Impact Assessment Report:
Strengthening Rural Healthcare – PHC Upgradation

Honeywell Hometown Solution India Foundation (HHSIF)

April 2026

Price Waterhouse Chartered Accountants LLP

Table of Content

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2. By reading this you deem to agree and confirm the content of the same. If you do not agree, you are an unauthorised recipient and should return or destroy the document.

3. The reader of this report understands that the work performed by PW was performed pursuant to the requirement stated under Rule 8(3) of the Companies (CSR Policy) Rules, 2014 applicable to the Contributing Parties and was performed exclusively for **Client's** sole benefit and use. The reader of this report acknowledges that this report was prepared for the purpose stated herein and as per the terms agreed in the contract. Accordingly, it may not include all procedures deemed necessary for the purposes of the reader.

4. PW makes no representations or warranties express or implied regarding the information contained in this report and expressly disclaims any contractual or other duty, responsibility or liability to any person or entity other than its Client in accordance with the agreed terms of engagement.

5. This report by its very nature involves numerous assumptions, inherent risks and uncertainties, both general and specific. The conclusions drawn are based on the information available with us at the time of writing this report. We have not carried out any work or made any enquiries of management since the date of our report. Our report do not incorporate the effects, if any, of events and circumstances which may have occurred, or information which may have come to light, after such date. The information contained in this report is selective and is subject to updating, expansion, revision, and amendment. It does not purport to contain all the information that a recipient may require.

6. PW's Deliverable(s) should be read in full and in no way should be construed as an opinion, attestation, certification or any form of assurance. We have not performed any procedure which can be constituted as an audit or an examination or a review in accordance with generally accepted auditing standards or attestation standards in India or elsewhere. The comments in our report are not intended, nor should they be interpreted to be legal advice or opinion. Our report is not a substitute for any enquiries and procedures that you would (or should) otherwise undertake and judgements you would make for any purpose. **HHSIF** shall be fully and solely responsible for applying independent judgment, with respect to the findings included in this report, to make appropriate decisions in relation to future course of action, if any. We shall not take responsibility for the consequences resulting from any decisions made by anyone based on information included in the report.

7. While information obtained from the public domain or external sources or implementing partners or whatever source, if any, the same has not been verified for authenticity, correctness, genuineness, accuracy or completeness. We have obtained information, as far as possible, from sources generally considered to be reliable and no independent verification, assessment, audit or otherwise has been performed on those. It must be noted that information from public domain or websites may not be updated regularly. We assume no responsibility for the reliability and credibility of such information.

8. Our work was limited to the specific samples/ procedures described in this report and were based only on the information and analysis of the data obtained through interviews of beneficiaries supported under the programme, selected as sample respondents. Accordingly, changes in circumstances/ samples/ procedures or information available after the review could affect the findings outlined in this report. Further, the study did not include conducting any KYC checks/due diligence of the implementing partners, beneficiaries.

9. We assume no responsibility for any user of the report, other than **HHSIF**. Any person who chooses to rely on the report shall do so at their own risk.

10. Our observations represent our understanding and interpretation of the facts based on reporting of beneficiaries and stakeholders. The recommendations provided may not be exhaustive from the perspective of bringing about improvements in the CSR Project(s) and additional steps/efforts may be required on the part of the management to address the same.

11. PW performed and prepared the Deliverable(s) at Client's direction and exclusively for Client's sole benefit and use pursuant to the requirement stated under Rule 8(3) of the Companies (CSR Policy) Rules, 2014 applicable to the Contributing Parties. Our report is based on the completeness and accuracy of the above stated facts and assumptions, which if not entirely complete or accurate, should be communicated to us immediately, as the inaccuracy or incompleteness could have a material impact on our conclusions.

12. The reader agrees that PW its partners, directors, principals, employees and agents neither owe nor accept any duty or responsibility to it, whether in contract or in tort (including without limitation, negligence and breach of statutory duty), and shall not be liable in respect of any loss, damage or expense of whatsoever nature which is caused by any use the reader may choose to make of this report, or which is otherwise consequent upon the gaining of access to the report by the reader. Further, the reader agrees that this report is not to be referred to or quoted, in whole or in part, in any prospectus, registration statement, offering circular, public filing, loan, other agreement or document and not to distribute the report without PW's prior written consent.

13. In no circumstances shall we be liable, for any loss or damage, of whatsoever nature, arising from information material to our work being withheld or concealed from us or misrepresented to us by any person to whom we make information requests.

List of acronyms

Acronym	Full Form
AMC	Annual Maintenance Contract
ANC	Ante Natal Care
CBC	Complete Blood Count
CHC	Community Health Centre
CSR	Corporate Social Responsibility
FY	Financial Year
HHSIF	Honeywell Hometown Solution India Foundation
IDI	In-Depth Interview
INR	Indian Rupee
IP	Implementation Partner
IPHS	Indian Public Health Standards
IRECS	Inclusiveness, Relevance, Effectiveness, Convergence, Sustainability
JBR	Joint Business relationship
KM	Kilometers
KII	Key Informant Interview
KYC	Know Your Customer
MO	Medical Officer
NCD	Non-Communicable Diseases
NGO	Non-Government Organisation
OPD	Out Patient Department
OT	Operation Theatre
PHC	Primary Health Centre
PWCALLP	Price Waterhouse Chartered Accountants LLP
PW	Price Waterhouse
RO	Reverse Osmosis
SDG	Sustainable Development Goals

List of Figures

List of Tables

Executive Summary

About the Project:
Honeywell Hometown Solutions India Foundation (HHSIF) supported the **Strengthening Rural Healthcare – PHC Upgradation programme** to address critical gaps in primary healthcare infrastructure. It was implemented by Americares India Foundation covering 197 Primary Healthcare Centers (PHCs) and 1 Community Healthcare Center (CHC) across Haryana, Karnataka, Maharashtra, Tamil Nadu and Uttarakhand between Dec 2021 to Mar 2025. The programme focused on strengthening diagnostic capacity, essential equipment availability and readiness of PHCs aligned with Indian Public Health Standards (IPHS) norms.

HHSIF engaged **Price Waterhouse Chartered Accountants LLP (PWCALLP)** to conduct the impact assessment of the CSR project – 'Strengthening Rural Healthcare – PHC Upgradation'.

The assessment followed a **qualitative approach** using **KIIs and IDIs** with key programme stakeholders. Interactions were conducted with Medical Officers, nursing staff, patients, the implementing partner and the HHSIF team across four states.

Need for the intervention

- **Limited diagnostic capacity at the primary level:** Absence of essential and advanced laboratory equipment limited comprehensive diagnosis, delayed reports and led to avoidable referrals.
- **Community Perception and Trust in PHC / CHC Services:** Repeated referrals, limited diagnostic availability and service interruptions shaped PHCs/CHCs as transit points, negatively affecting health-seeking behavior.

