Country Report

Ghana

Improving health workforce performance

Key project information
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<th><strong>Title of research programme:</strong></th>
<th>Supporting decentralised management to improve health workforce performance (PERFORM)</th>
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<td><strong>Reference number:</strong></td>
<td>266334</td>
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<td><strong>Partners:</strong></td>
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<td><strong>Institute of Development Studies, University of Dar-es-salaam</strong></td>
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<td>Human immunodeficiency virus</td>
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<td>Iron-folic Acid</td>
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<td>M&amp;S</td>
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<td>SSA</td>
<td>Sub Saharan Africa</td>
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<td>STPH</td>
<td>Swiss Tropical and Public Health Institute, Switzerland</td>
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<td>TBA</td>
<td>Traditional Birth Attendants</td>
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<td>UMK</td>
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EXECUTIVE SUMMARY

Introduction
Ghana like many sub-Saharan Africa (SSA) countries is faced with major health workforce challenges. Its health systems have decentralized management structures that offer opportunity for greater decision-making in the areas of planning, management and resources allocation including human resources. However, there has been little research to understand how such decentralised authority can be effectively used, within available resources, to improve health workforce performance at the district level. The PERFORM project focused on improving the performance of existing and future staff in the face of their current constraints. The PERFORM project management strengthening interventions drew on the concepts of Action Research (AR). District health managers were supported to conduct an initial situational analysis of the workforce issues, identification of appropriate local strategies to respond to these challenges, implementation of selected HR/HS strategies and evaluation them in the final situation analysis. This report covers the final situation analysis of the study.

Methods
Three districts were selected in the Eastern Region of Ghana for the study. DHMTs supported by Country Research Team (CRT) selected appropriate HR/HS bundles стратегies to address core HR/HS problems identified in the initial situation analysis. The HR/HS bundles/strategies implementation lasted for a period of eighteen months (March 2013 to August 2015). Facilities (i.e., government and faith-based private non-profit organization) were randomly sampled for the final situation analysis. The respondent were DHMTs (13), district hospitals (8), health centres (34), CHPS zones (18), stakeholders (3) and clients (647). In-depth interviews (IDIs) were conducted with these respondents. Clients were randomly selected with the assistance of the in-charges of Child Welfare Clinics (CWCs) and ante-natal care units for exit interviews. All interviews were conducted between September and October, 2014. Structured questionnaires and IDI guides were used for the data collection. Descriptive statistics was mainly used for the quantitative analyses using EPI Info Version 6. The mean perceived ratings score of HR/HS bundles/strategies implementation were calculated as well as the DHMT time use with 95% confidence interval. Thematic content analysis of management strengthening, workforce performance, wider health system and some unintended effects was undertaken using NVIVO 10. Appropriate quotes were selected from the IDIs to support the thematic content analysis. The results are presented in verbal quotations, tables, diagrams, charts and graphs.
Findings and discussion

Akwapim North

Management strengthening: The key management strengthening findings was that intensified monitoring and supervision visits improved staff performance and enabled DHMT to make decisive decisions based on the findings of monitoring and supervisory visits.

Workforce performance: The key workforce performance findings were: (1) participation of volunteers in CWC activities has improved the rate of home visiting as well as rate of vaccine administration. Male involvement in the CWC sessions has also increased coverage; (2) mean perceived rating score of HR/HS bundles implemented were similar with an overall mean score of 3.9. Use of workplan was rated highest (4.8) while monitoring and supervision was scored the lowest (3.5).

Wider health system: Key findings observed in relation to wider health systems include: (1) vaccination defaulter rate reduced and CWC attendance has significantly increased due to joint constant monitoring and supervision visits and regular home visits; (2) majority of clients (90%) indicated waiting time of less than 30 minutes reasonable. Furthermore, most clients (99%) thought it was right to spend less than 30 minutes with the health worker, they considered any time beyond 30 minutes as too long.

Kwahu West:

Management strengthening: The key management strengthening findings was that, regular joint DHMT and facility meetings helped in finding lasting solutions to workforce problems. Distribution of immunization logistics is now based on performance indicators and tally records.

Workforce performance: The workforce performance findings were: (1) data validation at sub-district level had improved data quality at all levels. However, this is very tedious and time consuming; (2) PERFORM approach to problems analysis, staff training and joint DMHT meetings helped in boosting performance and strengthening management; (3) majority (90%) of client interviewed indicated that waiting time of less that 30minutes was reasonable. About 75% of clients consider less than 30minutes time spent with the health worker as about right; (4) mean perceived rating score of HR/HS bundles implemented were similar with an overall mean score of 4.3. Supportive supervision was rated highest (4.5) and performance reward the lowest (4.2).

Wider health system: The coverages of rotarix and pneumococcal vaccinations increased from about 63% and 50% in 2012 to 88% and 92% respectively in 2014. Both rotarix and pneumococcal vaccinations recorded steady decline in drop-out rate over the period (from 18% to zero for rotarix and 38% to 3% for pneumococcal).

