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PHC PERFORMANCE MANAGEMENT (PHC-PM) ACTIVITY

BUGESERA, RWANDA

Improving Antenatal Care Coverage through a Performance Management Approach

1. INTRODUCTION & CONTEXT

Bugesera District in Rwanda's Eastern Province serves a population of more than 620,000 people[1] and covers a relatively large geographic area with communities widely dispersed across the district. Travel distances and transportation barriers can make it difficult for pregnant women in some areas to access routine maternal health services.

The district health system includes two hospitals, 15 health centers, and 59 health posts, supported by 2,251 community health workers (CHWs) who provide community-based services and referrals. Together, these facilities and CHWs form the backbone of primary health care (PHC) in the district.

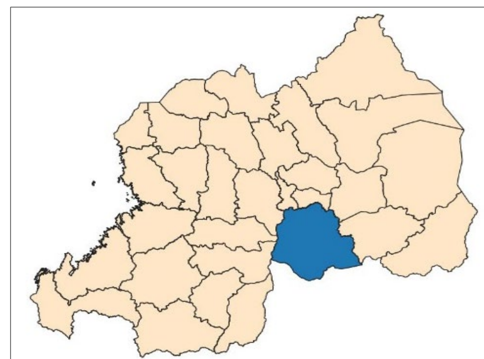

Figure 1. Bugesera District

Despite Bugesera's network of facilities and CHWs, antenatal care (ANC) coverage has remained uneven across communities and facilities. Early ANC attendance is critical

[1] As per the latest National Institute for Statistics projections (pulled from HMIS, 2024).

because it enables health workers to identify risks, provide preventive interventions, and ensure continuity of care in pregnancy.

ANC1 coverage, the proportion of pregnant women who attend their first ANC visit, serves as a key indicator of PHC system performance. Through routine data review, the District Health Management Team (DHMT), responsible for planning, supervision, data use, and coordination across this network of facilities and CHWs, identified low early ANC attendance across parts of the district.

The DHMT selected ANC1 coverage as one of its Desired Measurable Results (DMRs) due to these persistent gaps. The challenge reflected a combination of system and population-level factors. A family planning acceptance rate below 50% contributed to higher fertility and increased demand for ANC services, while ANC1 performance remained below the national average and the national target of 100%. This gap between service demand and early uptake highlighted weaknesses in community mobilization, service readiness, and timely engagement of pregnant women (see Table 1).

Through the Primary Health Care Performance Management Activity (PHC-PM), the Bugesera DHMT received support to analyze performance data, identify root causes, and implement improvement actions through structured improvement cycles under the PHC Leadership Development Program (PHC-LDP).

This case study summarizes Bugesera's improvement journey across two PHC-LDP cycles—Cycle 2 (Oct 2024–May 2025) and Cycle 3 (Jun 2025–Dec 2025). It highlights the strategies implemented, results observed, and lessons learned to support long-term system strengthening. The DHMT initially focused on strengthening service readiness and CHW engagement and later shifted toward enhancing provider competency, structured supervision, and accountability systems. This progression reflects a deliberate move from addressing foundational gaps toward embedding stronger performance management practices within routine district operations.

2. ROOT CAUSES & BARRIERS IDENTIFIED

Improving ANC1 coverage required a clearer understanding of the systemic and behavioral factors limiting access to care. Prior to the PHC-PM Activity, several PHC and maternal health indicators in Bugesera District were below the national average, including health worker density, family planning acceptance rate, neonatal mortality rate, and ANC1 and ANC4 coverage (Table 1).

Through routine data review and analysis, the DHMT identified several barriers related to community engagement, service readiness, and staffing that contributed to low ANC1 coverage.

Insufficient community mobilization for ANC services: CHWs were not fully engaged in existing community mobilization activities. In addition, CHWs received limited supervision and operated with minimal operational budgets, which constrained their ability to support early pregnancy identification and ANC referral.

Insufficient equipment and materials to support quality ANC services: Some health centers lacked fetal heart rate monitors needed to support routine ANC consultations. These monitors are less technical than ultrasound machines and can be used by a broader range of health workers, allowing greater access to basic fetal monitoring during ANC visits.

Shortage of skilled staff in health facilities: Health facilities faced staffing constraints due to limited budgets for recruitment and shortages of qualified personnel able to implement the national ANC protocol. Staff with the required skills were often unavailable and some providers reported limited awareness of updated ANC protocols. In Rwanda, staffing decisions are largely managed at the national level, which limits district-level autonomy to recruit staff according to local needs.