Impact Created:

Strengthened Clinical Readiness and Facility Functioning Through Reliable Diagnostics and Essential Equipment:

- Upgraded diagnostic and essential equipment enabled same-day investigations, reduced turnaround time and improved delivery room and emergency readiness.
- Equipment aligned to facility requirements, actively utilised and supported better clinical decision-making while reducing dependence on external labs

Enhanced Workflow Efficiency, Staff Coordination and Operational Confidence Among PHC Teams:

- Improved infrastructure reduced manual workarounds, improved coordination among staff and eased management of OPDs, ANC days and immunisation sessions.
- Reliable equipment and organised workflows increased staff confidence and supported smoother service delivery across locations

Improved Patient Confidence, Faster Care-Seeking and Higher Uptake of PHC Services:

- Communities increasingly used PHCs as trusted points of care, with facilities reporting noticeable increases in OPD attendance post-upgradation.
- Reduced waiting time, on-site diagnostics and quicker consultations improved care-seeking behaviour and follow-up adherence.

Reduced Referral Rate Through Expanded Local Care Management and Stabilisation Capacity:

- Upgradation addressed foundational gaps, enabling PHCs to manage more conditions at the primary level in alignment with IPHS-mandated functions.

- Faster diagnosis and improved stabilisation capacity reduced avoidable referrals ensured appropriate escalation and reduced patient expenses

Improved Community Health Outcomes and Reduced Household Burden Through Accessible Care:

- On-site diagnostics reduced travel, wage loss and out-of-pocket expenses, especially benefiting remote and low-income communities.
- Same-day reports and strengthened maternal, child and emergency services improved timeliness of treatment and adherence to follow-ups.

Recommendations:

1. Strengthen Post Warranty Maintenance Systems for Long Term Equipment Functionality

While PHCs acknowledged the quality and stability of newly installed diagnostic and maternal newborn care devices, maintenance after the expiry of one year warranty period should be addressed.

A structured model of post warranty upkeep can be ensured, whether through extended warranty agreements, AMC add-ons or inclusion of CSR supplied equipment in existing repair schedules at district level. This would ensure uninterrupted functioning. This is especially important for high end machinery provided to the PHCs, which directly influence timely diagnosis, emergency stabilisation, and maternal and newborn outcomes.

2. Consider Provision of Enabling Infrastructure to Optimise Use of IPHS-Aligned Equipment and Ensure Service Continuity

All core medical and diagnostic equipment under the programme was provided in alignment with Indian Public Health Standards (IPHS) and based on assessed facility requirements. To further support smooth execution and uninterrupted service delivery, select enabling infrastructure—over and above IPHS provisioning—may be considered.

Targeted additions such as power backup for diagnostic equipment, air-conditioning in OT and delivery rooms, RO water systems for patient use, and assured power supply during emergency stabilisation would enhance operational reliability. These measures would help PHCs fully leverage the equipment already provided, minimise service disruptions, and strengthen continuity of care, particularly in high-volume facilities.

Comprehensive analyses, detailed findings, observations and recommendations are presented in the subsequent sections of this report.

1. About Honeywell Hometown Solutions India Foundation[1]

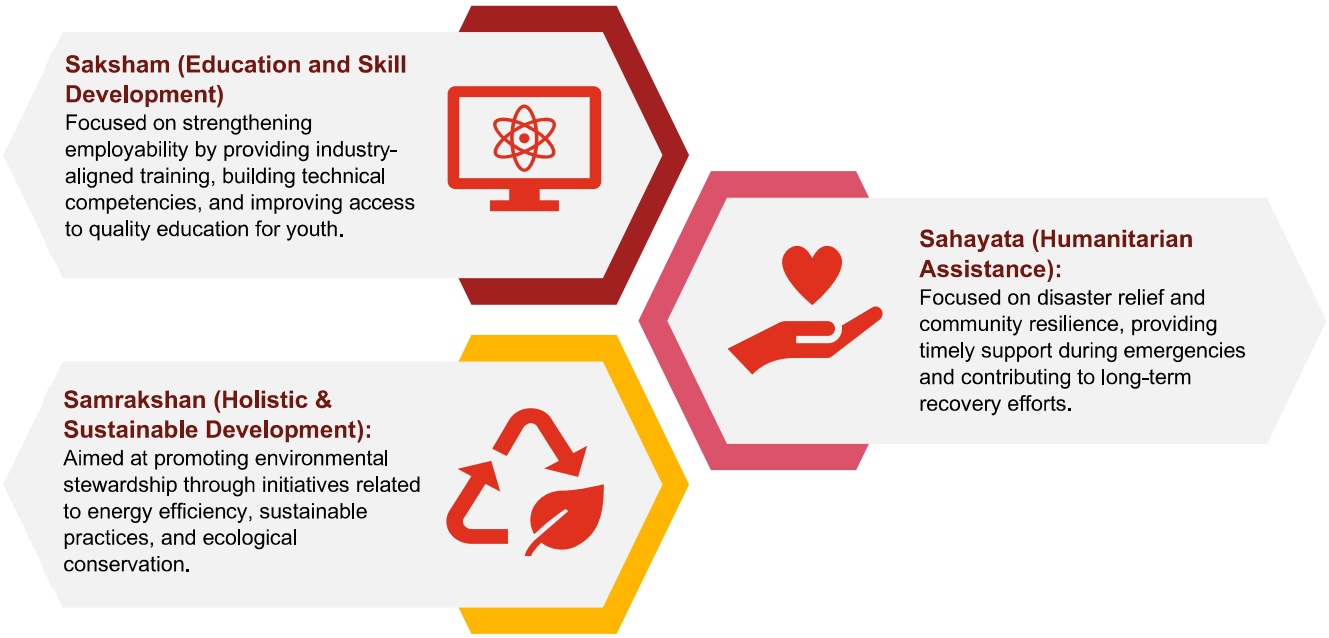
Honeywell Hometown Solutions India Foundation (HHSIF) is the corporate social responsibility arm of Honeywell in India. The Foundation focuses on creating sustainable and inclusive impact by supporting communities through initiatives in education, skill development, environmental sustainability, and humanitarian assistance.

HHSIF's approach is centred on improving access to quality education and enhancing employability among youth, particularly those from underserved and marginalised backgrounds. A key priority is to bridge the gap between academic learning and industry requirements by enabling students to acquire industry-relevant skills and practical exposure, thereby preparing them for future employment opportunities.

The Foundation works in close collaboration with onground partners, academic institutions, and industry experts to design and deliver programmes that are aligned with current market needs. This collaborative model ensures that beneficiaries receive not only technical training but also exposure to real-world applications and industry practices.

HHSIF's CSR initiatives are guided by key thematic areas, including:

Figure 1: HHSIF Key Focus Areas



Through these focus areas, HHSIF aims to create long-term, scalable impact while contributing to inclusive growth and sustainable development across communities.

