	400
2.	Tura Maternal and Child Health (MCH) Hospital	50
3.	Mawkyrwat Civil Hospital with MCH services	100
4.	Williamnagar Civil Hospital with MCH services	100
5.	Khliehriat Civil Hospital with MCH services	100
6.	Nongstoin Civil Hospital with MCH services	110
7.	Nongpoh Civil Hospital with MCH services	100
8.	Tirot Singh Memorial Civil Hospital Mairang	100
9.	Ampati Civil Hospital with MCH services	100
10.	Baghmara Civil Hospital with MCH services	100
11.	Tura Civil Hospital without MCH services	200
12.	Jowai Civil Hospital without MCH services	100
13.	Shillong Civil Hospital without MCH services	600
14.	Maternal and Child Health Hospital, Jowai	100
15.	Reid Provincial Chest Hospital	170
16.	Tura TB Hospital	30
17.	MIMHANS	150

The performance of all three types of district hospitals against each indicator was extracted from the District Health Information Software Version 2. The data was then entered in the Microsoft Word Excel sheet. Accordingly, a simple statistical analysis was conducted using the Microsoft Word Excel Sheet.

Findings:

This section outlines the performance of district hospitals during the first (October-December 2023) and second (January-March 2024) IPA/RBF implementation cycles. The analysis includes approximately 30 key indicators derived from the frameworks of all three types of district hospitals. It is important to note that not all indicators from the IPA frameworks for District Hospitals are included in this analysis. Here, an indicator is defined as “a measurement that reflects a given situation,” and these indicators were measured in absolute numbers, rates, or proportions. The findings from the analysis are presented as follows.

This section outlines the performance of District Hospitals during the first (October-December 2023) and second (January-March 2024) IPA/RBF implementation cycles. The analysis includes approximately 30 key indicators derived from the frameworks of all three types of District Hospitals. It is important to note that not all indicators incorporated in the IPA frameworks for District Hospitals are included in this preliminary analysis. Here, an indicator is defined as “a measurement that reflects a given situation”¹ and these indicators were measured in absolute number, rates, or proportions. Findings from the analysis are presented as follows.²

Achievement of indicators during the first and second implementation cycles:

The performance of district hospitals is determined by multiple factors, such as the availability and strength of human resources for health, the number of beds available in the hospital, the types of services they provide, etc. Analysis of these indicators will help in monitoring improvement in program performance.

Monitoring indicators:

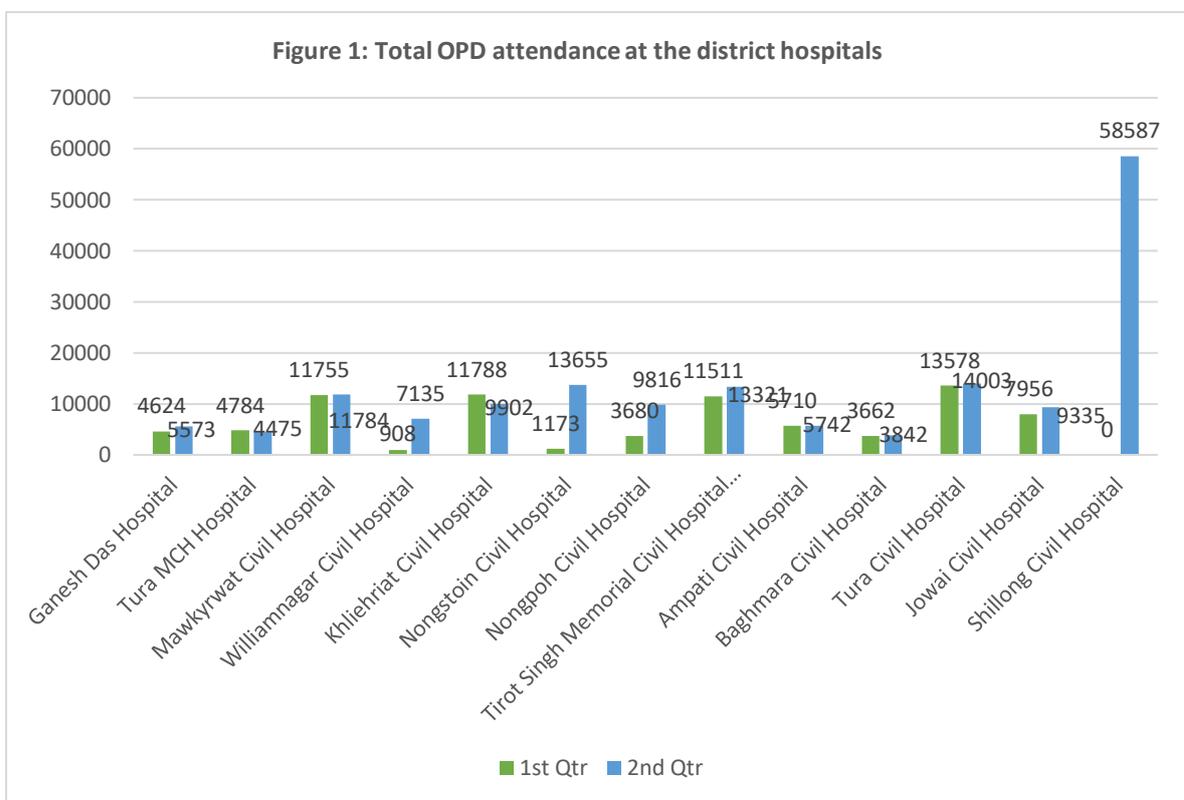
(i) Total OPD attendance:

Figure 1 below illustrates the total number of OPD attendances during the first and second cycles of IPA implementation. During the first cycle, Tura Civil Hospital had the highest OPD attendance with 13,578 visits. In the second cycle, the highest OPD attendance was reported at Shillong Civil Hospital with 58,587 visits, followed by Tura Civil Hospital with 14,003 visits. Overall, there was an increase in OPD attendance in the second cycle across all district hospitals, except for Tura MCH Hospital and Khliehriat Civil Hospital, which experienced decreases of 6.91 percent and 19.05 percent, respectively. Notably, Williamnagar and Nongstoin Civil Hospitals saw significant increases in OPD attendance during the second cycle, with increases of 87.27 percent and 91.41 percent, respectively.

¹ World Health Organization. (n.d). Health Indicators: Conceptual and Operational Considerations. Available at https://www3.paho.org/hq/index.php?option=com_docman&view=download&alias=45249-health-indicators-conceptual-operational-considerations-249&category_slug=health-analysis-metrics-evidence-9907&Itemid=270&lang=pt#:~:text=A%20health%20indicator%2C%20then%2C%20is,performance%20of%20a%20health%20system, accessed on 21.05. 2024.

² Performance of Shillong Civil Hospital was not captured during the first cycle of IPA implementation.

Figure 1 below shows that the total number of OPD attendances during the first cycle of IPA implementation and was highest in Tura Civil Hospital (13578). In the second cycle the highest OPD attendance was reported in Shillong Civil Hospital (58587) followed by Tural Civil Hospital (14003). Overall, there was an increase in OPD attendance in the second cycle across all district hospitals, except in Tura MCH hospital and Khliehriat Civil Hospital, with a 6.91 and 19.05 percent decrease, respectively. Notably, Williamnagar and Nongstoin Civil Hospitals saw significant increases in OPD attendance during the second cycle, with increases of 87.27 percent and 91.41 percent, respectively.



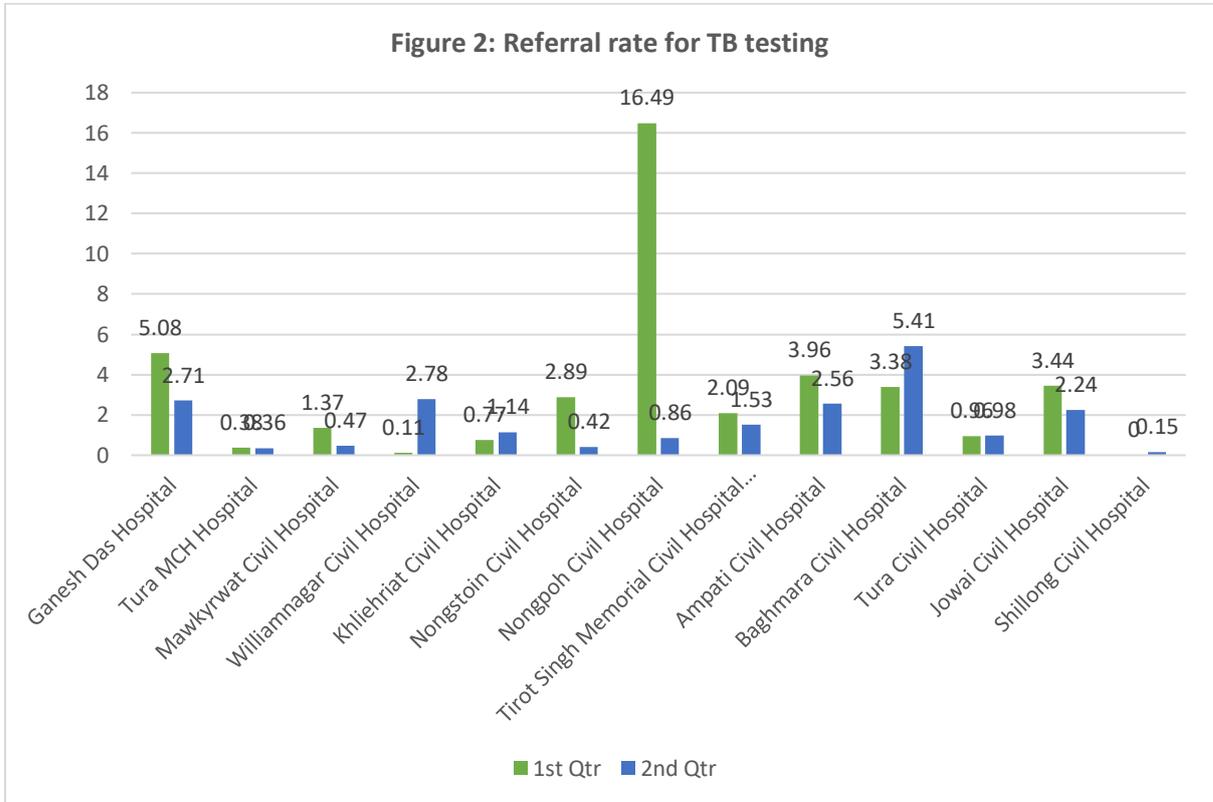
Key research questions for qualitative study:

- What factors determine the increase in OPD attendance during the second cycle of IPA implementation?