Upper Manya Krobo:

Management strengthening: The workforce performance findings include: (1) CRT’s constant monitoring and supervision improved DHMT’s monthly, quarterly and annually reporting; (2) introduction of some new staff management activities reduced absenteeism at all levels (e.g., spot
checks, attendance book, event register, movement books and staff appraisal); and (3) noticeable improvement in core management meetings, due to its participatory and decision-making nature.

**Workforce performance:** The workforce performance findings were: (1) CHO's attachment to the district hospital has enhanced their confidence and improved ANC service delivery thereby increasing coverage; (2) over 90% of clients considered waiting time before seeing a health worker as reasonable whiles half of clients interviewed considered time spent with the health worker as ‘about right’. On average, over 90% of bundle activities were rated to have moderately achieved positive changes with an overall mean score of 3.6.

**Wider health system:** Some key wider health system effects observed were: (1) the general lack of technical and non-technical staff in the district, increased workload and thus puts immersed pressure on the available staff; (2) community leaders and volunteers mobilization effort helped improve CWC activities; (3) ANC coverage increased marginally from about 74% to 79% in 2013, but decline to 72% in 2014. The decline was attributed to inability to meet ANC service targets at ‘island’ communities due to lack of logistics like ferry boat and life jackets.

**Time use:** Overall, all district health managers spent the highest mean time on managing and monitoring service provision (2.7 hours: 95% CI: 2.5 - 2.9). This was followed by general management activities (2.2 hours: 95% CI: 2.1 - 2.4) and human resource activities (1.4 hours: 95% CI: 1.2 - 1.5). In comparison, mean time use for financial management (0.8 hours, 95% CI: 0.6 to 0.9) and management of material resources (0.5 hours, 95% CI: 0.4 to 0.6) were considerably lower. Clinical activities were conducted on average for only 0.1 hours (95% CI: 0.07 to 0.12). Travelling accounted for 0.8 hours (95% CI: 0.8 to 0.9) and non-productive activities (excluding breaks) for 0.3 hours (95% CI: 0.2 to 0.3) of the mean working time.

All the districts noted appreciable unintended effects in the implementation of PERFORM bundles which they perceived affected their performance. The unintended effects include: (1) data management increased workload from the data validation exercise; (2) service delivery increased administrative duties; and (3) finances in terms of lack of financial support for PERFORM bundles implementation was noted to be demotivating.

**Conclusions and recommendations**

The DHMTs use of AR approach was observed to have improved their problem analysis capabilities (i.e., identification, analysis, and strategies). All districts observed improvement in areas of management strengthening, workforce performance and the wider health system.
The following recommendations are being made: (1) GHS Head Office should continuously advocate and negotiate with the Ministry of Finance and Economic Planning to improve on its funds disbursement to the sector ministry to enable the usual quarterly regular disbursement to RHAs and DHMTs; (2) RHA must where feasible coordinate and manage the ad-hoc meetings, workshops and programmes from GHS Head Office, NGOs and other stakeholders so as not to seriously disrupt their planned work schedules of DHMTs; (3) RHA in conjunction with the DHMTs of the three study districts should roll out the AR approach to problem solving to the remaining districts in the region.
1.1 Introduction and background

1.2 Project overview and members of the consortium

The single biggest barrier to scaling up the necessary health services for addressing the three health-related Millennium Development Goals for countries in sub-Saharan Africa (SSA) is the lack of an adequate and well-performing health workforce. Funding constraints are increasingly being addressed through international initiatives. However, such funding, to be effective, requires the availability of health professionals performing appropriately; this remains a major challenge for sub-Saharan Africa. The deficit in health professionals needs to be addressed both by scale-up through training more new health personnel and by improving the performance of the existing and future workforce.

Most development and research emphasis has been on the first of these – increasing numbers (such as the PEPFAR programme to train 140,000 new health workers in Africa). There has been a serious neglect of initiatives to address the complex area of workforce performance. Examples of poor workforce performance include high vacancy and turnover rates at the management level and poor clinical behaviour and frequent absenteeism at the individual level and more generally low motivation of health workers. The PERFORM project focused on this aspect of the human resource challenge by providing new knowledge as to how district managers can effectively intervene within their current constraints to improve the performance of their staff as a response to the workforce crisis.

A number of complex factors affect workforce performance. Of particular importance are the maldistribution of staff, inappropriate task allocations and poor working conditions (including training, management and support). These factors also lead to high staff losses (brain drain) from the public sector to other employers (particularly the private sector) or other countries. Understanding the nature of these factors and developing appropriate responses will both improve the performance of the existing workforce and reduce staff losses. It will also increase the effectiveness of future new health personnel trained and deployed under scaling up investments.