[1] Source: HHSIF's Website

2. About the Programme under Assessment

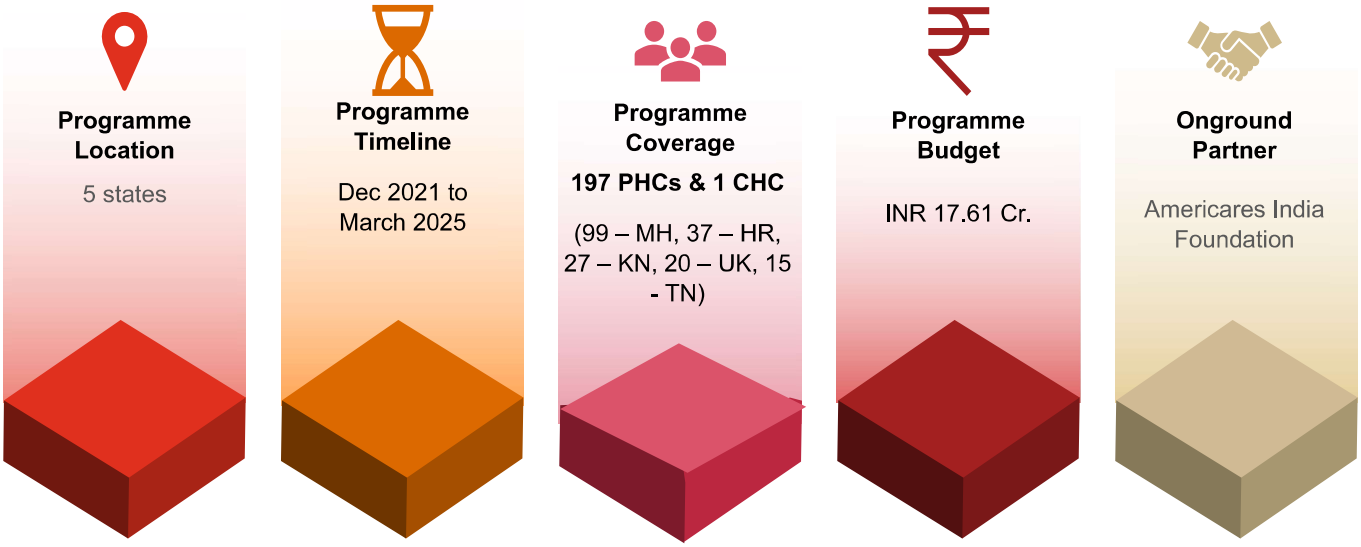
Healthcare is fundamental to human development, enabling individuals to live healthier and productive lives while supporting social & economic well-being. In India, an extensive network of public health facilities across rural and urban areas is intended to ensure access to essential health services close to communities. Primary healthcare facilities serve as the first point of contact for most populations and are crucial for promoting preventive care, early identification of health conditions, and continuity of treatment, especially in rural and remote settings.

India's health profile is evolving, with non-communicable diseases such as cardiovascular conditions, diabetes and chronic respiratory illnesses emerging alongside persistent communicable health concerns. This shift places growing responsibility on Primary Health Centres (PHCs) to support early screening, timely diagnosis and ongoing management of chronic conditions, in addition to routine and maternal health services. While PHCs are expected to address an increasingly broad range of health needs, many operate with limited infrastructure, diagnostic capacity and functional support systems. These elements often restrict on-site service delivery and result in higher referrals even for basic care, affecting service quality and continuity of care in public health facilities.

Recognising these systemic challenges, HHSIF, in partnership with Americares India Foundation as the Implementing Partner (IP), supported strengthening of selected PHC in rural and remote areas across 5 states Haryana (HR), Karnataka (KN), Maharashtra (MH), Tamil Nadu (TN) and Uttarakhand (UK) . The programme focused on enhancing facility readiness by addressing critical gaps in diagnostic capabilities, essential medical equipment, and enabling infrastructure, where required.

Below is the snapshot of key programme details:

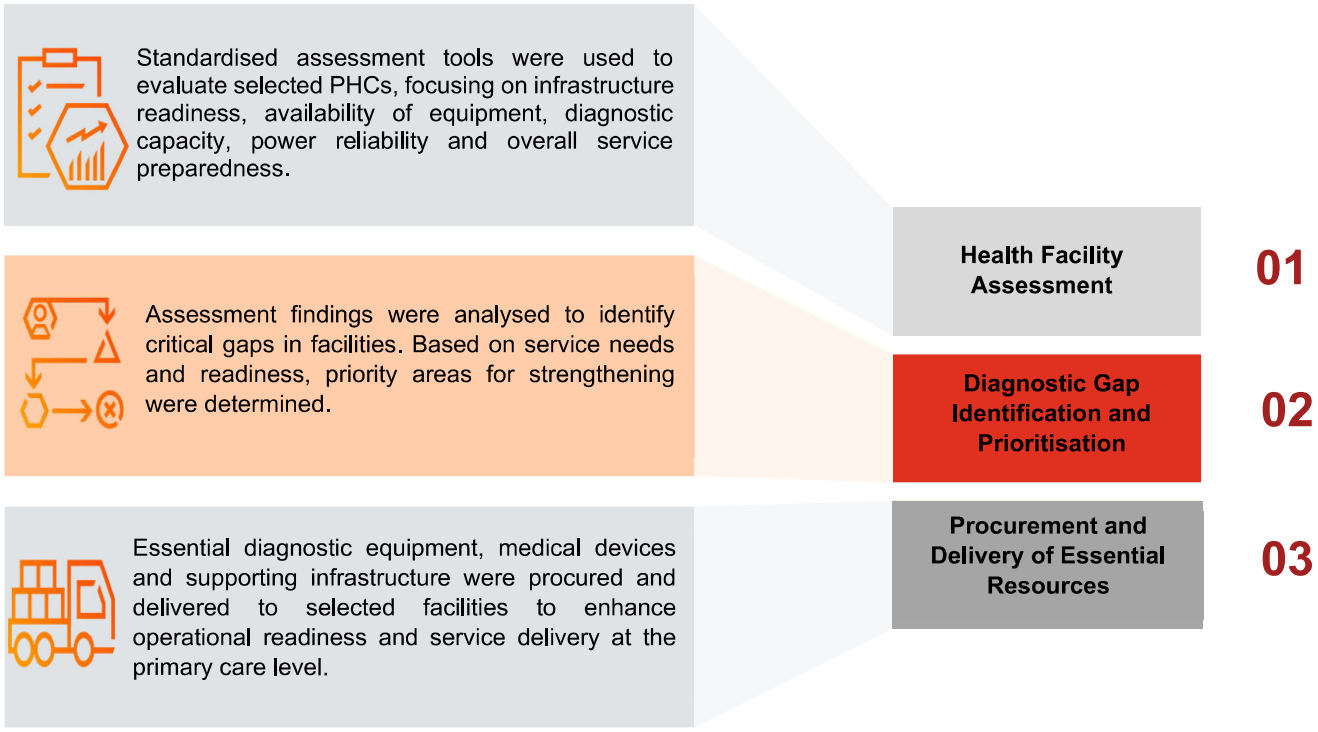
Figure 2: Key details of the programme under assessment