(ii) Referral rate for TB screening:

The established framework of District Hospitals mandates that at least 3 percent of the total Out-Patient-Department (OPD) attendance should be referred for TB screening. However, findings from the present analysis indicate that only five of the 13 District

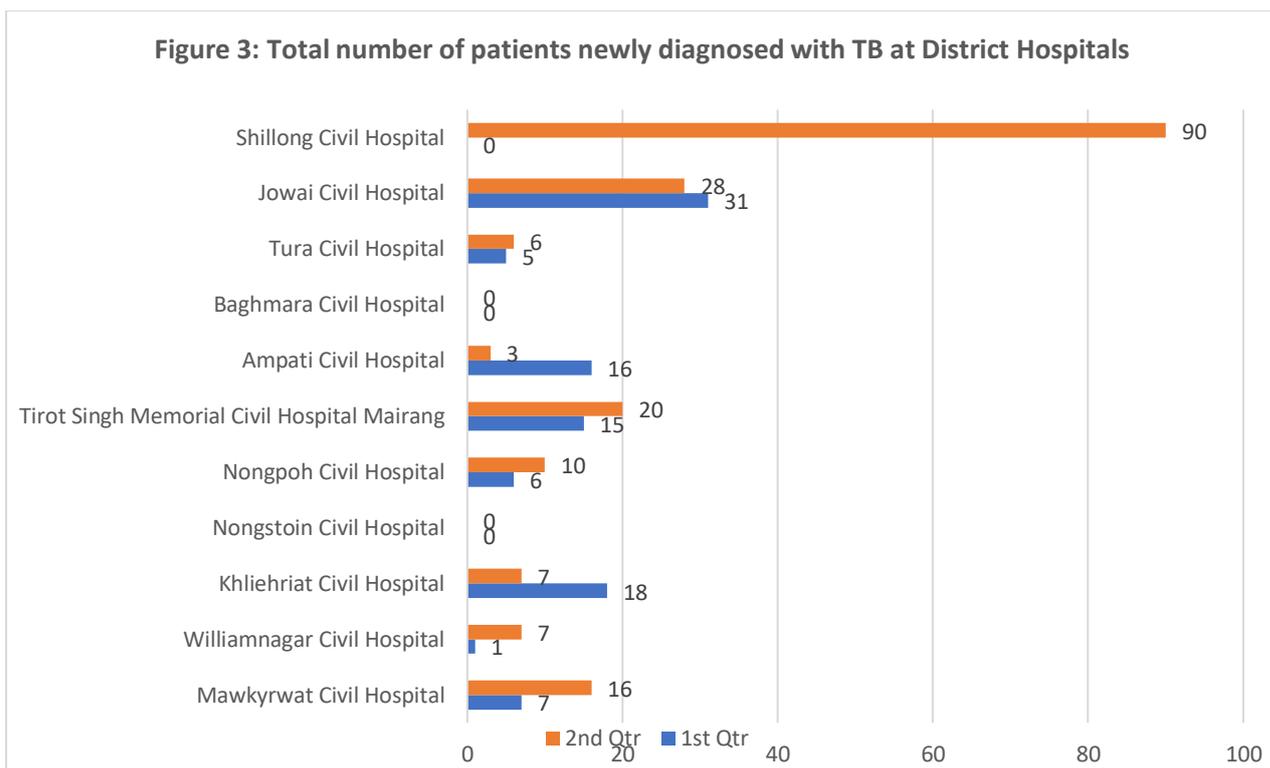
Hospitals reached the target during the first cycle of IPA implementation. In the second cycle, only Baghmara Civil Hospital crossed the 3 percent benchmark with a referral rate of 5.41 percent.



(iii) Number of patients diagnosed with Tuberculosis³:

Figure 2 above shows that during the second cycle of IPA implementation, Shillong Civil Hospital reported the second lowest referral rate (0.15) for TB screening after Khliehriat Civil Hospital (0.14). Nonetheless, correlating with Figure 3 below, Shillong Civil Hospital reported the highest number of patients newly diagnosed with TB (90) despite its lowest referral rate. Baghmara and Nongstoin Civil Hospital do not report any newly diagnosed TB cases during the first and second cycles of IPA implementation. Nongstoin Civil Hospital reported the referral rate to be 2.89 and 0.42 percent during the first and second cycles of IPA implementation, respectively. This is lower compared to Baghmara Civil Hospital, with 3.38 and 5.41 percent, respectively.

³ This indicator is not included in the IPA frameworks for the two Maternal and Child Health Hospitals instead, it is being replaced with MCH-related indicators.

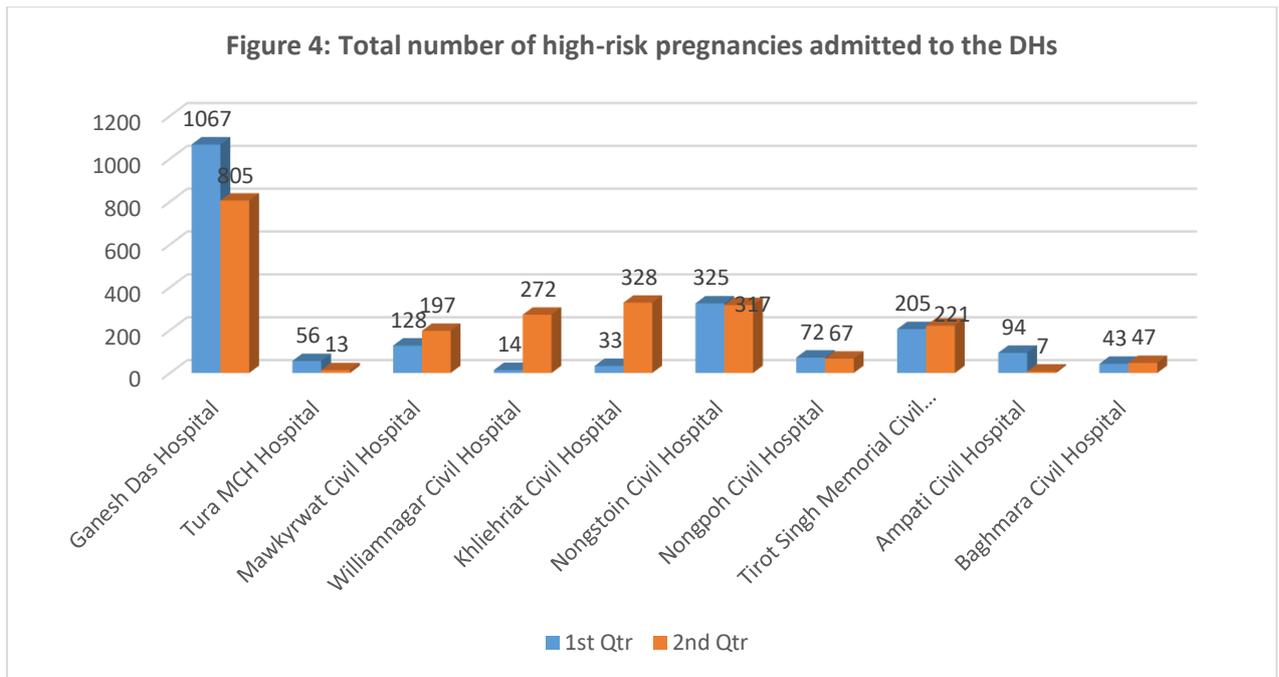


(iv) Indicators related to maternal health and family planning:

High risk pregnancies

Figure 4 below shows that during the first cycle of IPA implementation, the total number of high-risk pregnancies admitted was highest in Ganesh Das Hospital (1067), and the lowest was reported by Williamnagar Civil Hospital (14). The most interesting inference from Figure 4 is as the number of high-risk pregnant women admitted to Ganesh Das Hospital reduced in the second cycle of IPA implementation, Mawkyrwat, Khliehriat, and Tirot Singh Memorial Hospital reported an increase in the number of high-risk pregnancies admitted. It can be noted that Ganesh Das Hospital, located in East Khasi Hills, mainly caters to the Khasi and Jaintia Hills region due to its proximity to the hospital. This shows that strengthening MCH services in district hospitals located in the Khasi and Jaintia Hills region would significantly help reduce the patient load at Ganesh Das Hospital, which would help ensure the provisioning of quality health care services to women and, in turn, good treatment maternal health outcomes.

The other key finding that requires exploration through qualitative research is the reduction in the number of high-risk pregnancies admitted to Tura MCH, Nongpoh, and Ampati Civil Hospital during the second cycle of IPA implementation.



Institutional Deliveries

A similar trend is observed in Figure 5 regarding the total number of deliveries conducted at the District Hospitals. Mawkyrwat, Nongpoh, and Tirot Singh Civil Hospital reported an increase in the total number of deliveries conducted during the second cycle of IPA implementation, whereas, in Ganesh Das Hospital, the number reduced from 1946 in the first cycle to 1909 in the second cycle of IPA implementation.

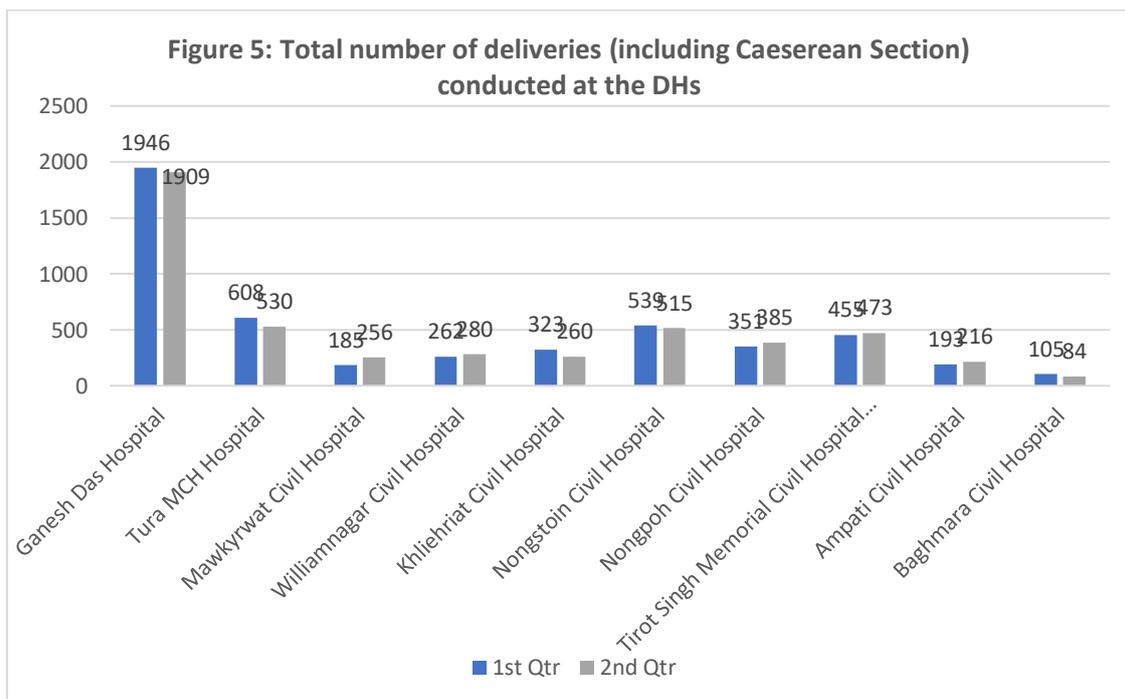
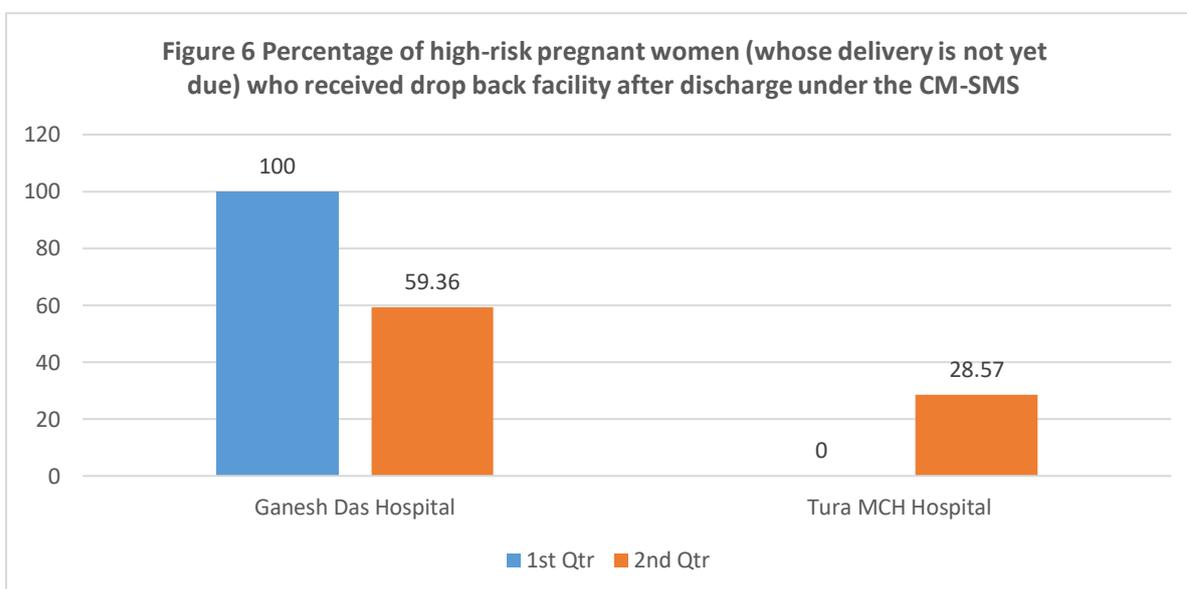
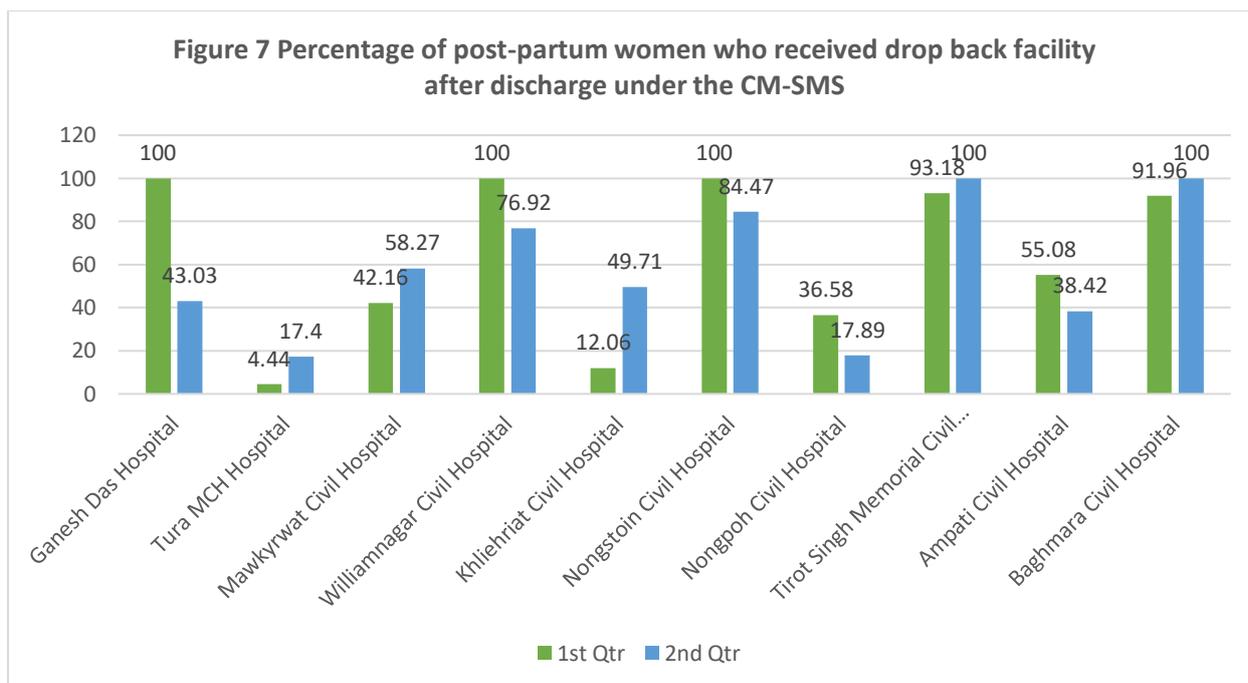