There are a wide range of measures which managers use to address human resource (HR) issues. Research has shown however, that these HR strategies may be more or less effective according to the nature of the factors that influence employee behaviour e.g. gender, career stage, level of responsibility. It is therefore necessary to select strategies that respond to the factors that influence the behaviour of particular health personnel.

In addition to choosing the right strategies, there is also a need for integration across human resource management (HRM) practices. For example, the effectiveness of the recruitment system may benefit from changes in the remuneration system. Current thinking on health systems strengthening suggests
integration of health workforce strategies with the five other health system building blocks (i.e. service delivery, information, financing, leadership & governance, medical products, vaccines and technologies). It is imperative to consider potential unintended as well as intended consequences of a strategy within the wider health system.

The most effective management strengthening approaches address real problems and use planning and management tools that managers are familiar with and for which they are likely to get support in future. The management strengthening intervention will employ locally available tools and draw on the concepts of action research. In particular the district managers will be supported in the conduct of a situational analysis of the workforce problem, identification of appropriate local strategies to respond to this, implementation of such strategies and evaluation – leading where appropriate to a redesign of the strategies. The research will assess the effectiveness of such an approach.

Health systems in SSA are increasingly decentralising authority to lower levels, and in particular to districts, in planning and management. Research has been conducted to understand how to allocate resources more efficiently at this level. However, there has been no equivalent research to understand how such decentralised authority can be effectively used, within available resources, to improve health workforce performance at district level. This research project will enhance our understanding of how, and under what conditions, a management strengthening intervention can improve workforce performance within their districts.

The research has been conducted in Ghana, Tanzania and Uganda. Each of these countries face major problems of inadequate health workforce. They also have decentralised management structures that offer management teams greater decision-making opportunities including in the area of human resources. The research will study how management strengthening interventions can be used, and under what conditions, to enhance workforce performance. A comparative analysis of the findings from three study districts in each country will add new knowledge as to the effect of different country contexts on these interventions. This will lead to insights into the application of the new approaches in different SSA country contexts. The overall structure of the research project is summarised in Figure 1.
**Project partners**

The PERFORM Consortium is made up of six partner institutions. Each partner is experienced in health systems strengthening and brings different research expertise to the Consortium.

The partner institutions are:

1. Liverpool School of Tropical Medicine, United Kingdom (LSTM).
2. School of Public Health, University of Ghana (SPHG).
3. Institute of Development Studies, University of Dar Es Salaam, Tanzania (IDST).
4. School of Public Health, Makerere University, Uganda (MUSPH).
5. Swiss Centre for International Health, Swiss Tropical and Public Health Institute, Switzerland (STPH).
6. Nuffield Centre for International Health and Development, University of Leeds, United Kingdom (UNIVLEEDS).

**1.3 Objectives of the project**

**Aim**

The overall aim of the PERFORM project is to identify ways of strengthening decentralized management in order to address health workforce inadequacies by improving workforce performance in three districts each in Ghana, Tanzania and Uganda.

**Objectives**

The specific objectives are:
1. To conduct a participatory situation analysis of the health system especially the health workforce and DHMTs and with particular focus on health workforce performance in each study district.

2. To identify, from the results of the situation analysis, areas of workforce performance which need to be improved in each district.

3. To develop and test context-specific management strengthening interventions and processes focused on the areas of workforce performance in need of improvement.

4. To monitor the implementation of the strategies and evaluate the intermediate processes and impact on health workforce performance, and the wider health system.

5. To conduct comparative analyses across districts and countries of the management strengthening intervention, the processes of implementation as well as the intended and unintended effects on health workforce performance and the wider health system.

6. To provide ongoing communication of the research process, findings and conclusions, in order to raise awareness and change attitudes of sub-national, national and international stakeholders.

7. To consolidate research capacity of research partners on integrated approaches to workforce performance improvement and contribute to strengthening capacities of decentralized management of district health systems.

8. To establish and maintain effective partnerships amongst academia, civil society, policymakers and health managers in study countries and amongst partners.

1.4 Country overview, location and demography

Ghana is in West Africa and shares boundaries with Togo to the East, la Cote d'Ivoire to the West, Burkina Faso to the North and the Gulf of Guinea, to the South. Its land area is about 238,500 km² and has an estimated population of 24,658,823. The most populous region is Ashanti, with a population of 4,780,280 representing 19.4% of the country’s total population. The male population is 12,024,845 and the female population is 12,633,978 which gives a sex ratio (i.e. number of males to 100 females) of 95.2. The proportion of the population living in urban areas is 50.9%. The level of urbanization varies from region to region. Greater Accra has the highest proportion of urban population (90.5%) while Upper West has the lowest proportion (16.3%). The remaining eight regions are predominantly rural, with the level of urbanization below the national average of 50.9%. (Population and Housing Census, 2010).
1.5 Description of Country health system and decentralisation

Health services are provided by governmental, Christian Health Association of Ghana (CHAG), private Islamic missions, quasi-government and other organisations. Health services and functions in Ghana are relatively decentralised under the Ghana Health Service (GHS) and Teaching Hospitals Act 525, 1996 (Africa Health Workforce Observatory, 2010) with relevant decision spaces at regional and district level. Health service delivery follows a three tier system: primary, secondary and tertiary levels run by the GHS. The primary health services are provided by health centers and Community-based Health Planning Services (CHPS). Regional, teaching and specialised hospitals handle referrals, complicated and complex cases. The role played by the traditional birth attendants (TBAs) and the traditional healers is also receiving national recognition.