Several of these root causes reflect underlying behavioral and system drivers. Limited CHW engagement stemmed not only from resource constraints but also from unclear expectations and weak supervision practices. Staffing challenges were compounded by gaps in provider confidence, inconsistent adherence to ANC protocols, and limited district authority to respond to staffing shortages. Identifying these root causes enabled the DHMT to better understand the contextual factors shaping ANC performance and informed the design of subsequent improvement strategies.

3. IMPROVEMENT STRATEGY & PRIORITIZED ACTIONS

Through the PHC-LDP approach, the DHMT translated findings from its root cause analysis into a focused improvement strategy aimed at strengthening early antenatal care (ANC1) attendance across Bugesera District. The strategy prioritized actions that could realistically be implemented within existing system constraints while improving early pregnancy identification, service readiness, and coordination between community and facility services.

In the first improvement cycle (Cycle 2), the DHMT prioritized strengthening service readiness and improving coordination between CHWs and health facilities. The strategy focused on improving community-level pregnancy identification and ensuring that facilities could respond effectively to increased demand for ANC services. Catalytic grants provided flexible resources that enabled the DHMT to address priority gaps identified during the root cause analysis, including strengthening community mobilization and improving basic service readiness.

As implementation progressed, the DHMT refined its approach during the subsequent cycle (Cycle 3) by strengthening provider competency, structured supervision, and accountability systems. Greater emphasis was placed on routine performance monitoring and reinforcing coordination between facility teams and CHWs.

Through this phased approach, the DHMT moved from addressing foundational gaps in pregnancy identification and service readiness toward institutionalizing stronger performance management practices within routine district operations

Table 1. Evolution of DHMT Strategy for ANC1 Across Two PHC-LDP Cycles

Cycle	Focus	How Strategy Evolved
Cycle 2 (Oct 2024 – May 2025)	Service readiness & CHW engagement	Strengthened community engagement and coordination between CHWs and health facilities
Cycle 3 (Jun 2025 – Dec 2025)	Provider competency & supervision	Reinforced supervision, provider support, and routine performance monitoring

4. IMPLEMENTATION: KEY ACTIVITIES ACROSS CYCLES

Implementation occurred across two PHC-LDP improvement cycles (Oct 2024–Dec 2025), each addressing key drivers of early antenatal care attendance identified during the root cause analysis. The DHMT used routine performance monitoring and supervision to guide implementation and adjust strategies across the cycles.

Targets were identified using routine performance data from the Rwanda Health Analytics Platform (RHAP), which visualizes data from the national Health Management Information System (HMIS). These data allowed the DHMT to track ANC performance trends across facilities and identify areas requiring additional attention.

Figure 2. Coordination with CHWs at Mareba Health Center

Cycle 2: Strengthening Service Readiness and CHW Engagement (Oct 2024 – May 2025)

During Cycle 2, the DHMT focused on strengthening service readiness and improving coordination between health facilities and CHWs to support early ANC attendance. Health center leads strengthened implementation through structured supportive supervision, with the DHMT emphasizing timely supervisory visits to reinforce oversight and district priorities.

Building on this foundation, monthly CHW coordination meetings became routine practice, strengthening linkages between health centers and CHWs and providing a platform to review community-level activities, coordinate pregnancy identification efforts, and improve referral and follow-up of pregnant women. CHW engagement expanded further through participation in patient education activities, including morning health talks led by nurses and midwives. These sessions reinforced health messaging while strengthening collaboration between facility staff and community workers, reflecting a deliberate effort by the DHMT to strengthen coordination between community and facility services.

During this cycle, the DHMT also addressed gaps in equipment and materials required for ANC services. In March 2025, the DHMT