Figure 6 shows the performance of Ganesh Das Hospital and Tura MCH Hospital in providing free drop-back services to high-risk pregnant women under the Chief Minister Safe Motherhood Scheme (CM-SMS). In Ganesh Das Hospital, during the first cycle of IPA implementation, all high-risk pregnant women admitted and awaiting delivery received the free drop-back service. However, in the second cycle, this percentage dropped to 59.36 percent. The reasons for the decline can be explored further through qualitative study. In contrast, Tura MCH Hospital initially reported a zero percentage of high-risk pregnant women receiving the drop-back service after discharge. There was notable improvement in the second cycle, with 28.57 percent of high-risk pregnant women receiving the drop-back facility.



Regarding the percentage of post-partum women who received drop back facility after discharge under the CM-SMS, in the first quarter, three district hospitals, i.e., Ganesh Das, Williamnagar, and Nongstoin Civil Hospital, reported 100 percent of post-partum women received the service (Figure 7). However, during the second cycle of IPA implementation, these percentages decreased to 43.03 percent for Ganesh Das, 76.92 percent for Williamnagar, and 84.47 percent for Nongstoin Civil Hospital. Conversely, improvement in the percentage of postpartum women receiving drop-back services in the second cycle was observed in five district hospitals: Tura MCH, Mawkyrwat, Khliehriat, Tirot Singh, and Baghmara Civil Hospital.



Family Planning acceptance rate:

Given Meghalaya's higher total fertility rate (2.9 as per the National Family Health Survey-5-2020-21), this indicator is kept to ensure that quality family planning services are provided at public health facilities that will help increase its acceptance rate.

In the IPA framework, this indicator is defined as follows:

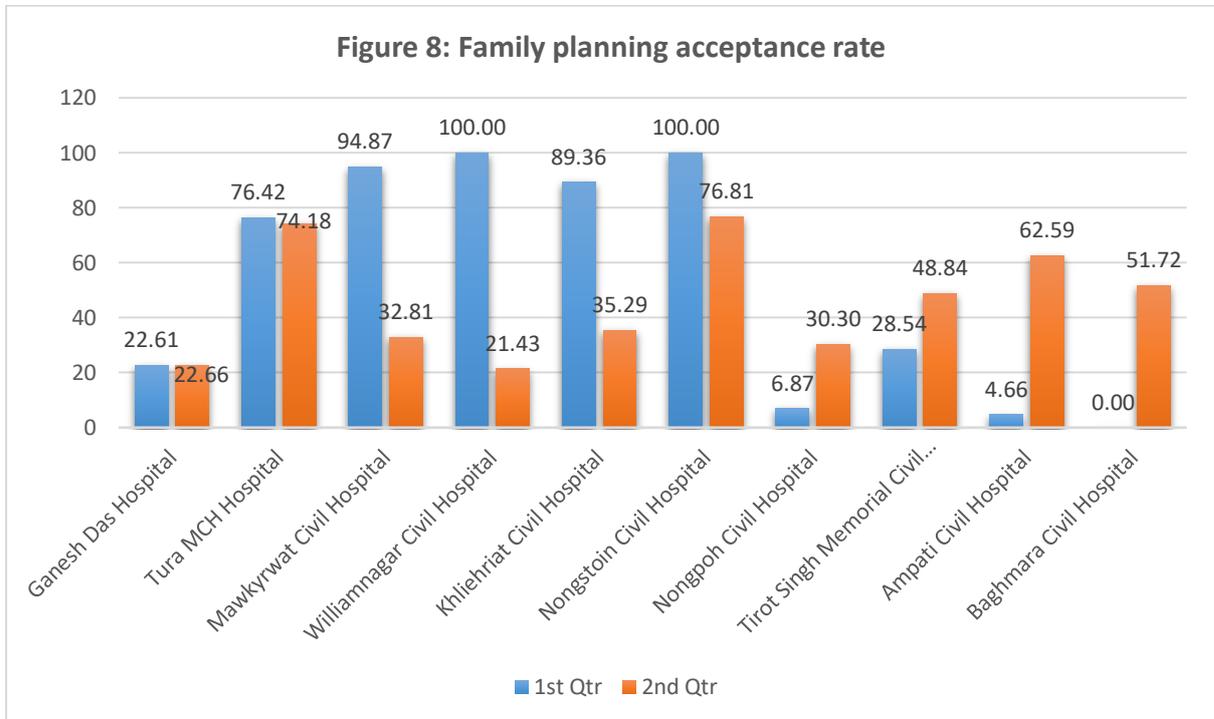
Numerator= Number of women who accepted any method of birth spacing and family planning during the quarter assessed.

Denominator= Total number of women counselled during the quarter assessed.

Family planning methods in the present indicator include Condoms (counted as the number of clients who accepted the method and not the number of condoms distributed), Oral Contraceptive Pills (OCPs), Injectable contraceptives, and Intra-Uterine Contraceptive Devices (IUCDs).

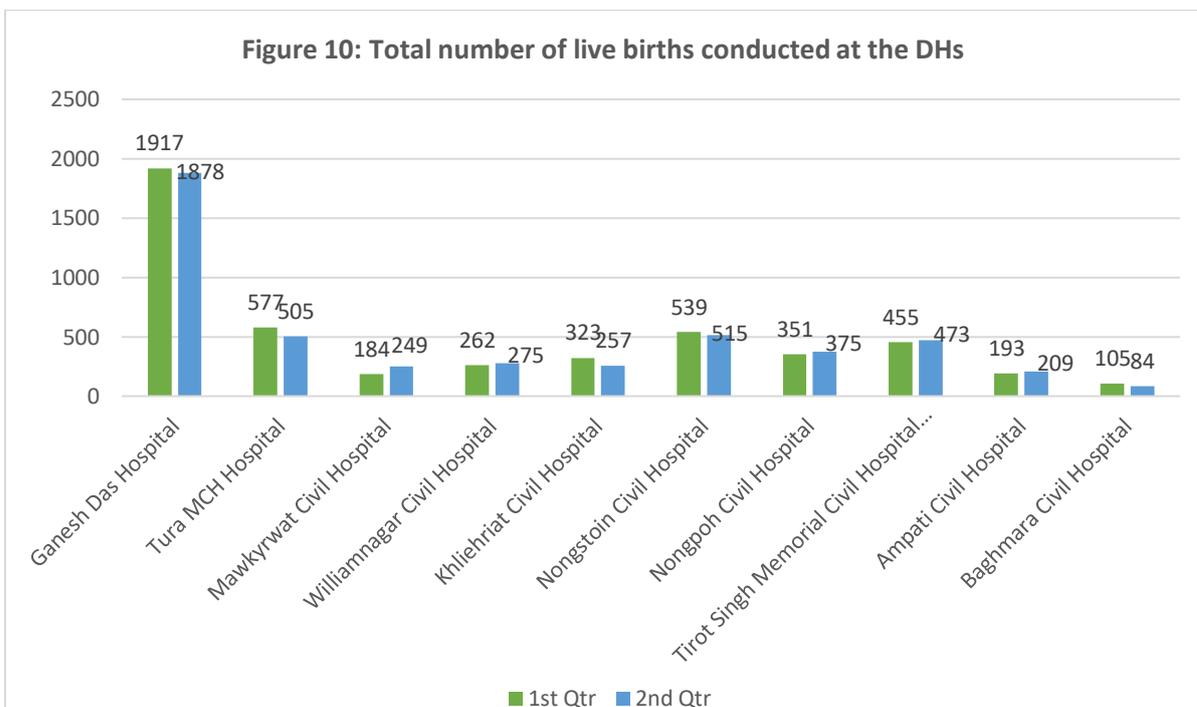
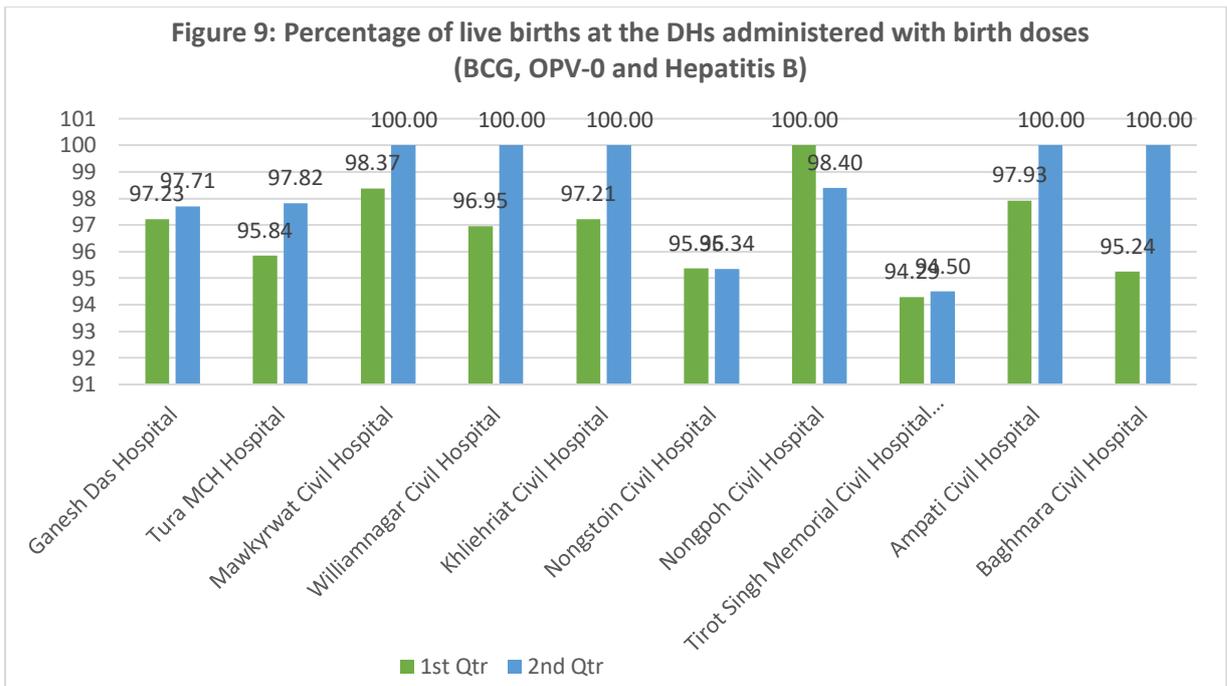
Findings from the first and second cycles of IPA implementation show that the acceptance rate is exceptionally high in almost all the district hospitals except Ganesh Das Hospital, even when the benchmark for this indicator is set at 25 percent for district hospitals to receive full points. It was observed that this information is well-maintained at Ganesh Das Hospital by the family planning counsellors in registers and charts, which made the measurement of this indicator easier. However, for other hospitals, there is a need for further