There are three management levels in the health system: national/central, regional and the district levels. At national level, the Ministry of Health (MOH) has the responsibility for the stewardship of the entire health sector thereby ensuring equity and efficiency of the overall health system. It exercises this function by presiding over all policy directions, outlining priorities, promoting institutional development, coordinating the activities of agencies, partners and stakeholders involved in health and ensuring performance and accountability within the sector. The MOH coordinates planning, resource development and the overall monitoring and evaluation of the Health Sector performance (MOH, POW 2008). On the other hand, there are 10 Regional Health Administrations or Directorates (RHA), which are headed by the Regional Director of Health Services provides supervision and management support to the districts and sub-districts within each region.

At the district level, a District Health Management Team (DHMT) is established in all metropolitans (6), municipals (49) and districts (161). The members of the team include: the District Director of Health Services (DDHS); the Deputy Director of Nursing Services (DDNS); the District Health Information Officer (DHIO); the District Human Resource Officer (DHRO); District Disease Control Officer(DDCO); an Administrative and Accounting Officer. The DDHS is the head of the team and also a member of the district hospitals management committee. The DHMT is responsible for the supervision of all health services at the district level as well as the implementation of national and local health plans and policies.

The District Health Administrations (DHAs) have, since 1999, been receiving and directly managing funds for non-salary recurrent expenditure. The District Health Administration (DHA) also provides supervision and management support to their sub-districts. Public health services are provided by the DHMT and the Public Health unit of the district hospitals. Budget Management Centres (BMCs) have
been established to promote financial decentralization to and within districts and to improve both access to health services and community involvement in planning and delivery of services.

1.6 Other on-going projects on HRH in the country

Table 1 shows nine on-going and completed projects on HRH across the regions and health facilities in Ghana since 2009. The core areas covered include: (i) distribution, attrition and retention of health workforce; (ii) career opportunities; (iii) working conditions and job satisfaction; (iv) human resources for health policy implementation; (v) health workforce dynamics; (vi) health workforce motivation, morale and attitude; (vii) human resource management and development.

Table 1: Ongoing and completed HR projects related to health in Ghana

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Projects Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010-2011</td>
<td>Careers, Inequalities and Health care provisions: Health worker choice and disparities in the Availability of human resources for Improving Mental Health in Ghana.</td>
<td>Greater Accra, Western, Ashanti, Northern Regions</td>
</tr>
<tr>
<td>December 2010 – July 2011</td>
<td>Junior Doctors’ Perception of their working conditions.</td>
<td>Korle-Bu Teaching Hospital (Greater Accra)</td>
</tr>
<tr>
<td>2012</td>
<td>A (pilot) study of the relationship of human resources for health policy implementation and inequality in health outcomes between the three Northern regions and Southern Ghana.</td>
<td>Three Northern Regions and Southern Ghana</td>
</tr>
<tr>
<td>2011</td>
<td>Research on Experiences in Ghana’s Mental Health Workforce</td>
<td>Accra Psychiatric Hospital, Pantang Hospital, Ankaful Hospital</td>
</tr>
<tr>
<td>9th January, 2011</td>
<td>Frontline health worker retention, motivation, morale and quality of maternal and child health service provision</td>
<td>Ga South Municipality and Tema metropolis (Greater Accra Region)</td>
</tr>
<tr>
<td>2011</td>
<td>Midwives’ Experience of Active Management of Third Stage of Labour (AMTSL): A qualitative study from Accra, Ghana</td>
<td>Greater Accra</td>
</tr>
<tr>
<td>2009</td>
<td>Evaluating managerial effectiveness from the perspectives of managers and employees of the health sector of Ghana; the case of developing core competencies for improving human resources for health management</td>
<td>Not Stated (3 regions)</td>
</tr>
<tr>
<td>2009</td>
<td>Evaluating the effect of human resource management on the retention and motivation of maternal health care providers in Ghana: a comparative study of public and private health facilities</td>
<td>Greater Accra and Ashanti Regions</td>
</tr>
</tbody>
</table>

1.7 Purpose and structure of the report

As a country report, this document aims to provide an in-depth analysis of the outcomes of the PERFORM research project in Ghana over the period 2012 to 2015. In order to do this, the reader will first be provided with an overview of the research design and methodology followed by a description of the process of identifying problems in the district and selecting interventions to address these
problems. The report will also present the findings in terms of district management strengthening, human resource management and health systems improvements while analysing these in view of the contextual factors at play in the country. A comparison of outcomes linked to the problems addressed by each district before and after the interventions were implemented should shed light on any areas of improvement in health workforce performance. Inter-district comparison will be undertaken in order to highlight similarities and differences in outcomes based on the interventions implemented. Based on the findings, the reader will be provided with conclusions and recommendations on how to improve district management and workforce performance in Ghana.