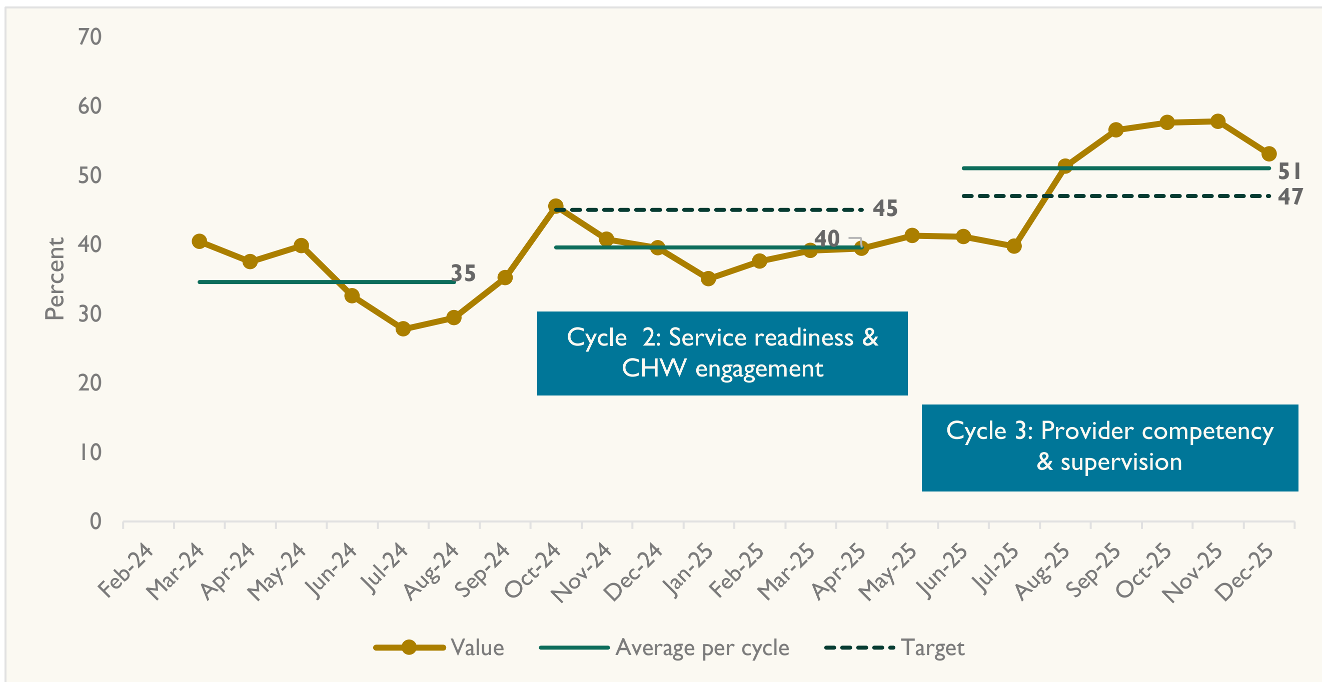

Figure 3. ANC 1 Coverage - Bugesera District (February 2024 – December 2025).
ANC1 coverage increased from 35% at baseline to 40% during Cycle 2 and reached 51% by the end of Cycle 3, exceeding the district target of 47%.. Although monthly fluctuations occurred—particularly during harvesting seasons (June 2024, January 2025, July 2025)—the overall trend reflects strengthened community mobilization, improved service readiness, and targeted demand-creation efforts during Cycle 3.

procured essential equipment including dopplers, blood pressure machines, ultrasound gel, delivery kits, and microcuvettes. Procurement delays and unclear equipment specifications initially slowed implementation, highlighting the need for stronger leadership oversight during the procurement process. Catalytic grants supported several of these activities by supplementing existing district efforts, including CHW meetings, supervision visits, and community health education activities.

Figure 4. Purchase of medical equipment at a health center in Bugesera

Cycle 3: Strengthening Provider Competency and Accountability (Jun 2025 – Dec 2025)

During Cycle 3, the DHMT built on groundwork laid in Cycle 2 to deepen its focus on provider competency and reinforcing accountability systems for ANC services. Staffing advocacy through formal letters and meetings with district and central authorities, led by the Vice Mayor, had resulted in the recruitment of 14 new staff members by February 2025.

Training on updated national ANC protocols had similarly been completed in February 2025, reaching 30 health center staff and 10 hospital

staff. Catalytic grants extended this work into Cycle 3 by financing continued capacity strengthening and enabling procurement of essential equipment needed to support ANC service delivery.

Through this phased approach, the DHMT strengthened service readiness, improved provider capacity, and reinforced coordination between community and facility services.

5. RESULTS & EVIDENCE OF CHANGE

Implementation of the PHC-LDP improvement cycles coincided with improvements in ANC1 coverage and several system drivers of maternal health service delivery in Bugesera district. Performance trends varied across months, reflecting both seasonal factors and implementation adjustments. Routine monitoring data illustrate both steady gains and the influence of refined strategies across Cycle 2 and Cycle 3.

Primary DMR Outcome: ANC1 Coverage

At baseline, ANC1 coverage stood at 35%. During Cycle 2 (start of improvement initiative), coverage increased to an average of 40% coinciding with improvements in equipment availability, staff training, and strengthened supervision practices. During Cycle 3, the DHMT expanded community engagement and mobilization efforts, including greater involvement of local leaders and more diverse outreach approaches. By the end of Cycle 3, ANC1 coverage reached 51%, exceeding the district target of 47%.