The programme undertook a series of activities for noting the specific needs of the PHCs and thereby fulfilling them through the intervention, as depicted below (refer Fig 3)[2]:

[2] Source: MoU documents from FY 2021 to 2025

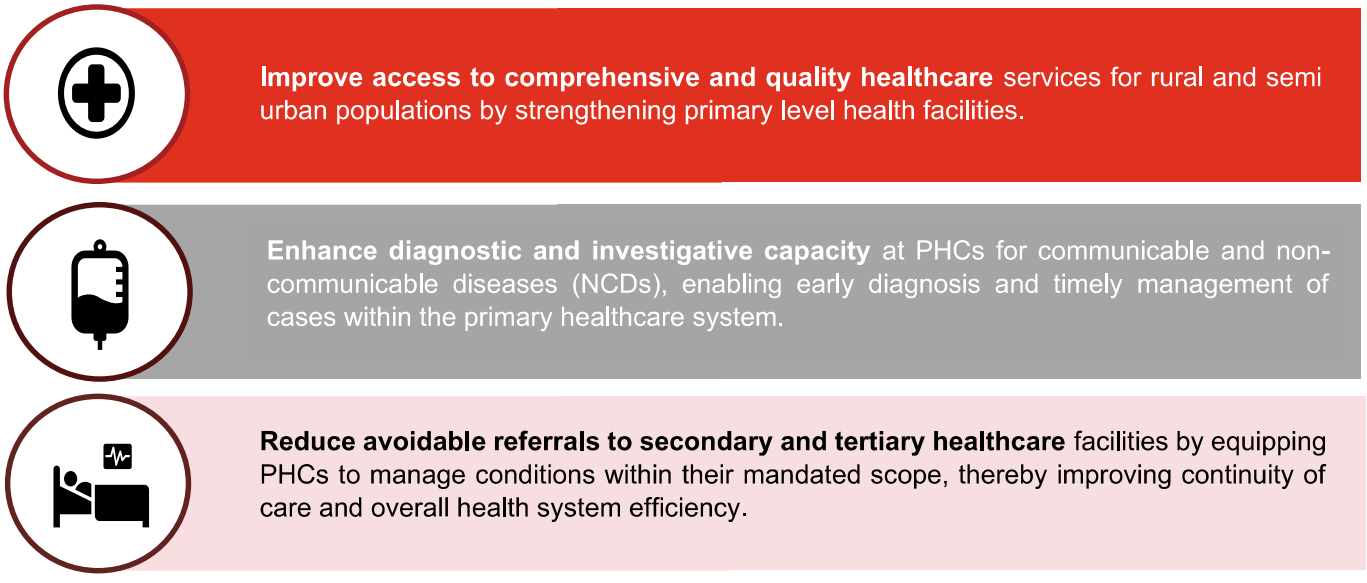
Figure 3: Key Activities undertaken for PHC Upgradation



Intended Programme Outcomes and other key details of the programme[3]

Based on the programme design and the key performance indicators outlined in the Memorandum of Understanding (MoU), the intervention was intended to achieve three key outcomes (refer Figure 4) .

Figure 4: Intended outcomes of the programme



[3] Source: MoUs (Dec 2021 to March 2025) and year wise programme completion reports shared by HHSIF and Onground Partner

3. Method of Impact Assessment

HHSIF engaged PWCALLP to conduct an impact assessment of the '**Strengthening Rural Healthcare – PHC Upgradation' programme** implemented in 5 states (Haryana, Maharashtra, Karnataka, Tamil Nadu and Uttarakhand) covering 197 PHCs & 1 CHC between Dec 2021 to March 2025. The scope of work included reviewing the Key Performance Indicators (KPIs) established by HHSIF's management within the project implementation framework, focusing on the project's output, outcomes, and overall impact. The assessment framework followed **Inclusiveness, Relevance, Efficiency, Convergence, and Sustainability (IRECS Framework)**, and recommendations were provided to support further evaluation and decision-making regarding the project's performance.

IRECS Framework used for the Impact Assessment

Inclusiveness

Ability of different stakeholders, particularly poorest and most marginalised to access the benefits of activities

Relevance

Are the services / inputs in the programme able to meet community priorities? How was the planning done? Was it participatory?

Effectiveness

Have the activities been able to effectively address community expectations? How efficiently have the resources been deployed, monitored and utilised?

Convergence

Degree of convergence with government/other partnerships; relationship between individuals, community, institutions and other stakeholders

Sustainability

Do communities feel ownership over assets created by activities and/or will the Project initiated community interventions sustain even after the exit?

The overall methodology adopted for conducting the impact assessment study can be categorised into four stages as illustrated below in Figure 5:

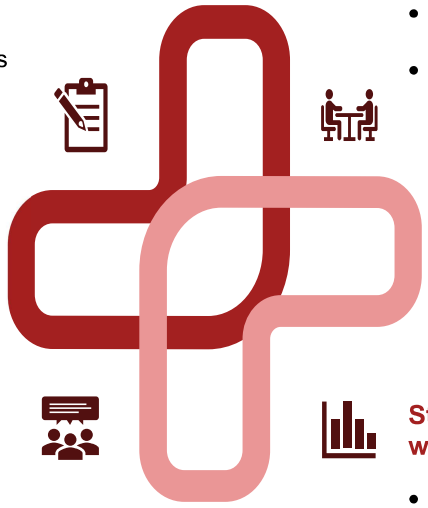
Figure 5: Key Stages of Impact Assessment

Stage 1: Desk Review

- A detailed understanding of the interventions was obtained through an inception meeting with HHSIF team.
- The scope of work was agreed upon, and HHSIF expectations were understood.
- A desk review of programme documents (FY wise MoUs, filled HFAs & completion reports) was undertaken.
- Mapping of programme stakeholders was carried out, based on the desk review and preliminary interactions with key stakeholders and in consultation with the HHSIF team for interaction purposes.

Stage 2: Planning and tool preparation

- The data collection plan was finalised in consultation with the HHSIF team and the Onground partner.
- Key indicators and research tools were finalised.
- The HHSIF team was apprised of the data collection plan for the field visit.



Stage 3: Data collection & field visit

- The field data collection process was initiated.
- In-Depth Interviews (IDIs) with Medical Officers, Nursing Staff at the PHCs / CHCs, Patients, On-ground Partner Field team member, and HHSIF team representative were conducted.

Stage 4: Data analysis and report writing

- The key findings were assimilated to better analyse the data.
- IRECS analysis was conducted using primary and secondary data.
- The draft of the impact assessment report was prepared for the HHSIF team.
- Feedback received from HHSIF was incorporated and the report was submitted to HHSIF for their management's consideration.

3.1. Sampling plan

The programme's impact was assessed using qualitative approach. For the assessment, multiple interactions were conducted to gather comprehensive feedback from stakeholders, including **In-Depth Interviews (IDIs), and Key Informant Interviews (KIIs)**. These samples were drawn from four states including **Haryana, Karnataka, Maharashtra and Uttarakhand**.