The report is made up of the following chapters:
Chapter 1- Introduction and background
Chapter 2- Methods
Chapter 3- Findings
Chapter 4- Discussion
Chapter 5- Study conclusions and recommendations
2.1 Methods

2.2 Overview of action research approach

The PERFORM project used an action research approach. The definition of AR that we applied during PERFORM is given below.

*Action Research (AR) is an enquiry which is conducted by a group on a problem which is of importance to them. Its aim is two-fold; to improve practice and to generate knowledge about the processes and strategies that work best to create that improvement.*

The Country Research Team (CRT) together with study DHMTs worked through systematic cycles of planning, acting, observing and reflecting to:

- Describe and analyze the problem DHMTs face
- Identify and plan strategies to improve situation or solve problem
- Implement the changes needed
- Observe, explain and reflect on the process and the effects of changes made.

CRT and DHMTs then continued with subsequent cycles to continue to create improvements. External facilitators (European partners) worked with the group to build participation, provide research methods support during observation phases of the cycles, and to record and analyze the process and strategies of change.

At the core of AR studies is the cycle presented Figure 2. This cycle was first described by Kurt Lewin who many see as the founder of AR:

![Figure 2: The classic Action Research Cycle](image-url)
Successive cycles are beneficial as they can deepen the learning about a problem and its solutions. In practice these may be more like a spiral, or a cycle with smaller cycles spinning off and feeding back into the main study.

The project started with a situation analysis in 2012. CRT collected baseline data and analysed. The aim of this phase was to collect evidence about the nature of the problem to be addressed in the AR cycles. It also provided a base line against which to compare any subsequent changes.

Aspects of AR in PERFORM to build research evidence:
- An initial situation analysis to collect research data on the problem, this feeds into the first cycle of AR.
- Robust use of research and analysis methods during the observation phases of the AR cycle(s) guided by the CRTs.
- Record and reflect on the change process throughout AR cycles using diaries.
- Recollect core data for final situation analysis including context, to identify within-district changes.

2.3 Overview of research process

2.2.1 Phase one

2.2.1.1 District selection

The study took place in three districts each in Ghana, Tanzania and Uganda. Each district was selected in 2012 using pre-defined criteria. Because of the collaborative nature of the management strengthening intervention, one important criterion for the selection of study sites was a motivated and reasonably staffed district management team with which to work. A second criterion was the inclusion of a mix of types of districts reflecting different contexts including a mix of rural and urban. The table below lists the study sites in each country.

<table>
<thead>
<tr>
<th>Countries</th>
<th>Selected districts</th>
</tr>
</thead>
</table>
| Ghana     | Kwahu West Municipal (KW)  
|           | Akwapim North District (AkN)  
|           | Upper Manya Krobo District (UMK)  |
| Tanzania  | Kilolo District  
|           | Mufindi District  
|           | Iringa Urban District  |
| Uganda    | Jinja District  
|           | Kabarole District  
|           | Luwero District   |
No ‘control’ districts were selected. However, information about wider contextual changes that needed to be considered in assessing the impact of the. Districts which were to serve as study sites were identified based on the agreed criteria and in collaboration with higher authorities and the districts themselves.

Each district selected is managed by a district health management team (DHMT) or their equivalent. The DHMT (or their equivalent) is the main collaborator in each district with the Country Research Teams (CRTs). The composition of the DHMT may vary from one country to another but their function is essentially similar across all three participating countries.

The DHMTs had responsibility for planning and coordinating health activities in the district. They did this by ensuring that health policies are implemented, resources are well utilized, quality standards are upheld, and performance is monitored and evaluated for better results. Because of the action research approach employed in this project, DHMTs were not considered to be ‘study participants’ in the traditional sense of the word. Rather, the DHMTs were considered to be ‘co-researchers’ and partners in achieving the objectives of the study.

At the beginning of the project, orientation meetings were held in 2012 with the relevant management teams to explain the project, clarify the level of involvement required and to agree roles of the management team and researchers. To ensure clarity and to increase the level of ownership of the project, the national research partners signed a memorandum of understanding with the DHMTs in July 2012.