exploration on how this high acceptance rates were captured in other hospitals. Moreover, this finding indicates the need for streamlining the reporting mechanism and also further examination.



(v) Immunization

Figure 9 shows that there is an improvement in the percentage of newborns administered with birth doses across all district hospitals in the second cycle compared to the first cycle of IPA implementation, except in Nongpoh Civil Hospital, where the percentage has slightly reduced from 100 percent in the first implementation cycle to 98.40 percent in the second cycle. This needs exploration on how they achieved this and if we can attribute it to the IPA setup. Figure 10, shows the total number of live births conducted at the District Hospital during the first and second cycles of IPA implementation. The total number of live births conducted in Baghmara, Ganesh Das, Tura and Khliehriat Hospitals it has declined in the second quarter.



(vi) Bed occupancy rate at Special Newborn Care Units (SNCU), Paediatric Intensive Care Unit (PICU), and Nutrition Rehabilitation Centre (NRC)

Findings from the analysis show that out of the 10 district hospitals that provide maternal and child health services, three of them have Special Newborn Care Units (SNCUs) as on **March 2024**. These three hospitals include- Ganesh Das, Tura MCH, and Williamnagar Civil Hospital.

Table 1: Availability of SNCU

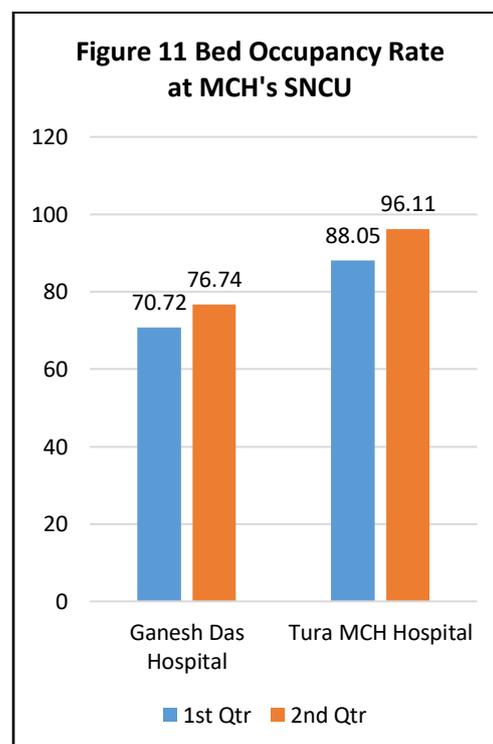
Sl. No.	Name of hospitals	1st Qtr	2nd Qtr
1	Ganesh Das Hospital	Yes	Yes
2	Tura MCH hospital	Yes	Yes
3	Mawkyrwat Civil Hospital	No	No
4	Williamnagar Civil Hospital	Yes	Yes
5	Khliehriat Civil Hospital	No	No
6	Nongstoin Civil Hospital	No	No
7	Nongpoh Civil Hospital	No	No
8	Tirot Singh Memorial Civil Hospital Mairang	No	No
9	Ampati Civil Hospital	No	No
10	Baghmara Civil Hospital	No	No

Bed Occupancy Rate at SNCU⁴

Ganesh Das and Tura MCH hospitals have 15 and 10 SNCU beds, per the information collected for the IPA online assessment tool during the first cycle.

However, the number of beds at Tura MCH hospitals appears to have reduced from 10 to 4 during the second cycle.

This is reflected in the reduction of the total number of available bed days from 706 in the first cycle to 346 during the second cycle, leading to the increase in the SNCU bed occupancy rate for Tura

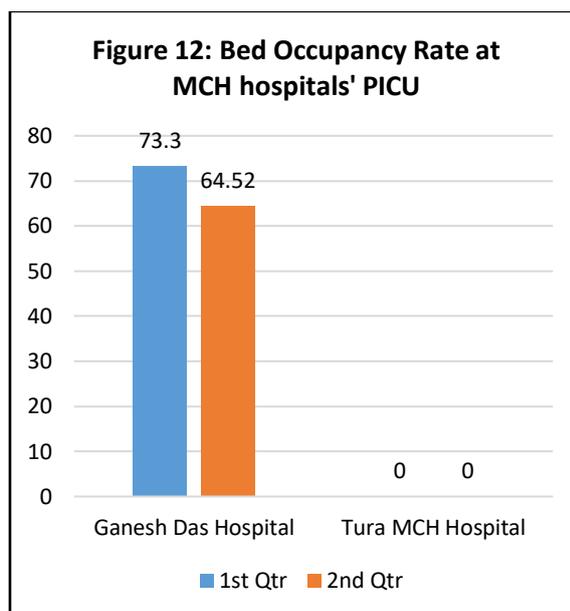


⁴ For DH with MCH, the bed occupancy rate at SNCU is currently not captured through the IPA framework.

Availability of PICU⁵:

As evident from Figure 12, the bed occupancy rate at Ganesh Das MCH hospital has reduced from 73.3 in first cycle to 64.52 percent in the second cycle of IPA implementation.

The Paediatric Intensive Care Unit (PICU) is available at Tura MCH hospital, but not yet functional. The reasons for the same can be explored through qualitative study.



Availability of NRC at DHs

From Table 2, it can be observed that six of the 10 hospitals that provide MCH services have NRC. Mawkyrwat, Khliehriat, Tirot Singh Memorial, and Ampati Civil Hospital are yet to set up the NRC. There are many challenges in setting up the infrastructure for NRC. For instance, one of them is the space constraint as reported in Tirot Singh Memorial Hospital. A detailed understanding of these challenges may be explored through qualitative inquiry.

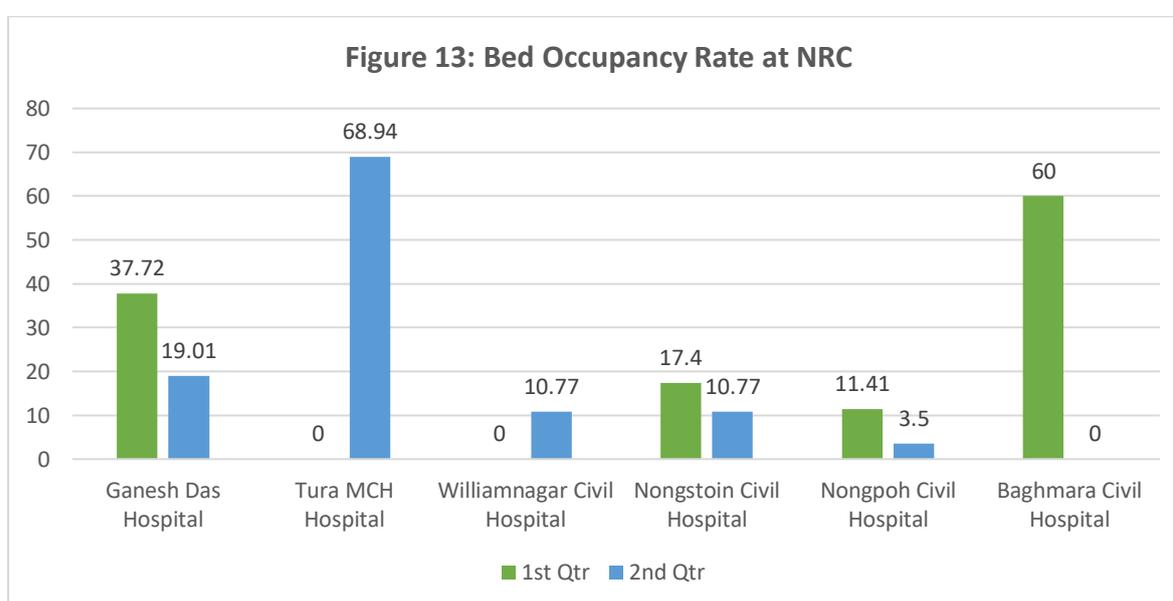
Table 2: Availability of NRC at DHs

Sl. No.	Name of hospitals	First cycle	Second cycle
1.	Ganesh Das Hospital	Yes	Yes
2.	Tura MCH Hospital	Yes	Yes
3.	Mawkyrwat Civil Hospital	No	No
4.	Williamnagar Civil Hospital	No	Yes
5.	Khliehriat Civil Hospital	No	No
6.	Nongstoin Civil Hospital	Yes	Yes
7.	Nongpoh Civil Hospital	Yes	Yes
8.	Tirot Singh Memorial Civil Hospital Mairang	No	No
9.	Ampati Civil Hospital	No	No

⁵ The availability of PICU is not being captured in the DH with the MCH framework.