Basis the discussion with HHSIF and IP, In-person interactions were conducted at 2 PHCs locations both in Maharashtra (Pune District) and Karnataka (Bengaluru District). Additionally, virtual interactions were organised with Medical Officers from Community Health Centre (CHCs) in Haryana (Charkhi Dadri District) and PHCs Uttarakhand (Dehradun District). Since the onground partner had no active programme team in Tamil Nadu post completion of this programme, this location was excluded in consultation with HHSIF. For Haryana and Uttarakhand locations, interactions with only the Medical Officers (MOs) were organised. Type of stakeholders interacted with has been detailed in the table below:

Table 1: Qualitative sampling plan

Stakeholder Name	Type of Interaction	Mode of interaction	No. of interactions
Medical Officer (Haryana & Uttarakhand)	KII	Virtual	3 (1 MO in Haryana responsible for 2 CHCs) & 2 MO in Uttarakhand)
Medical Officer – (Maharashtra & Karnataka)	KII	In-Person	4 (2 in Pune & 2 in Bengaluru)
Nursing Staff	IDI	In-Person	4 (2 in Pune & 2 in Bengaluru)
Patients	IDI	In-Person	4 (2 in Pune & 2 in Bengaluru)
Americares Team	IDI	In-Person	1
HHSIF Team	IDI	Virtual	1
Total			**17**

3.2. Assumptions and Limitations

General:

- The procedures we will be performing will not constitute an audit, examination or a review conducted in accordance with generally accepted auditing standards or attestation standards in India or elsewhere.
- We will not carry out any work or make any enquiries of management after the date of our Impact Assessment Report. Our Impact Assessment Report will not incorporate the effects, if any, of events and circumstances which may occur, or information which may come to light, after the date of our Impact Assessment Report.
- Our Impact Assessment Report will not be a substitute for any enquiries and procedures that Client shall otherwise undertake and judgements Client shall make for any purpose.
- We have not been engaged to, nor will we, provide any management functions or make management decisions.
- PW will not act in the capacity of the Client management; the Client will identify qualified personnel responsible for overseeing the CSR Project(s). We will not assign responsibilities to Client personnel. It will be the responsibility of the Client to identify the core member team who will assist us in this assignment. We will not act in a supervisory capacity over members of Client.
- The study did not include conducting any KYC checks of the implementing partner, beneficiaries interacted on fields.
- We will not chair any internal meeting of the Client or represent the Client / Client's management in meetings with the other partners and/or beneficiaries.
- We shall not perform any independent verification or assessment for verifying the completeness, accuracy, correctness, authenticity or genuineness of the documents to be provided by any concerned party.
- We will not provide any solution/recommendation for dispute resolution, for the Client, with the NGOs/ stakeholders.
- We should not be held responsible for slippage of schedule due to non – availability of personnel from Client side and delay in providing information or obtaining feedback or facilitating local consultations.
- Our scope of work, including any advice / assistance, will be limited to the scope of Services specifically defined in the Contract. We will not be responsible for the implementation of our recommendations. Any additional work beyond the scope of the assignment shall only be carried out upon mutual agreement by both parties.
- All information or data required for the assignment will be provided by the Client to PW. Any discrepancy in data or wrong information provided by any respondent shall be sole responsibility of the Client.

- Completion of Delivery of the Services is subject to, among other things, Client's timely cooperation including receiving necessary information and timely response to PW's queries. PW will keep Client informed of its progress and of any proposed changes in this timetable should PW believe it will be unable to complete delivery of the Services by the requested date.
- If there are any circumstances that reasonably restricts travel or physical presence of our personnel at your office/location, then without prejudice to your payment obligations, you shall allow such personnel to work from home or other remote location till the time such reasonable restrictions exist. Any delay/default in performing our obligations arising from such restrictions, shall not be attributable to us and shall not be considered a breach on our part and no consequent damage/penalties etc. arising there from would be imposed on us.
- PW will not be designing and/or implementing a CSR system for the Client or designing processes and controls related to it. This assignment does not relate to internal control over financial reporting and does not generate information that is related to accounting records or financial statements.
- We will not finalise the Client's CSR policy, CSR Project's implementation plan and monitoring & evaluation (M&E) framework relating to CSR. PW will only provide recommendations for improvements in the select CSR Project(s) assessed for management's consideration.
- We will not prepare any policy and procedures manuals and will not be responsible for the implementation of our recommendations and management remediation plan.
- We will be responsible only for providing options for consideration of the Client and not make any management decision for selection, prioritization and implementation of the same.
- The current sample estimated is indicative in nature and may change basis the actual condition on the field and availability/non availability of respondents, further information shared by **HHSIF** etc.

Pertaining to this report:

- The report prepared by the PWCALLP is based upon the (a) information/ documents provided by HHSIF and its onground partner and (b) data collected by the PWCALLP team. PWCALLP performed and prepared the Information at the client's direction and exclusively for the client's sole benefit and use pursuant to its client agreement. Our report is based on the completeness and accuracy of the above-stated facts and assumptions, which if not entirely complete or accurate, should be communicated to us immediately, as the inaccuracy or incompleteness could have a material impact on our conclusions.
- PWCALLP's work was limited to the samples/ specific procedures described in this report and were base only on the information and analysis of the data obtained through interviews of beneficiaries supported under the programme, selected as respondents. Accordingly, changes in circumstances/samples/procedures or information available could affect the findings outlined in this report.

4. Key Findings and Analysis

This section provides an overview of key findings that emerged from the discussions with key stakeholders undertaken both – in-person and virtually:

4.1. Need for the intervention

The team noted the following challenges that emerged prior to programme intervention:

- **Limited diagnostic capacity at the primary level:** While basic diagnostics were available, the absence of essential and advanced laboratory equipment limited comprehensive diagnosis at PHCs and CHCs, particularly for NCDs and routine investigations. This resulted in extended test durations, delays in report availability, and avoidable referrals to higher facilities such as district hospitals.
- **Community Perception and Trust in PHC / CHC Services:** Repeated referrals, limited diagnostic availability and interruptions in services shaped community perception of PHCs / CHCs as transit points rather than comprehensive and trusted care centres, negatively influencing their health seeking behavior.