2.2.1.2 Finalisation of research methods

During this phase in 2012 and 2013, the methodology was further developed with input from all partners resulting in the production of a methodology manual. The overall management strengthening intervention using concepts from health systems thinking and action research applied within the district context was agreed in this phase. The methodology and agreement is based on a common understanding amongst all members of the research teams of the proposed research approach.

Ethics approval in each of the three study countries and for the European partners was sought and obtained during this phase of the project.
2.2.2 Phase two

2.2.2.1 Initial situation analysis

The purpose of the initial situation analysis was to serve as the baseline for the project as well as to inform the subsequent action research cycles in each district through identification of priority challenges to be addressed.

The initial situation analysis included some common core HR and health systems indicators across districts and countries to allow for the comparative analysis. As much as possible, these indicators used routinely collected data and performance indicators (gender disaggregated) to simplify the collection process, minimize disruption and to increase the chance of expanding and sustaining such an approach beyond the project period.

The objectives of the (initial) situation analysis were:

1. To identify major areas of exceptional performance (good or poor) in service delivery.
2. To identify the major areas (geographical and/or service delivery) of staffing shortage.
3. To identify key problems of health workforce performance (retention, distribution and effectiveness)
4. To identify key health systems factors (e.g. resources, processes, gender or other forms of discrimination) affecting (positively or negatively) health workforce.
5. To identify key contextual factors at the district (e.g. political situation, leadership, conflicts), regional and national levels affecting workforce performance.
6. To identify current management and communication processes used by the health management team, dynamics of the DHMT (e.g. roles, power and gender relations among the team) and how these may affect levels of management performance.

2.2.2.2 Overall output from the Initial Situation Analysis

The information collected during the initial situation analysis formed the basis of a draft report. This report assembled the information in the three districts in each country. The report was written by the CRTs with input from the DHMTs. This draft report was presented at National Workshop which was hold in Ghana in October 2012.

The objectives of the National workshop were:

1. To review the data for each study site
2. To review the problem analysis based on findings from initial situation analyses in each district and subsequent problem identification and prioritization
3. To identify possible HR/HS bundles for addressing the workforce performance problems appropriate for each study site
4. To review lessons learnt from the situation analysis process
5. Capacity building in action research.

The workshop was attended by members of each of the DHMTs involved in the study, the CRT, the EU paired partner, the local research communications experts and a small number of stakeholders participating as observers.

2.2.2.3 Data collection sources and methods for the Situation analysis

Data was generated from a range of sources including:

i. Use of routine data collected in the district- including reports, plans, budgets and minutes of meetings.
ii. Use of data collected by other institutions and agencies (e.g. Ministry of Finance, NGOs etc)
iii. Primary data collection in the event that existing routine data is unavailable, unreliable or insufficient

The data collection methods employed include:

i. Focus group discussions (n = 3) with each core study DHMT members
ii. Observation of management processes
iii. Researcher’s/facilitator’s reflection and observational notes

2.2.2.4 AR process recording

Over the period of activities implementation from March 2013 to August 2014, diaries and documentation templates were used to record and reflect on the change process throughout the AR cycles. The diaries and recording templates also served as a record of the activities implemented in each district by the DHMT.

2.2.2.5 Problem identification and prioritisation

A National workshop was held in Ghana to prioritise study districts’ problems and develop problem trees and statements (see table 3 and, annexes 1, 2 and 3). The three study DHMTs ranked and prioritized key workforce problems identified during the Initial Situation Analysis using a priority matrix (see annex 4). The problem which obtained highest scores in each district was selected to be addressed using the AR intervention (see table 3).

2.2.2.6 Description of the process of selecting HR/HS bundles

A second National Workshop was held in Ghana in February 2013 in order to develop detailed plans for the unique sets of HR/HS bundles for each study site.
Given the variety of human resource management (HRM) strategies to improve performance linked to ‘direction’ (e.g. job descriptions, work plans, processes) and ‘competencies’ (e.g. in-service training, supportive supervision) and the provision of rewards and sanctions (e.g. praise or disciplinary action) it is essential to have some coordination as it is usually necessary to have more than one HRM strategy (for example in-service training followed by supportive supervision to help staff put new skills into practice). Where there are several strategies they are often referred to as "bundles" of HRM strategies. In addition, there may also be problems of resources that affect performance. The problems relate to the wider health systems (HS) - for example, supplies or information systems. So there is a need to combine human resource and health systems strategies to address problems of performance. These also need to be coordinated bundles of strategies. So they are referred to as bundles of HR/HS strategies.

2.2.2.7 Selecting strategies and making plans

There is a wide range of strategies that can be used to improve workforce performance, depending on the particular problem(s) you are trying to address. The challenge is to identify those strategies that are possible to implement (i.e. within the DHMT’s boundaries of budget and authority and should whenever possible be aligned to annual priority/activity planning of districts) and are likely to be effective in your situation. An additional challenge is to ensure that strategies selected complement each other and are not contradictory.