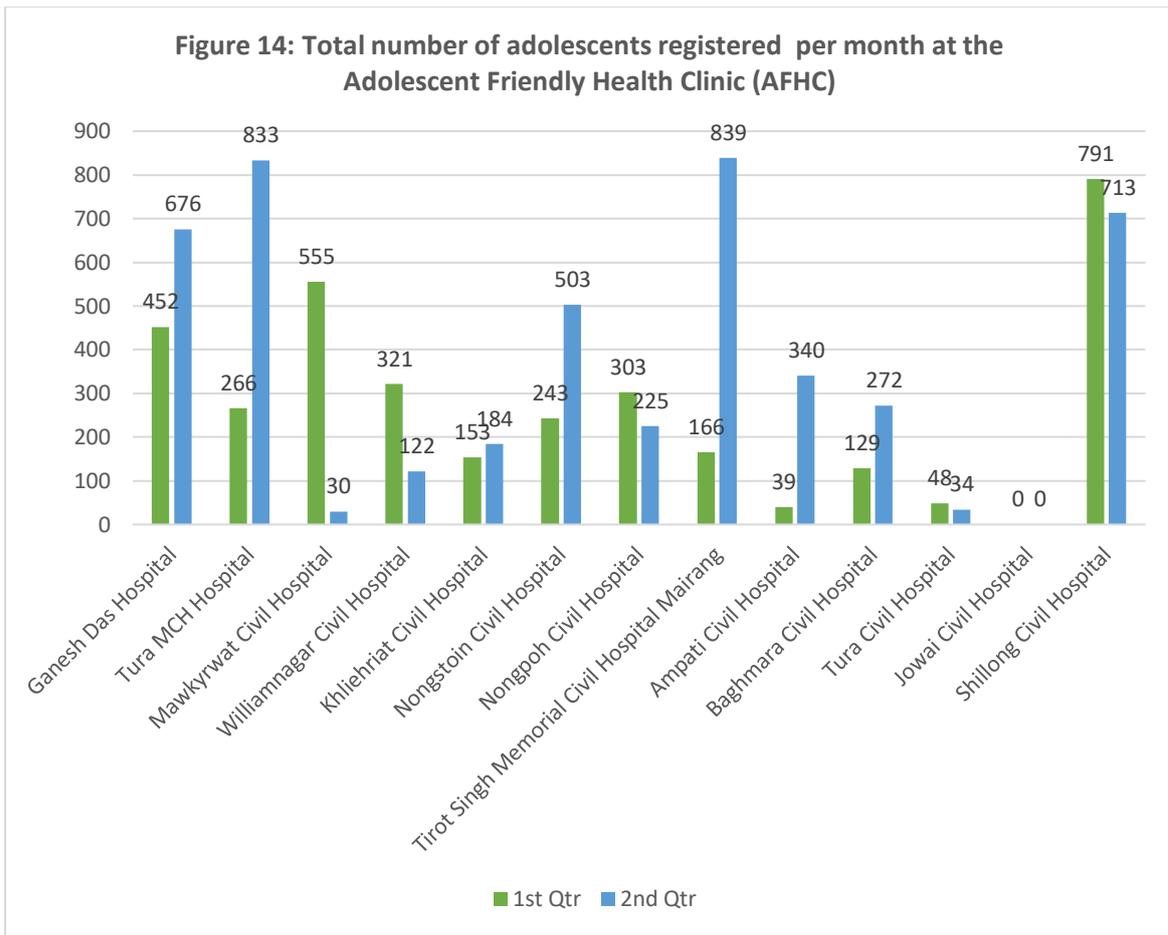
10.	Baghmara Civil Hospital	Yes	Yes
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Figure 13 shows the bed occupancy rate at NRC in the six district hospitals. Although Tura MCH hospital reported the bed occupancy rate to be 68.94 percent during the second quarter and Baghmara 60 percent during the second quarter, the total available bed days reported were quite low. During the second cycle of IPA implementation, Tura MCH Hospital reported the total available bed days to be 132, and the total in-patient days of care was 91. Baghmara Civil Hospital reported the total available bed days to be 90 and the total in-patient days of care to be 54. However, the total available bed days reported during the second cycle was 910, while the total in-patient days of care was 0.



(vii) Registration of adolescents at the Civil and District Hospitals:

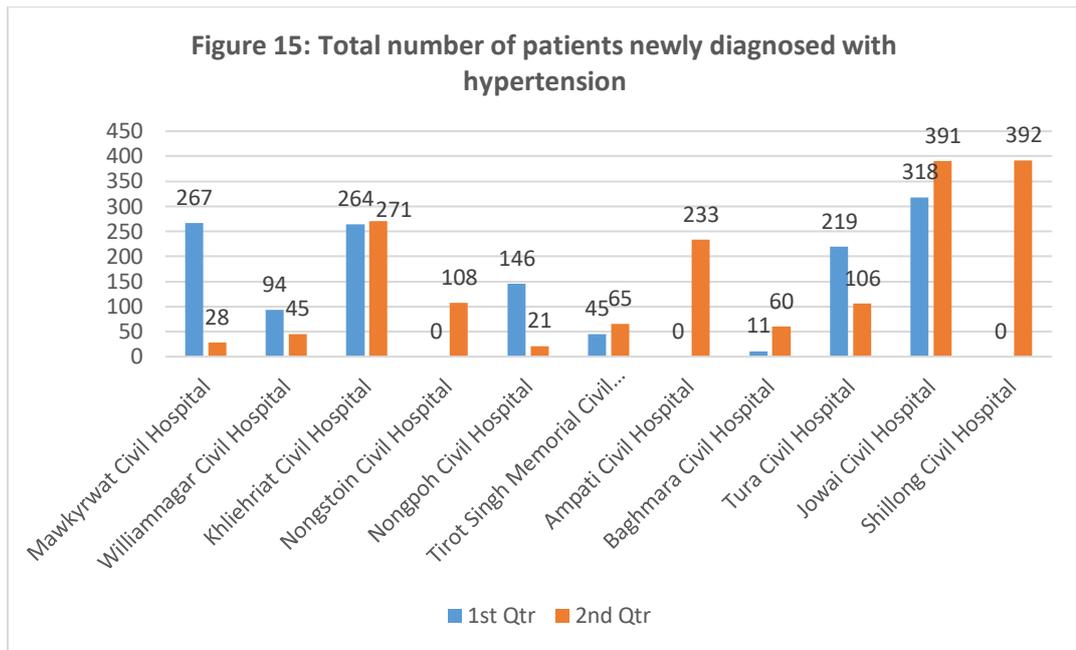
As shown in Figure 14, the total number of adolescents registered per month at the Adolescent Friendly Health Clinic (AFHC) during the first cycle of IPA implementation was highest in Shillong Civil Hospital, with 791. However, during the second cycle, Tirot Singh Memorial Civil Hospital reported the highest number of adolescents registered per month, with 839, followed by Tural MCH Hospital, with 833 adolescents registered per month at the AFHC. During the first and second cycles of IPA implementation, the adolescent counselor was unavailable at Jowai Civil Hospital, Ialong. Hence, the reporting is zero.



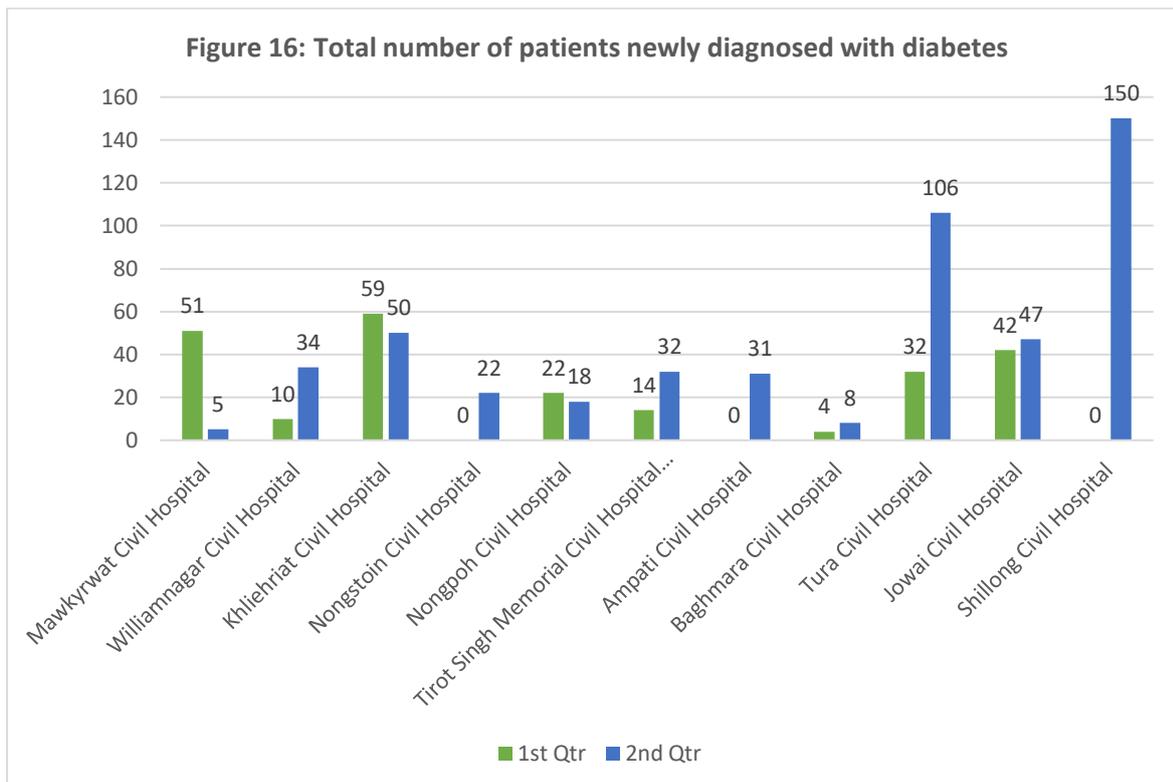
(viii) NCD- related indicators

Diagnosis of hypertension and diabetes:

The total number of patients newly diagnosed with hypertension during the first cycle of IPA implementation was reported to be the highest from Jowai Civil Hospital, Ialong with 318 patients (Figure 15). This number increased to 391 during the second cycle. It became the second highest after Shillong Civil Hospital, with 392 patients reported to be newly diagnosed with hypertension during the second cycle of IPA implementation.



The total number of patients newly diagnosed with diabetes was reported to be highest from Khliehriat Hospital during the first cycle, with 59 (Figure 16). During the second cycle, Shillong Civil Hospital reported the highest number of patients newly diagnosed with 150 newly diagnosed diabetes cases. Tura Civil Hospital reported a significant increase in patients newly diagnosed with diabetes, from 32 patients in the first cycle to 106 in the second quarter.



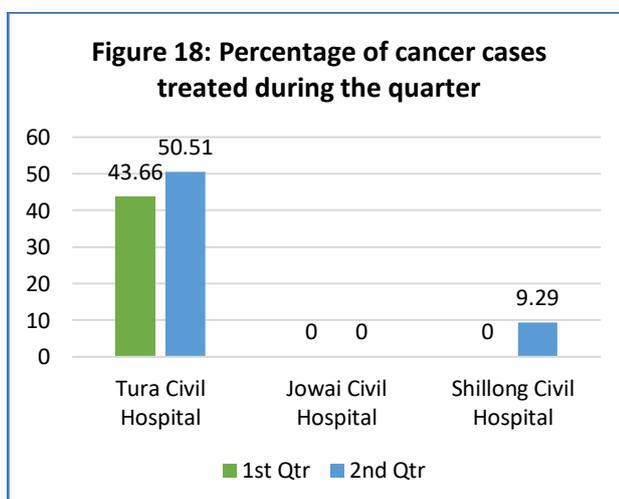
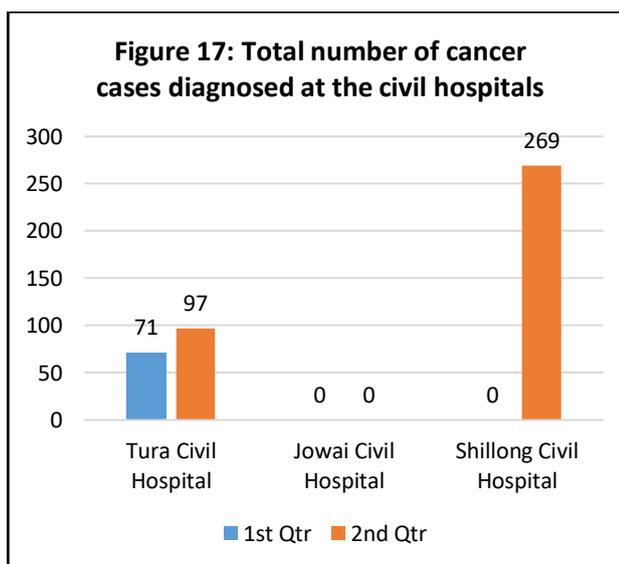
Follow-up rate for hypertension and diabetes:

The RBF strategy enables the purchase of services for chronic Non-Communicable Diseases such as hypertension and diabetes- however, findings in most district hospitals suggest key challenges. While follow-up of NCD cases is known to be very poor across all states in India, most district hospitals reported the follow-up rate to be 100%. Through RBF, district hospitals can be motivated to ensure that all patients diagnosed with hypertension and diabetes come for regular follow-up. However, as of now, the information entered in the IPA online assessment tool is not provided with supporting documents to support the claim of 100 percent follow-up thereby, indicating the need to redefine the follow-up rate indicator in accordance with the definition provided in the NCD application and also change the means of verification to the NCD application.