4.2. Impact of the intervention

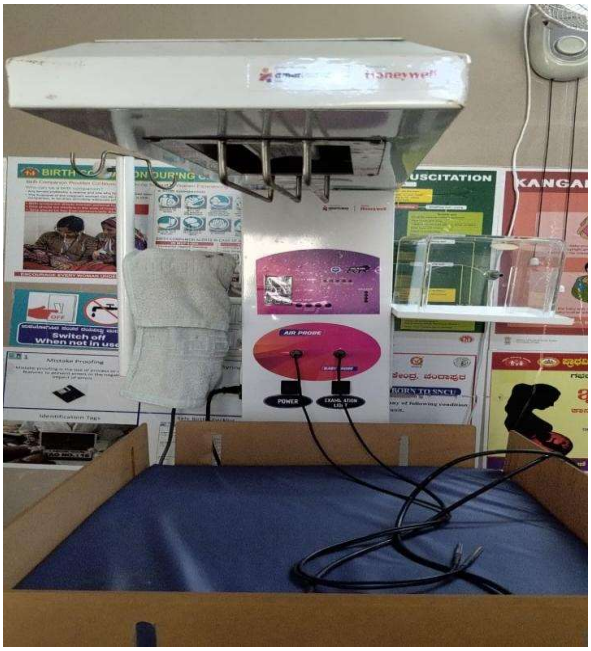
4.2.1. Strengthened Clinical Readiness and Facility Functioning Through Reliable Diagnostics and Essential Equipment

- Following the upgradation supported by HHSIF, an **enhancement in the ability to deliver timely and accurate primary healthcare services** was noticed at all PHCs that the team visited. Prior to the intervention, each PHC/CHC visited and interacted with described significant constraints caused due to outdated laboratory tools, rusted or non-functional equipment, and lack of diagnostic equipment and personnel that forced providers to depend on external facilities for even the most basic tests.
- The Medical Officer (PHC Chakrata, Uttarakhand) shared that prior to the intervention, basic tests were either not available or took two to three days because samples had to be sent to external laboratories for testing, which delayed diagnosis and treatment. However, with the installation of the biochemistry analyser, Hematology Analyser and HbA1c system, the PHCs can now conduct these investigations within the centre itself, **enabling same day diagnosis for most of the tests and reducing turnaround time for patients significantly.**

Figure 6: Hematology Analyser & Serum Centrifuge made available in PHCs (Pune District)

- Similar gains were observed in Maharashtra. Khanapur PHC staff shared that earlier, frequent shortages and outdated tools affected service quality. The upgraded equipment including **centrifuge, child weighing scales, AMBU bags and emergency kits** helped restore routine functioning and extend reliable services to neighboring villages.

Figure 7: Delivery table provided in one of the PHC in Pune and Baby Warmer at a PHC in Bengaluru



- In Bengaluru's Chandapura PHC, the replacement of a decade old newborn and delivery room equipment **directly improved maternal and neonatal care.** Staff further shared that the delivery table they previously relied on had become unstable over the years, requiring repeated patchwork repairs to continue its usage. With the new advanced table installed under the programme, they are now able to position mothers safely during labour and manage complications such as postpartum hemorrhage with greater control, significantly improving delivery room readiness.
- PHC teams across states highlighted that the **equipment closely aligned their service needs** rather than being generic, indicating that the provision was appropriate and responsive to actual clinical requirements. This has strengthened staff confidence in managing emergencies, conducting camps, or handling routine OPDs more efficiently. The assessment team also observed during field visits that equipment identified as priority requirements through facility assessments was available and installed at the PHCs visited, supporting effective utilisation.
- The On-ground Partner also highlighted that **equipment selection was guided by facility level assessments** and validated in consultation with district health authorities. According to them, only those devices that aligned with the PHC's service load and utilisation potential were prioritised, which helped ensure that all supplied equipment was actively used.
- Across all locations, Medical Officers shared that the upgraded diagnostic equipment and essential tools fundamentally changed how the **facilities could respond to routine and urgent healthcare needs**. Earlier, PHCs struggled with limited diagnostic capacity, unreliable equipment, and basic service gaps that delayed care and prompted frequent referrals.

The upgradation has enabled PHCs to move from a referral dependent environment to a more capable, self-sufficient system where firs point of service and stabilization can be handled locally. This has contributed to reduced treatment delays, improved the quality of clinical decision making, and strengthened the ability of PHCs to deliver more comprehensive and dependable primary care aligned with the vision of strengthened public health delivery. PHC staff further indicated that the equipment provided was relevant to their needs and actively utilised for routine and emergency care, reflecting appropriateness and effective use of the support extended.

4.2.2. Enhanced Workflow Efficiency, Staff Coordination and Operational Confidence Among PHC Teams

- Infrastructural upgrade also made an impact on internal functioning of healthcare facilities. Before upgradation, staff across states described **spending substantial time managing workarounds** whether shifting nonfunctional equipment across rooms, managing long queues with limited seating, or coordinating referrals for even simple diagnostic needs. Nursing staff explained that they were often fatigued, especially during ANC sessions and immunisation camps, because the supporting equipment was unreliable or inadequate.

After receiving **upgraded devices along with other supporting equipment** (refer Figures 7 & 8) such as benches, organising trays, crash cart, OT Table (used for deliveries as well), Almirahs, baby warmers, trolleys, bio waste bins, adult and new born weighing machines and other essentials, staff reported **far more structured workflows.**

> *"With reliable equipment now in place, we are able to organise multiple camps—such as leprosy, ANC and vaccination camps—without the operational stress we faced earlier. The improved delivery room setup has also allowed us to resume normal delivery services, which were difficult to manage when equipment was inadequate."* - **Nursing Staff, PHC Anungondunhalli (Bengaluru)**

Figure 8: Crash Cart & Newborn child weighing scale

- In Uttarakhand, the Medical Officer highlighted that **lab related improvements reduced manual effort and freed up staff time** for patient engagement. In Karnataka, the upgraded seating areas created comfort for ANC patients and elderly beneficiaries, contributing to quieter, better managed waiting areas and reducing the burden on nursing staff for crowd management. Staff also reported smoother coordination between lab technicians, MOs, and nursing teams, with tasks being distributed more naturally due to the availability of appropriate equipment.

- Importantly, staff members including MOs across geographies mentioned that the improved setup **enhanced their professional confidence**. A Head Nurse in Bengaluru explained that earlier, working with outdated instruments created constant anxiety about equipment failure, but the new devices made the staff feel confident on undertaking their respective daily tasks appropriately. This sense of capability is crucial in PHCs that work with limited human resources and high patient load.

Figure 9: Honeywell branding in PHCs visited in Maharashtra & Karnataka

- PHC support staff and On-ground Partner field teams highlighted the short turnaround between needs assessment and delivery of equipment. Once facility requirements were finalised, procurement and installation were completed within a streamlined timeline, enabling prompt installation and early operationalisation of approved equipment. This efficient approach supported smooth integration of upgraded devices into routine service delivery and helped ensure uninterrupted access to essential services at the facility level.
- Alongside these implementation processes, field observations also noted variability in the visibility of programme branding across supported equipment and facilities. Consistent branding may help strengthen recognition of CSR support at the facility level without affecting routine service delivery.
- Some PHCs also pointed out infrastructure gaps that affected optimal utilisation of the upgraded devices. Support staff in Bengaluru and Pune PHCs noted the need for power backup solutions, air-conditioning for OT and delivery rooms, and RO water systems for patient use, which would further help ensuring uninterrupted and efficient functioning of key equipment.
- Across multiple PHCs, Medical Officers shared that the equipment provided under the intervention came with an average warranty period of one year, during which no major functional issues were reported. Staff noted that the improved quality of devices contributed to stable functioning in the initial months. Beyond the warranty period, most PHCs indicated that maintenance in their PHC is generally managed through technical partners empaneled by the Health Department, who service multiple government supplied devices during their scheduled visits. However, a few facilities particularly in Haryana highlighted that visiting technicians are sometimes reluctant to service equipment procured through CSR support, indicating a gap that may require system level coordination to ensure long term upkeep.