Monthly fluctuations occurred during certain periods, particularly during harvesting seasons (June 2024, January 2025, and July 2025). These fluctuations highlight the importance of continued monitoring and targeted engagement during periods when service utilization may decline.

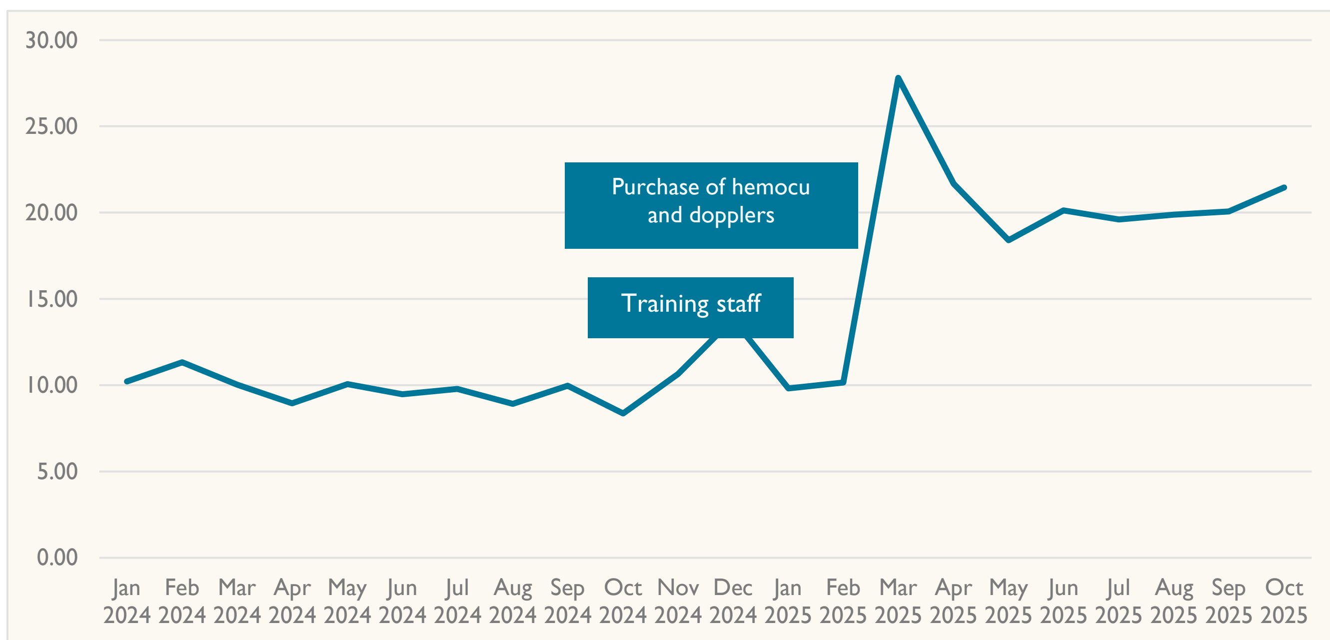

Figure 5. Percentage of High Risk Pregnancies Detected – Bugesera District (January 2024 – October 2025)
High-risk pregnancy detection increased sharply following the purchase of hemocues, dopplers and subsequent staff training, possibly in conjunction with improved ANC service delivery as a result of the PHC-PM Activity.

Overall, the upward trend in ANC1 coverage coincided with strengthened service readiness, expanded community engagement, and more consistent monitoring of maternal health indicators.

System Strengthening Outcomes

In addition to improvements in ANC1 coverage, several system-level changes strengthened maternal and newborn health service delivery across the district.

- ***Expanded service readiness:*** the number of health centers equipped with functional fetal heart rate monitors increased from 0 to 15 facilities, improving access to essential ANC diagnostic services at the primary care level.
- ***Enhanced provider capacity:*** nearly 40 health workers received training on updated ANC protocols, strengthening adherence to national guidelines and improving provider capacity to identify and manage high-risk pregnancies.
- ***Improved high-risk pregnancy detection:*** following procurement of hemocues and dopplers and associated staff training, detection of high-risk pregnancies increased, reflecting strengthened diagnostic capacity and improved quality of care.

Although ANC1 coverage was the selected DMR, these system-level improvements illustrate broader strengthening of maternal health service delivery associated with the PHC performance management approach in Bugesera district.