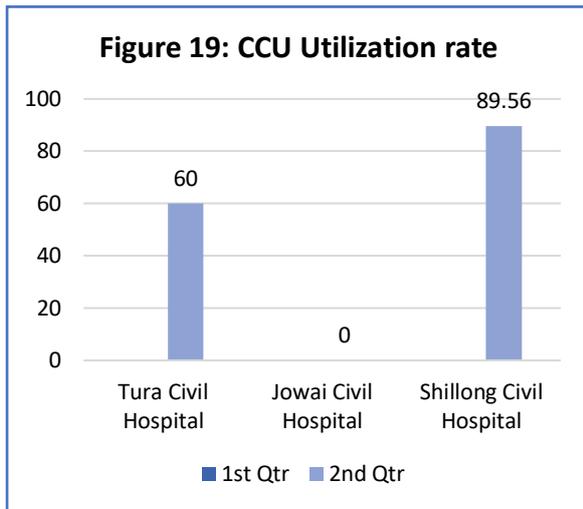
Figure 17 shows that of the three district hospitals providing all services excluding MCH-related, two have oncologists, i.e., Tura Civil Hospital and Shillong Civil Hospital. Shillong Civil Hospital reported 269 patients diagnosed with cancer during the second cycle of IPA implementation. In Tura Civil Hospital, the number of patients diagnosed with cancer increased from 71 during the first cycle of IPA implementation to 97 during the second cycle.

The percentage of patients diagnosed with cancer who received treatment is shown in Figure 18. Compared to Tura Civil Hospital (50.51%), the percentage of patients who received treatment for cancers in Shillong Civil Hospital during the second cycle is very less with 9.29 percent.

Diagnosis and treatment of cancers:



Cardiac Care Unit (CCU) Utilization rate at DH without MCH



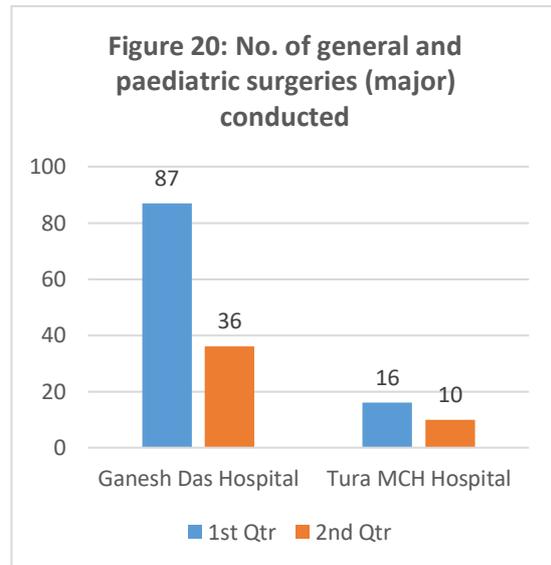
- As per the information from the state NCD cell team, CCU is not yet available at Tura Civil Hospital, as reflected in the IPA online assessment tool.

Dialysis Service: All district hospitals without MCH services have dialysis units. Thus, we can emphasize the quality of dialysis in subsequent quarters.

(ix) Surgeries performed:

Figure 20 shows that the total number of general and paediatric surgeries conducted in the two MCH hospitals has reduced in the second cycle of IPA implementation compared to the first cycle.

The reasons regarding the same may be explored through qualitative study.



The number of major general surgeries conducted during the first and second cycles of IPA implementation varies across district hospitals (Figure 21). In the first cycle, Jowai Civil Hospital, with 218, reported the highest number of surgeries conducted. However, in the second cycle, the number dropped to 79. In the second cycle, Tura Civil Hospital reported the highest number of major general surgeries conducted (344), indicating a significant improvement compared to the first cycle, where only 70 major surgeries were conducted. Along with Tura Civil Hospital, Mawkyrwat, Khliehriat, Nongpoh, Tirot

Singh Memorial, and Baghmara Civil Hospital shows significant improvement during the second cycle.

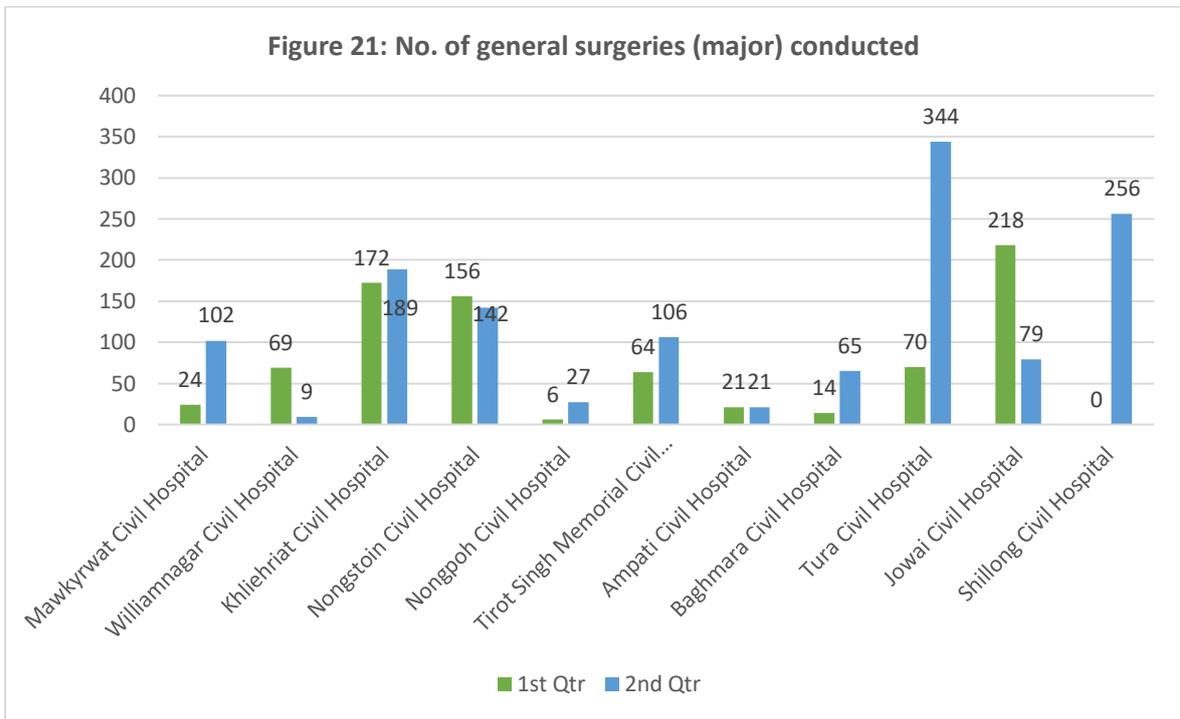


Figure 22 depicts the number of obstetrics and gynaecological surgeries, both major and minor, conducted across the District Hospitals providing MCH services. It is encouraging to note that there is a significant increase in the number of surgeries conducted during the second cycle compared to the first in almost all hospitals except Ganesh Das Hospital. However, we may imply that the reduction in the number of obstetrics and gynaecological surgeries conducted in Ganesh Das Hospital could be because other hospitals in Khasi and Jaintia Hills districts have conducted more surgeries, which otherwise would have been referred to Ganesh Das Hospital.

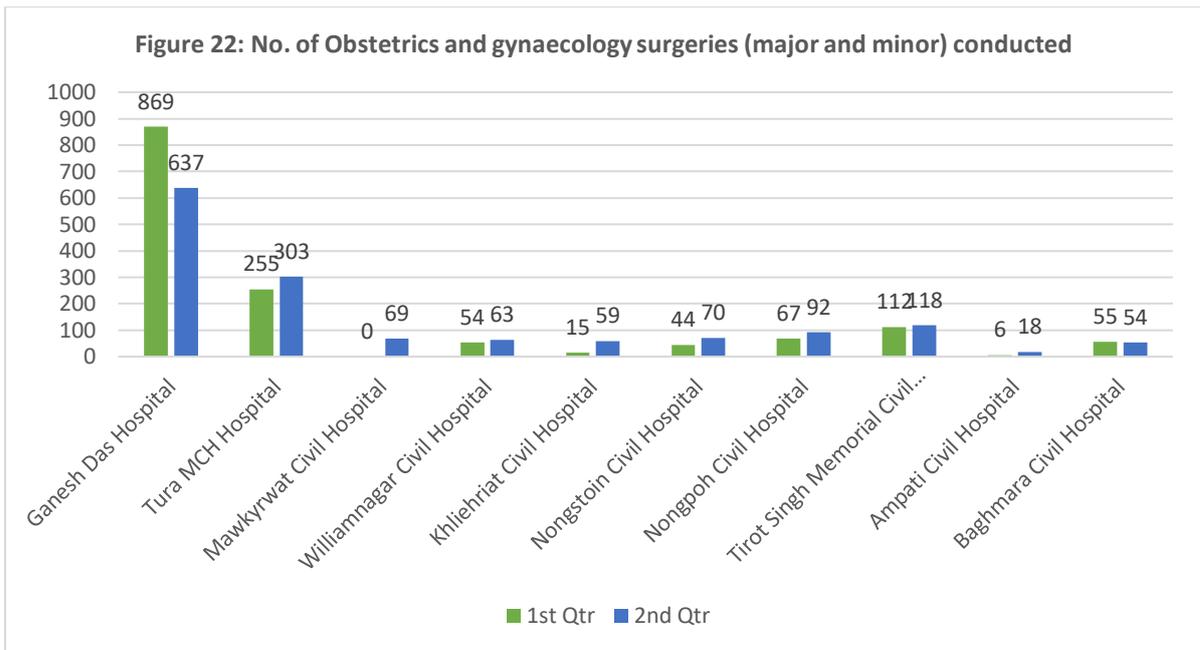
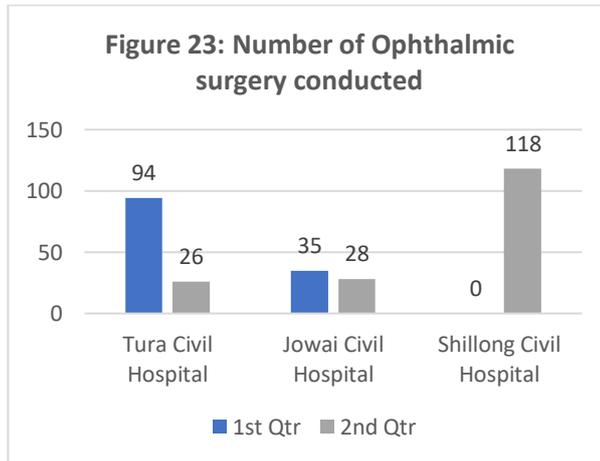


Figure 23 shows that the number of ophthalmic surgeries conducted at two of the three district hospitals without MCH services has reduced during the second cycle. However, the data for the first cycle is unavailable



The reduction in the number of ophthalmic surgeries at public district hospitals required further exploration of the barriers to conducting these surgeries. Figure 24 depicts a different story of patients who required ophthalmic surgeries at district hospitals but were referred due to the non-availability of this service at the eight district hospitals. In the first cycle, with 51, Nongstoin Civil Hospital reported the highest number of patients who required eye surgery. However, in the second cycle, the highest number of patients who required eye surgery was reported from Baghmara Civil Hospital (107).