Based on this, it can be inferred that the improvements in equipment and internal arrangements have helped PHC teams now **manage their daily workload more efficiently**. Staff now operate within a more **reliable and organised environment,** which allows them to focus on patient care rather than compensating for infrastructural gaps. Better quality tools, smoother coordination between clinical and laboratory teams, and **reduced operational friction** have all contributed to a work setting where responsibilities are clearer and service delivery is more predictable. Importantly, the **increased sense of control and confidence reported by staff** suggests that the upgradation has improved their efficiency.

4.2.3. Improved Patient Confidence, Faster Care-Seeking and Higher Uptake of PHC Services

Communities demonstrated a noticeable shift in how they perceive and utilise the PHCs. PHCs that earlier had limited capacity were increasingly used as points of care following improvements in on-site diagnostics, clinical responsiveness and patient processes. These changes supported more consistent use of PHCs by the community for routine, preventive and follow-up services. This renewed confidence reflected in higher footfall and more regular attendance for preventive and follow-up services, as shared by the Medical Officers across PHCs.

- Prior to the upgradation, patients in several states reported turning to CHCs, private laboratories or local chemists because essential tests or basic services were often unavailable at the PHC. With the **strengthened facilities**, PHCs are now able to meet such routine needs within the facility itself, making them a more convenient and credible option for households who earlier relied on external providers.

> *"I have been coming to this PHC for nearly 30 years. Earlier, many services were unavailable, and we were often asked to go elsewhere. Now, everything gets done here itself."* - ***Patient, Khanapur PHC (Maharashtra)***

- In consensus to this, the PHC staff also reported a **noticeable rise in OPD attendance** following the upgradation, reflecting a shift in **patient confidence and preference for PHC-based care**. PHCs such as Khanapur (Pune) recorded on an average, increase from 70 – 80 to around 110 OPD (approximately 40% increase in OPDs) cases per day. In Bengaluru, Chandapura PHC, which caters to a large population including migrant families, reported steady use of strengthened maternal and neonatal services. Nursing staff there shared that 10 to 15 deliveries continue to take place each month, supported by the upgraded equipment.
- Patients during interactions also expressed that their **waiting time at the PHC has reduced considerably**. A beneficiary of a PHC in Karnataka explained that they receive counselling and medicines within 15 minutes most days, reflecting smoother internal coordination and reduced dependency on external laboratories. For daily wage earners, this reduction in waiting time and travel directly lowers opportunity costs and makes the PHC a more practical choice for routine healthcare needs.
- Medical Officer from Uttarakhand (PHC Dudhli) shared that they are able to observe behaviour changes among the communities availing of PHC services. Earlier, patients normally avoided recommended tests or did not return with reports from external labs. With diagnostics now available on site, patients show **greater willingness to undergo investigations and comply with follow up advice**, resulting in earlier diagnosis and more consistent monitoring of chronic conditions. This pattern was particularly evident in Ante-Natal Care (ANC) services and NCD clinics, where same day test results improve counselling and treatment adherence.

4.2.4. Reduced Referral Rate Through Expanded Local Care Management and Stabilisation Capacity

A Primary Health Centre is designed to serve as the first point of contact for outpatient care, basic diagnostics, maternal and newborn services, and management of routine acute illnesses (NCD & Non-NCD cases both). As per Indian Public Health Standards (IPHS)[4], PHCs are expected to manage conditions that fall within the scope of primary care and to refer patients to higher level facilities only when specialised investigations, advanced imaging, surgical procedures or intensive care are required. In practice, however, many PHCs were compelled to refer patients even for conditions that could ordinarily be managed at the primary level, largely because essential diagnostic tools, basic emergency equipment or functional delivery room infrastructure were not available.

- The upgradation directly addressed these foundational gaps by providing them with the tools basis their requirement to **meet the service expectations defined in national guidelines**. As a result, staff across Haryana, Uttarakhand, Maharashtra and Karnataka reported **reduction in avoidable referral rates**.

[4] https://nhsrcindia.org/sites/default/files/PHC%20IPHS_2022_Guideline_pdf.pdf

- During interactions, HHSIF team emphasised that the objective of the initiative was to strengthen public primary healthcare systems rather than create parallel service delivery. The focus was on enabling PHCs to **perform their mandated functions more effectively within the existing government framework**.
- Tests that previously required external support such as basic blood investigations or emergency first line management are now handled within the PHC. This has enabled patients to receive care closer to home and **eased unnecessary pressure on higher-level public health facilities**.
- In Haryana, Medical Officer explained that stabilisation of pediatric respiratory issues using nebulisers (equipment support provided by HHSIF) has **significantly reduced emergency referrals**. The availability of essential delivery-room equipment at facilities has strengthened their ability to manage routine, uncomplicated deliveries as mandated for PHCs, while ensuring that any C-section requirements or delivery-related complications continue to be referred to the CHC or district hospital as per IPHS referral norms. A PHC in Uttarakhand, (Dudhli), noted that emergency care for road accidents, dog bites, and snake bites could now be managed more effectively before referral.

> *"Earlier, we struggled to manage emergencies. Now, we stabilise patients and then refer them with proper coordination to the receiving hospital."* ***– Medical Officer, PHC Dudhli (Uttarakhand)***

- PHC / CHC staff also observed that **faster diagnosis resulted in better referral decisions**. Rather than sending patients prematurely or out of caution, PHCs could determine who genuinely needed secondary care. This helped reduce both patient expenses and the workload of higher-level facilities. In several interviews, providers emphasised that the community now sees the PHC as the first point of contact for larger parts of their healthcare needs rather than considering it for minor illnesses only.

PHCs are now better able to **handle the level of care expected at the primary tier,** while ensuring that **escalations are appropriate and clinically justified**. This shift has strengthened the integrity of the referral pathway and reinforced the PHC's role within the broader public health system.

4.2.5. Improved Community Health Outcomes and Reduced Household Burden Through Accessible Care

Various programme stakeholders (MOs, Support staff, IP) across states shared that patients often travel several kilometers (an average of 5 KMs at least) to reach a government hospital when required services are not available at their nearest PHC. If their local PHC is unable to provide the required services, which can translate into **lost wages, out-of-pocket travel expenses, and delays in seeking care**.

- In this context, the presence of a PHC that is adequately equipped and functionally prepared marks an **improvement in accessibility**. With essential diagnostics and routine clinical services now available within the PHC itself, communities are better able to address health concerns promptly, receive appropriate counselling, and undertake travel to higher level facilities only for conditions that lie beyond the mandate and capacity of primary care facilities.
- In regions like Uttarakhand, where geographical terrain makes travel difficult, same day reporting for basic tests such as Complete Blood Count (CBC) or urine analysis has **allowed patients to start treatment immediately, preventing complications**. Providers noted that more **patients now adhere to follow up** schedules because they no longer need to travel long distances for basic investigations.
- Several PHCs reported improved outcomes in maternal and child health. In Haryana, MO highlighted that reliable neonatal equipment enhanced the safety and comfort of newborn care. In Maharashtra, frequent nebulisation for children with respiratory infections helped prevent escalation and unnecessary hospitalisation.