The problem trees and statements developed during the situation analysis phase (and as written down in the draft situational analysis report in January 2013) served as starting point for the selection of the HR/HS bundles to improve workforce performance.

Based on the key areas for managing performance, the DHMTs decided which of the following areas they needed to address in their district:

1. Availability (of staff)
2. Direction (on what work to do, when and how)
3. Competencies (to carry out required tasks)
4. Rewards and sanctions (to influence staff behaviour)
5. Other health systems components (to support the implementation of the work).

2.2.2.8 Description of the bundles (final) implemented in each district

The DHMTs implemented a wide range of HS/HR strategies aimed at addressing core health workforce problems identified in each district (see table 3). Activities that can be implemented from DHMTs’ budget and are within their authority were selected. These include: capacity building; staff attendance
monitoring; intensification of monitoring and supportive supervision; staff retention; Use of information systems; enforcement of code of conduct; incentives etc.
### Table 3: Selected problems and bundles

<table>
<thead>
<tr>
<th>District name</th>
<th>Problem identified</th>
<th>Underlying cause(s) of problem</th>
<th>HR/HIS Bundle to address the problem</th>
<th>Bundles of activities</th>
</tr>
</thead>
</table>
| Akwapim North | High dropout rate (40%) in EPI performance on the new vaccines (ROTA and Pneumo) for the first half of 2012. | Inadequate Monitoring & Supervision of EPI activities; Conflicting programmes; Lack of defaulter tracing mechanism; Inadequate skills of staffs in monitoring & supervision; Poor data quality | Intensify monitoring & supervision                                                             | Develop sub-district level monthly supervision schedule  
Training SDHMT supervisors (mainly CHOs) in supportive supervision  
Conduct monthly and quarterly monitoring and supervision (M&S) visit respectively by DHMT and SDT |
|               |                                                                                       |                                                                                                | Intensify EPI defaulters tracing at health facilities levels                                         | Train SDHT on filling of EPI forms  
Ensure completeness of records in EPI register  
Monthly review of EPI register for defaulters  
Embark on monthly home visits to vaccinate EPI defaulters  
CBSV DHMT SDHMT CHOs meetings to encourage volunteers' involvement in tracing defaulters |
|               |                                                                                       |                                                                                                | Collaboration with stakeholders in community mobilization for EPI services                        | Task CBSVs to mobilize community members for EPI services |
|               |                                                                                       |                                                                                                | Use of workplans                                                                                | Involve community members in planning CWC activities |
|               |                                                                                       |                                                                                                |                                                                                                | Develop and implement PPM for fridges |
| Kwahu West District | Poor implementation of new vaccine vaccination schedule leading to high dropout rate of pneumococcal (46.9%) and rotarix (19.1%) vaccination in the municipality. | Poor staff attitude; Inadequate training; Inadequate supportive supervision                      | - Improve data management at all levels;  
- Improve supportive supervision to sub-district as planned;  
- Reward (Certificate and material) best performing facilities (drop rate of PCV & Rota 10% & below) | Train and retrain all staff including DHA on new vaccine(EPI)  
Conduct monthly data validation per facility by comparing tally books  
Enforce use of separate log books for drop-in & drop-out  
Train all staff on logistics management  
Obtain standard EPI supportive Supervision Checklist from DDPH/RHA  
Discuss checklist with sub-district staff  
Input from sub-district staff effected and final checklist circulated to all facilities  
On-site supportive supervision in general but EPI in particular (2 visits per facility per year)  
Hold quarterly meetings to review performance & share best practices  
Prepare and cascade a league table for measuring performance for awards of sub-district vaccination  
Award prize to best performing health facilities |
<table>
<thead>
<tr>
<th>District name</th>
<th>Problem identified</th>
<th>Underlying cause(s) of problem</th>
<th>HR/HS Bundle to address the problem</th>
<th>Bundles of activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Manya Krobo</td>
<td>Low coverage of ANC services leading to poor birth outcome (high still-birth rate, high low birth-weight and birth complications leading to maternal deaths).</td>
<td>- Lack of capacity to provide full range of ANC services; - Poor staff attitude; - Accommodation problems; - Illegal fee collection &amp; charges; - Poor quality of care.</td>
<td>Retention</td>
<td>Redesign CHO's job description &amp; orientate staff Assigning mentor to new staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Use temporary staffing measures</td>
<td>Outreach services to underserved communities (25)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Attendance monitoring</td>
<td>Use attendance register and movement book at facilities DHA and RHA to spot check on attendance register Local Health Committee members to sign CHO's outreach log books</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Regular open appraisal</td>
<td>Support sub-district leaders and program officers on appraisal process</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Regular supportive supervision</td>
<td>Training supervisors in effective supportive supervision skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Use of work plans</td>
<td>Support CHO to develop weekly work plan and share targets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Team meetings</td>
<td>Organize weekly core DHMT, core SDHMT meeting and DHMT/SDHMT meetings to discuss workplan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Introduce robust award system</td>
<td>Establish a reward committee Reward deserving staff (SDHMT and facility)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enforce code of conduct and disciplinary procedure</td>
<td>Introduce event register (SDHA and DHA) Orientation on code of conduct and disciplinary guidelines Booklets on code of conduct distributed to sub-district staff after orientation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Use information systems</td>
<td>Use service delivery data to monitor performance of facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Enhance participation of pregnant women in ANC services</td>
<td>Plan and conduct regular Customer care training for all facility staff once a year Durbars to sensitize communities on illegal collection of fees and importance on ANC services Provide essential drugs and equipment for ANC - IFA, Urine strips, HB meters etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Capacity building</td>
<td>Attachment of CHO's to Maternity ward In-service training for practicing Midwives</td>
</tr>
</tbody>
</table>
### Implementation of HR/HS bundles