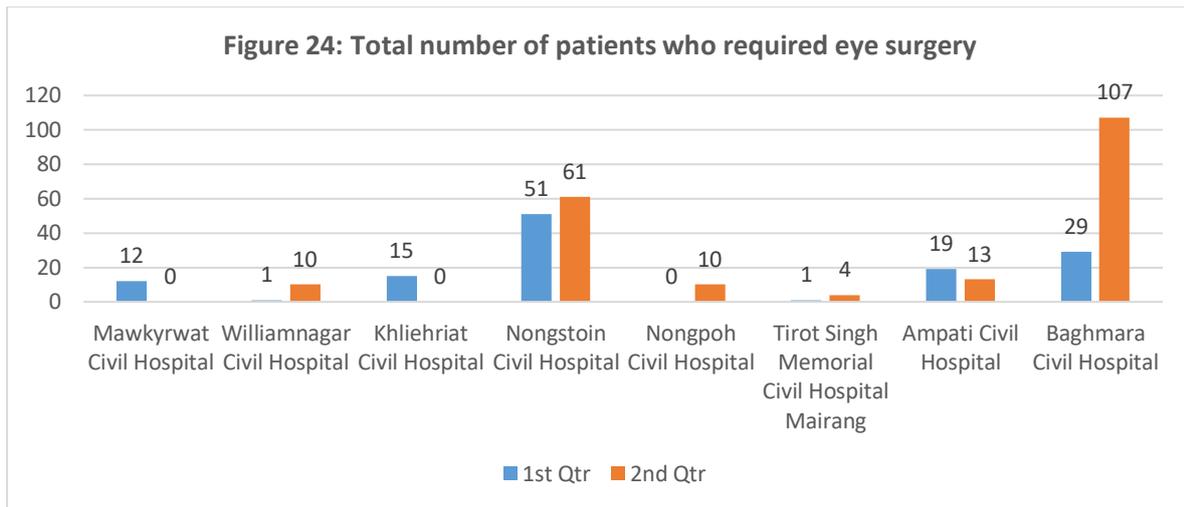
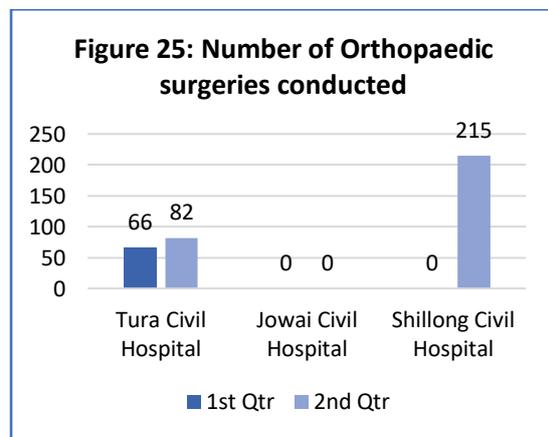


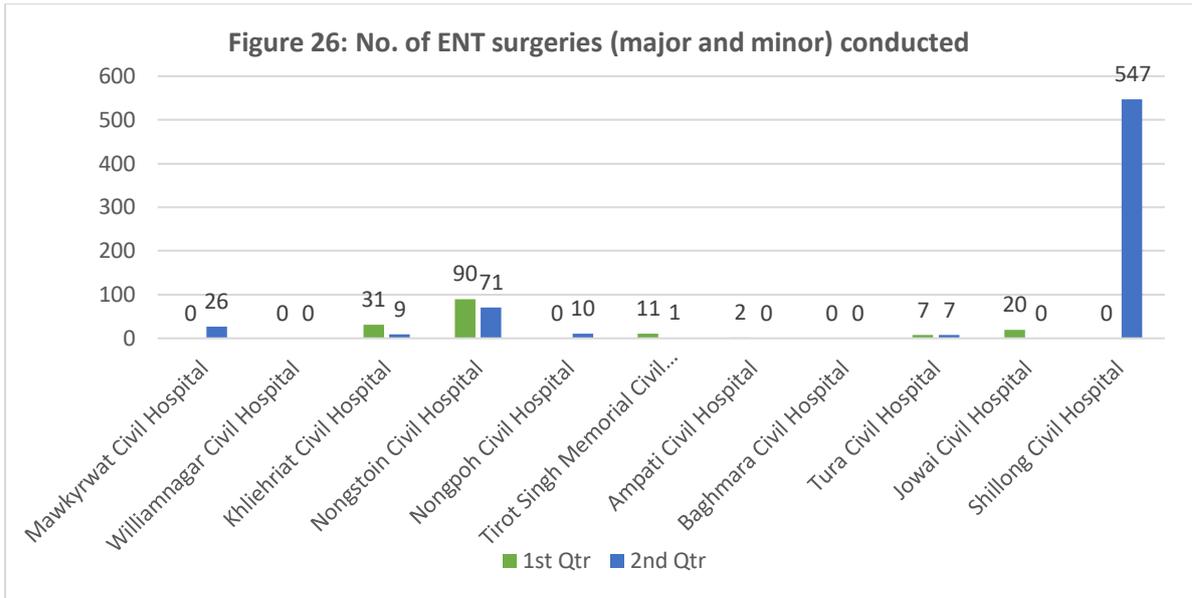
Figure 25 shows that two district hospitals without MCH services conduct orthopaedic surgeries.

There is an increase in the number of surgeries conducted by Tura Civil Hospital during the second cycle compared to the first.



No Orthopaedic and Ophthalmology Surgery is conducted at district hospitals where MCH services are also being provided. Preliminary findings suggest that this is on account of the non-availability of required surgeons and infrastructure.

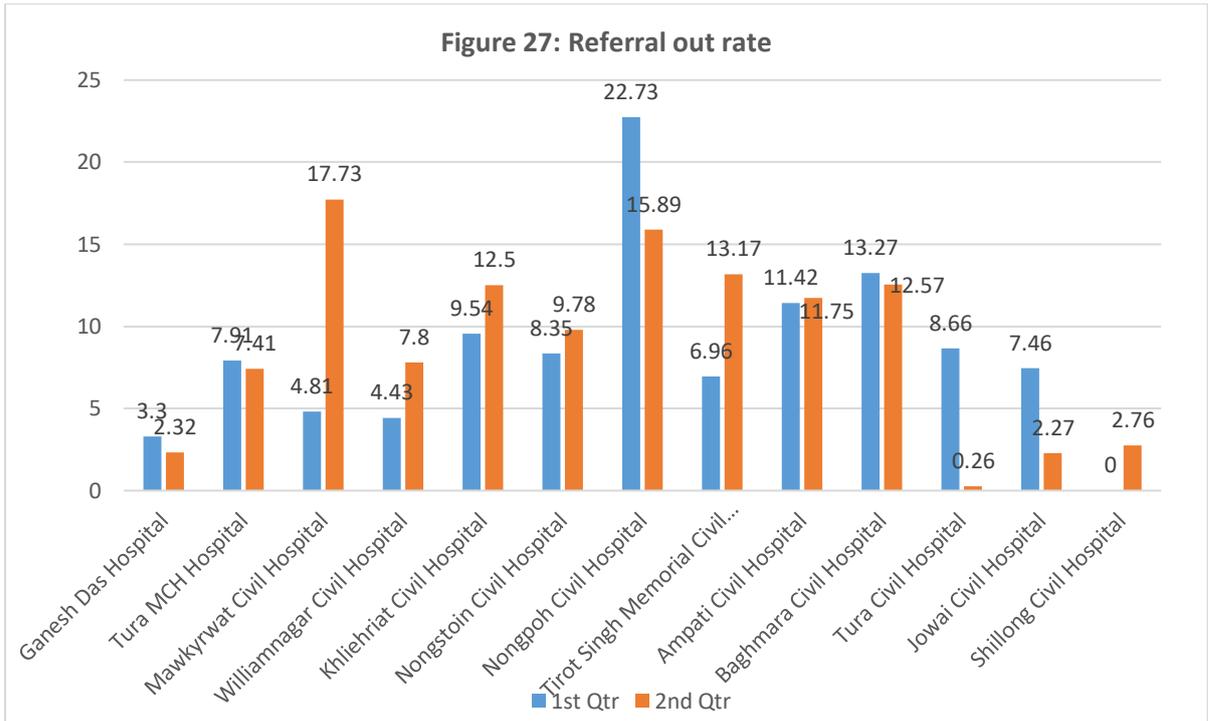
Almost all district hospitals conduct ENT surgeries in the first or second cycle of IPA implementation, except in Williamnagar and Baghmara Civil Hospital, where no ENT surgeries was reported in either cycle. A significant number of surgeries was reported to be conducted in Nongstoin and Shillong Civil Hospital.



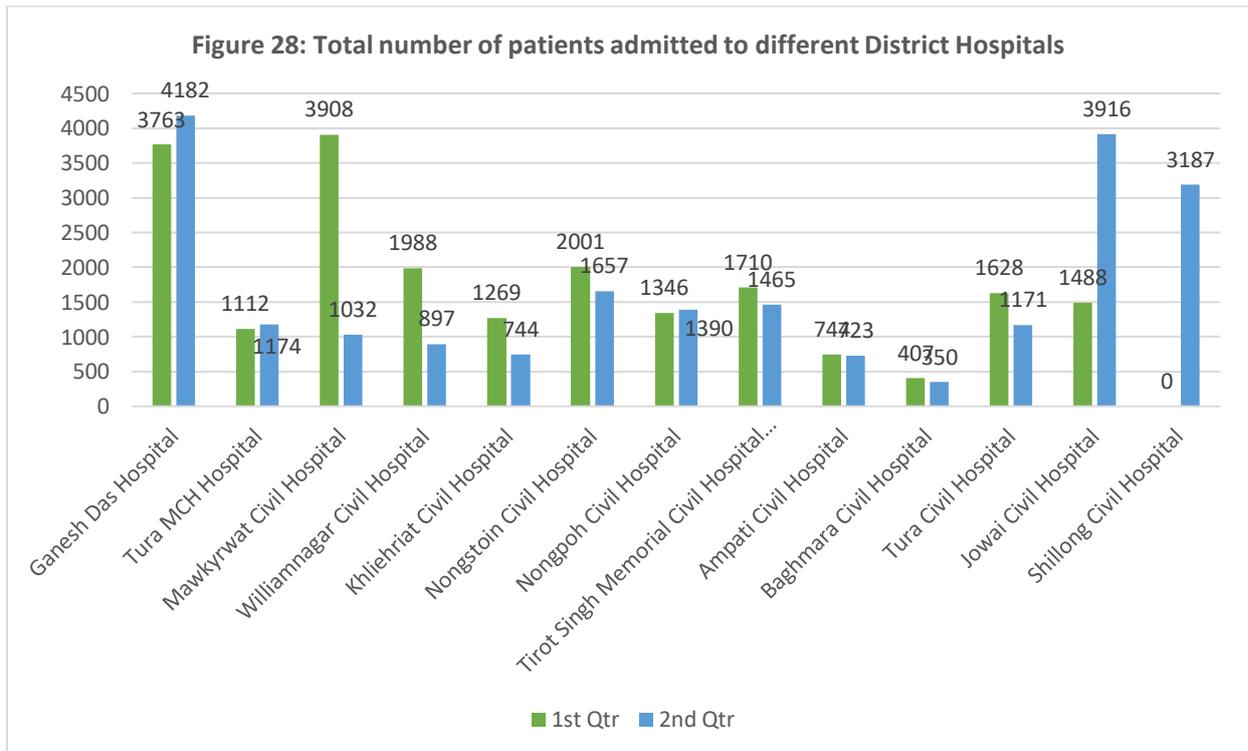
(x) Referral out rate

Of the 13 hospitals, Nongpoh Civil Hospital reports the highest referral out rate, with 22.37 percent reported during the first cycle, whereas during the second cycle Mawkyrwat reported the highest with 17.73 percent. Six of the 12 district hospitals where the data is available during the first and second cycles reported an increase in the referral out rate during the second cycle compared to the first. These include- Mawkyrwat, Williamnagar, Khliehriat, Nongstoin, Tirost Singh Memorial, and Ampati Civil Hospital. The remaining six district hospitals, i.e., Ganesh Das, Tura MCH, Nongpoh, Baghmara, Tura, and Jowai Civil Hospital, however, report a decrease in the percentage of referral out rate during the second cycle compared to the first.

We may further explore the reasons for the increase or decrease in the referral rate reported by all district hospitals and, accordingly, device intervention for those with the highest referral out rate. This will eventually help strengthen the district hospitals, especially those that reported high referral rates.