- The impact was equally meaningful regarding the financial stress. Patients shared that earlier, multiple visits to CHCs or private labs affected their finances and caused loss of wages, as large proportion of the patients who avail PHC facilities come from weaker economic background, as mentioned by IP. Having **reliable diagnostic and clinical services available within the PHC** allowed families to **save time, money, and effort.**

> *"The community saves both time and money now. Earlier, even the smallest test meant travelling far and losing a day's work, but most of those services are available at the PHC itself."* ***– Medical Officer, PHC in Charkhi Dadri District (Haryana)***

The intervention has therefore contributed not only to more **timely and comprehensive care**, but also to wider **social and economic relief for community members**, reinforcing the PHC's position as a critical and dependable institution supporting local well-being.

5. IRECS Framework

Based on the interactions with the key stakeholders and desk review, the impact of the programme was also assessed on the IRECS framework parameters. The IRECS analysis summary has been presented in the table below.

Table 2: IRECS Table

Parameter	Assessment from Study
Inclusiveness	• The upgradation **improved access for populations who earlier had to travel several kilometres to higher level facilities for basic tests** and routine care, particularly affecting daily wage earners, ANC beneficiaries, elderly patients, and low-income households. • PHCs serving diverse communities including migrant populations in Bengaluru and multiple nearby villages in Maharashtra and Uttarakhand, reported increased utilisation of services, indicating broader inclusion across demographic groups. • On-site availability of diagnostics and routine care enabled more patients to seek timely treatment and adhere to follow ups schedule, reducing dependence on private laboratories and reducing out-of-pocket expenditure.
Relevance	• The intervention **directly addressed critical gaps reported by PHCs** across states such as outdated laboratory tools, nonfunctional delivery equipment, lack of emergency stabilisation tools, and shortages of essential devices (CBC analyser, Biochemistry analyser, HbA1c analyser, Centrifuge for serum separation), which were limiting service delivery. • Equipment provided **matched facility specific needs** rather than generic lists, as repeatedly emphasised by Medical Officers and nursing staff. • The upgrades **aligned with the service expectations defined under IPHS norms** for PHCs, enabling them to perform mandated primary care functions more effectively.
Effectiveness	• PHCs reported significant **improvements in routine service delivery**, including same day reporting of basic tests, enhanced ANC profiling, and timely management of common acute conditions. • Multiple PHCs reported a **visible rise in daily outpatient attendance** following the upgradation, indicating that strengthened service readiness and improved patient

Parameter	Assessment from Study
	experience have contributed to higher and more consistent utilisation of public primary healthcare services across locations. • Staff highlighted **smoother workflows, reduced operational fatigue**, improved coordination between clinical and lab teams, and stronger confidence in handling daily caseloads. • Enhanced readiness **improved patient experience** resulting in shorter waiting times, faster diagnosis, and reduced reliance on external facilities for basic investigations.
Convergence	• The intervention demonstrated coordination between **HHSIF, Onground Partner, PHC staff, and District Health Authorities**, especially during needs assessment, validation, and installation of equipment. • Provisioning of equipment **complemented and further strengthened existing government service delivery** processes rather than creating parallel systems, particularly evident in laboratory functioning and emergency stabilisation pathways.
Sustainability	• Improved utilisation patterns and **stronger patient trust** indicate that PHCs are better positioned to sustain higher service uptake without additional behaviour change efforts. • Government AMC mechanisms were available for some equipment categories, and staff expressed confidence in continuing to use devices effectively with periodic training support. • By **strengthening core infrastructure** and enabling PHCs to perform their mandated IPHS level services, the intervention supports long term operational stability and reduces dependence on higher facilities for basic care.

6. Alignment to the HHSIF's CSR Policy and the UN SDGs

The programme aligns with HHSIF's **Key Focus Area - Sahayata**[5]. It also supports the achievement of **Sustainable Development Goals**[6], specifically SDG 3, SDG 10, SDG 16 & SDG 17.

- **SDG 3 (Good Health and Well-being)**: Improved access to same-day diagnostics, maternal and newborn services, and basic emergency stabilisation has strengthened frontline primary care. The intervention enabled patients to seek timely care within their own communities, reducing delays in treatment and improving early case management.
- **SDG 10 (Reduced Inequalities)**: Strengthening PHCs in rural, remote and economically weaker geographies ensured that essential services are available to populations who previously travelled long distances or relied on private providers. By reducing out-of-pocket expenditure and improving local access, the intervention narrowed disparities in healthcare utilisation among underserved groups.
- **SDG 16 (Strong Institutions)**: Upgraded PHCs demonstrated improved reliability, operational efficiency, and stronger adherence to IPHS mandated service delivery norms. The enhanced readiness and smoother workflows increased community confidence in public facilities, reinforcing the role of PHCs as credible institutions within the government health system.
- **SDG 17 (Partnerships for the Goals**) The initiative illustrates effective collaboration between Honeywell HHSIF, Americares India Foundation, PHC teams and district health authorities, resulting in targeted and relevant upgrades. The coordinated approach ensured that investments complemented government systems and built long-term capacity rather than creating parallel structures.

7. Recommendations

The following recommendations have been suggested based on our observation and the discussion with the programme stakeholders.

1. Strengthen Post Warranty Maintenance Systems for Long Term Equipment Functionality

While PHCs acknowledged the quality and stability of newly installed diagnostic and maternal newborn care devices, maintenance after the expiry of one year warranty period should be addressed.
A structured model of post warranty upkeep can be ensured, whether through extended warranty agreements, AMC add-ons or inclusion of CSR supplied equipment in existing repair schedules at district level. This would ensure uninterrupted functioning. This is especially important for high end machinery provided to the PHCs, which directly influence timely diagnosis, emergency stabilisation, and maternal and newborn outcomes.

2. Consider Provision of Enabling Infrastructure to Optimise Use of IPHS-Aligned Equipment and Ensure Service Continuity

All core medical and diagnostic equipment under the programme was provided in alignment with Indian Public Health Standards (IPHS) and based on assessed facility requirements. To further support smooth execution and uninterrupted service delivery, select enabling infrastructure—over and above IPHS provisioning—may be considered.
Targeted additions such as power backup for diagnostic equipment, air-conditioning in OT and delivery rooms, RO water systems for patient use, and assured power supply during emergency stabilisation would enhance operational reliability. These measures would help PHCs fully leverage the equipment already provided, minimise service disruptions, and strengthen continuity of care, particularly in high-volume facilities.

[5] Source: https://www.honeywell.com/in/en/csr#our-impact
[6] Source: https://sdgs.un.org/goals