6. LESSONS LEARNED, SUSTAINABILITY, & RECOMMENDATIONS

Implementation of the PHC-LDP approach in Bugesera revealed several operational challenges and lessons related to service readiness, workforce constraints, and coordination across the maternal health system.

The Bugesera DHMT faced several challenges during implementation of the PHC-LDP approach. These included stock-outs of essential medical devices such as Hemocue and disruptions in the pharmaceutical supply chain. Procurement delays and delayed delivery of equipment also created operational bottlenecks during implementation. The district also faced shortages of qualified staff. Limited availability of trained personnel and low pass rates in qualifying exams reflected broader national constraints that affected district-level staffing capacity.

Despite these constraints, the DHMT identified several practices that supported improvements in ANC services. Regular DHMT review meetings helped identify bottlenecks such as delayed equipment delivery and allowed the team to adjust implementation strategies. Reflection on missed targets during Cycle 2 prompted refinement of the community mobilization strategy, demonstrating adaptive management during the improvement cycles.

Staff training on ANC protocols strengthened adherence to national guidelines, while engagement with local leaders and CHWs elevated ANC as a community priority. CHWs were more intentionally integrated into coordination meetings, and Community and Environmental Health Officers (CEHOs) strengthened supervision of CHW activities. Procurement of essential ANC equipment, combined with training on proper use, expanded service capacity across facilities.

Lessons learned and recommendation

Across the implementation cycles, the Bugesera DHMT identified several lessons relevant to strengthening ANC service delivery:

- Procurement delays can disrupt implementation sequencing; proactive supply chain risk assessment is essential.
- Reorganizing ANC service delivery and triaging clients improves efficiency and quality of care.
- Targeted community mobilization—including CHW engagement and involvement of local leaders—strengthens early ANC uptake.
- CHWs visiting newly married couples helps promote early ANC engagement.
- Addressing negative staff behaviors and mindsets helps ensure roles and responsibilities are fulfilled effectively.
- Strong and consistent supervision of CHWs by CEHOs improves accountability and performance.
- Strengthening district ownership of routine data systems improves accountability and practical use of performance data.

Sustainability Conditions

To sustain improvements in ANC services, the DHMT aims to continue integrating these practices into routine district operations. Strengthened supervision structures, continued engagement of CHWs in community mobilization, and regular review of RHAP and HMIS data will remain central to monitoring ANC performance.

Maintaining functional equipment and ensuring continued adherence to national ANC protocols will also be important for sustaining service quality across facilities.

Key System Opportunities for Scale-Up

The Bugesera DHMT identified several strategies from the intervention that other districts could adapt to their context:

- Purchase of medical equipment for ANC service delivery, followed by training to ensure effective utilization.
- Organizing meetings with local leaders and fostering their active involvement to strengthen community engagement and support for DHMT initiatives.
- Facilitating collaboration between the DHMT and health facilities including inviting technical health staff to DHMT meetings and conducting more regular field visits to health centers by DHMTs
- Involvement of all local leaders from sectors and cells in mobilization to increase ANC attendance.
- Increased ownership of leaders and staff with regards to ANC equipment and the ANC protocols.

Recommendations for Future Scale-Up

The Bugesera experience offers several insights for policymakers and DHMTs seeking to strengthen early ANC attendance:

- Strengthen district capacity for supply chain planning and procurement oversight.
- Sustain structured supervision systems linking CHWs, CEHOs, and health facilities.
- Continue integrating CHWs into community mobilization and health education activities.
- Reinforce routine use of district data systems to guide performance monitoring and decision-making.

Together, these lessons demonstrate how PHC performance management practices can strengthen ANC coverage and support improvements in maternal health services.

ABOUT THE PROJECT

PHC is the foundation of resilient and equitable health systems. Strong local leadership is essential to ensuring accessible, high-quality care that responds to community needs. In Ghana and Rwanda, national and district health authorities are strengthening health system performance through the PHC-PM Activity—an initiative led by government partners and implemented with local institutions, with support from the Gates Foundation and technical partners including MSH. At the heart of the model are four interlinked components, each designed to reinforce district leadership, evidence-based decision-making, and sustained PHC system improvement:

1. Leadership development
2. Operational data & integrated dashboards
3. Ongoing monitoring, evaluation, and learning (MEL)
4. Catalytic grant funding

Through adaptive performance management cycles, district health authorities continuously analyze, monitor, learn, and adapt—maturing over time into effective stewards of district health systems. The PHC-PM Activity is a collaboration between MSH, Ubora Institute (Ghana), Building Systems for Health (Rwanda), Three Stones International (Rwanda), HISP Ghana, Zenysis, and district and national health authorities.