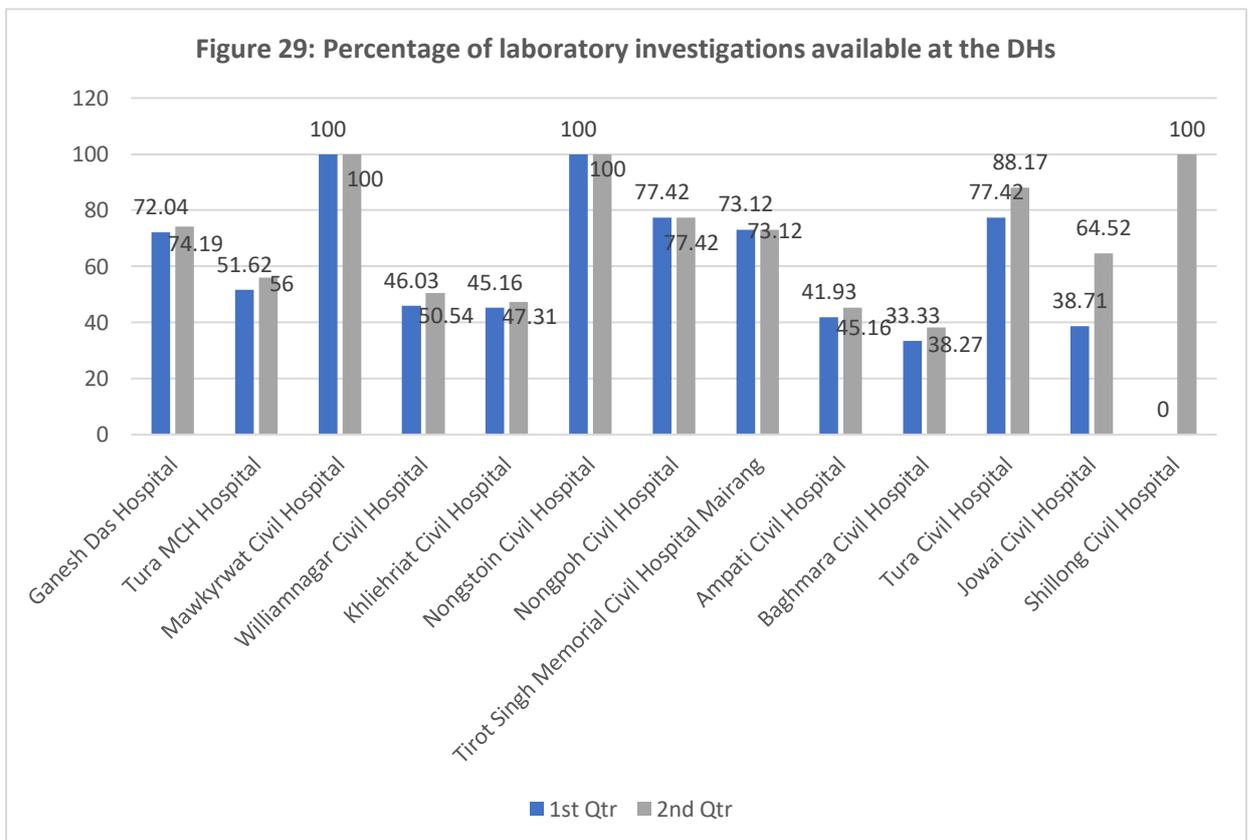


It can be noted from Figure 28 that although the number of patients admitted at Ganesh Das and Jowai Civil Hospital has increased, the referral out rate has decreased during the second cycle. Other hospitals, such as Mawkyrwat, Williamnagar, Khliehriat, Nongstoin, Tirot Singh, and Tura Civil Hospital, reported a significant reduction in the number of patients admitted during the second cycle compared to the first.



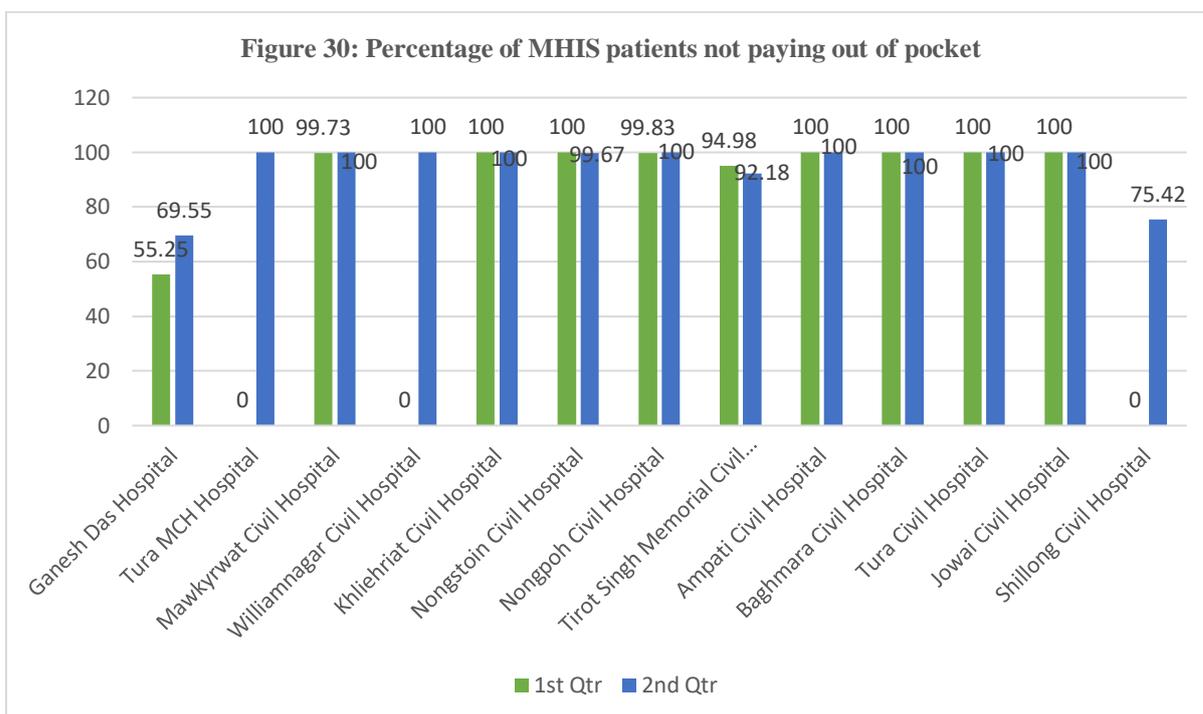
(xi) Percentage of tests available at the Civil and District Hospitals:

Figure 29 shows that out of the 13 district hospitals, three (Mawkyrwat, Nongstoin & Civil Hospital) provide 100 percent of the laboratory investigations. By 100 percent we meant the district hospitals provide all the 93 list of essential tests in accordance to Indian Public Health Standard (IPHS) norms specific to the Meghalayan context arrived upon consultation with the Directorate of Health Services (Research). The increase in the number of laboratory investigations conducted during the second cycle is observed in Ganesh Das, Tura MCH, Williamnagar, Khliehriat, Ampati, Baghmara, Tura and Jowai Civil Hospital. Nongpoh and Tirot Singh Memorial Civil Hospital reported no change in the number of laboratory investigations conducted.



(xi) Percentage cashless payment:

Reporting of 100 percent cashless payment for treatment provided at most public hospitals is encouraging (Figure 30). However, it could have been more convincing if evidence had also been uploaded.



Summary:

Based on the analysis of the performance of District Hospitals during the first and second cycles of IPA implementation, the following key observations have been made:

1. Redistributing Patient Load:

- Strengthening district hospitals in other districts will help reduce the patient load at Shillong Civil Hospital and Ganesh Das Hospital, particularly in the Khasi and Jaintia Hills region.

2. Increased Services in District Hospitals:

- The second cycle showed an increase in the number of high-risk pregnant women admitted, the total number of deliveries conducted, and the number of obstetric and gynaecological surgeries in other district hospitals. This increase likely contributed to the reduced burden on Ganesh Das Hospital.

3. Laboratory Investigations:

- Most district hospitals have shown an increase in the percentage of laboratory investigations conducted. Ensuring the availability of all necessary

investigations in-house will help prevent service fragmentation, improve patient satisfaction, and promote the utilization of public health facilities.

4. Admissions at Ganesh Das Hospital:

- Despite the overall improvements, admissions at Ganesh Das Hospital increased in the second cycle compared to the first. This is likely due to the availability of advanced medical care services such as ICU, SNCU, PICU, and NRC, which are still lacking in some district hospitals. Utilizing IPA funds to supplement efforts by the NHM to establish these infrastructures is crucial for accelerating the availability of these services in all district hospitals. This could be achieved by setting up infrastructure in district hospitals, with the required specialists and sufficient space.

5. Coordination with the Directorate of Health Services:

- Sharing findings from this analysis with the Directorate of Health Services and coordinating efforts is essential to achieve the common objective of strengthening secondary care at district hospitals.

6. Financial Autonomy and Decision-Making:

- While providing financial autonomy to health facilities is important, understanding their experiences and challenges in decision-making is crucial. Major decisions, particularly in district hospitals, should likely be made in consultation with the NHM and the DHS.

7. Strategic Spending:

- It is important to coordinate with the state health administration to ensure that facilities are spending on critical aspects that align with the objective of strengthening secondary care in Meghalaya.

Suggestions on key areas that require investment through the IPA fund:

Sl. No.	Health Systems Strengthening	Suggested interventions	Strategy
1.	Infrastructure	Support in setting up/operationalization of: <ul style="list-style-type: none"> • SNCU • NRC • PICU • ICU • OTs • Dialysis units [For medical equipment below one lakh]	<ul style="list-style-type: none"> ✓ Assess the need for setting up or operationalization of these infrastructures. ✓ Assess the feasibility of setting the infrastructure. ✓ Analyse the availability of human resource/specialists to deliver the services at SNCU/NRC/PICU/ICU/OTs ✓ If HR is available, invest in the medical equipment required, as mentioned in the following point.
2.	Medical equipment [in collaboration with MMSDL]	<ul style="list-style-type: none"> • Laboratory investigations • Radiology services • Insulin therapy 	<ul style="list-style-type: none"> ✓ To improve the utilization of services and ensure the availability of functional equipment required to provide comprehensive laboratory investigations and radiology services. ✓ Equipment to provide insulin therapy will help address one of the needs of patients with diabetes at district hospitals.
3.	Human resources for health	<ul style="list-style-type: none"> • Dietitian • Capacity building 	<ul style="list-style-type: none"> ✓ If setting up an NRC is not feasible, it is important to recruit a dietitian who will provide dietary counselling to mothers. ✓ Ensuring that a diet plan is made in accordance with the economic condition of the family and local availability is crucial for the good health and nutrition of children throughout. ✓ IPA fund may be utilized for conducting training on diet

			and nutrition to Staff nurses and frontline workers such as MLHPs, ANMs, ASHAs and AWWs by the dietitian.
4.	Health information systems	<ul style="list-style-type: none"> • Dedicated staff 	<ul style="list-style-type: none"> ✓ To avoid misinterpretation of information, it is crucial to have dedicated data entry operator trained to collect information required for measuring the IPA indicators. ✓ The dedicated staff may also prepare all the evidence and records that are required to be uploaded in the IPA online assessment tool. ✓ This way it will help in verification while conducting the analysis related to action research on IPA implementation.
5.	Referral services	<ul style="list-style-type: none"> • Referral services for patients suffering from NCD complications. 	<ul style="list-style-type: none"> ✓ Patients from low-income groups, in most cases, do not adhere to treatment due to huge travel expenditures. ✓ This is despite having the MHIS card. Therefore, a certain amount of IPA funds may be earmarked for providing referral services to patients requiring treatment at higher-level facilities.
6.	Payment for Surgeons	<ul style="list-style-type: none"> • To conduct surgeries in other hospitals beyond their original postings. 	<ul style="list-style-type: none"> ✓ Interested surgeons may be hired on a dedicated day to conduct the surgeries where the service is otherwise unavailable.

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