Table 4 shows how each HR/HS activity was implemented, who was involved in the implementation, period of implementation and expected outcomes for the three study districts.

Table 4: Activities implementation approaches, period and expected outcomes

<table>
<thead>
<tr>
<th>District</th>
<th>Activity</th>
<th>Implementation</th>
<th>How?</th>
<th>Who?</th>
<th>Period</th>
<th>Expected outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>AkN</td>
<td>Develop sub-district level monthly supervision schedule</td>
<td>SDHMTs developed monthly schedule for supervising CHPS</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Training SDHMT supervisors (mainly CHO) in supportive supervision</td>
<td>DHMT trained SDHMTs in supportive supervision</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conduct monthly and quarterly monitoring and supervision (M&amp;S) visit respectively by DHMT and SDHMTs</td>
<td>DHMT and SDHMTs undertook monthly and quarterly monitoring and supervision visits</td>
<td>DHMT, SDHMTs</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Train SDHMT on filling of EPI forms</td>
<td>DHMT trained SDHMTs on filling of EPI forms</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective defaulter tracing and home visits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ensure completeness of records in EPI register</td>
<td>Data validation by DHMT and SDHMTs</td>
<td>DHMT, SDHMTs</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monthly review of EPI register for defaulters</td>
<td>EPI register was reviewed monthly to identify defaulters</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Embark on monthly home visits to vaccinate EPI defaulters</td>
<td>CHO conducted monthly home visits to vaccinate EPI defaulters</td>
<td>CHO</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBSV</td>
<td>DHMT SDHMT CHO meetings to encourage volunteers' involvement in tracing defaulters</td>
<td>Regular DHMT meetings with SDHMTs, CHOs and volunteers</td>
<td>CHO, SDHMTs, DHMT</td>
<td>March 2013 to August 2014</td>
<td>High awareness on vaccination</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Task CBSVs to mobilize community members for EPI services</td>
<td>CHO involved volunteers in to community mobilization for CWC</td>
<td>CHO</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District</td>
<td>Activity</td>
<td>Implementation</td>
<td>How?</td>
<td>Who?</td>
<td>Period</td>
<td>Expected outcome</td>
</tr>
<tr>
<td>----------</td>
<td>----------</td>
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</tr>
<tr>
<td></td>
<td>Involve community members in planning CWC activities</td>
<td>Volunteers set up and clean CWC venue, and sometime take basic vitals of child</td>
<td>DHMT, CHO</td>
<td>March 2013 to August 2014</td>
<td>Effective vaccination</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop and implement PPM for fridges</td>
<td>Defrost fridges, checked battery and cleaned solar panels, and distilled water of panels</td>
<td>DHMT, CHO</td>
<td>March to November 2013 and March to August 2014</td>
<td>Effective vaccination</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Train and retrain all staff including DHA on new vaccine(EPI)</td>
<td>DHMT trained health staff on new EPI vaccines</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective defaulter tracing and vaccination</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conduct monthly data validation per facility by comparing tally books</td>
<td>DHMT and SDHMT validated facilities data monthly by comparing tally sheets.</td>
<td>DHMT, SDHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enforce use of separate log books for drop-in &amp; drop-out</td>
<td>DHMT and SDHMTs introduced and enforced use of separate log books for drop-in &amp; drop-out</td>
<td>DHMT, SDHMT</td>
<td>March to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td>KW</td>
<td>Train all staff on logistics management</td>
<td>DHMT trained health staff on logistics management</td>
<td>DHMT</td>
<td>March to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Obtain standard EPI supportive supervision checklist from DDPH/RHA</td>
<td>DHMT obtained standard EPI supportive supervision checklist from RHA</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discuss checklist with sub-district staff</td>
<td>DHMT oriented health staff on use of supportive supervision checklist</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Input from sub-district staff effected and final checklist circulated to all facilities</td>
<td>DHMT incorporated inputs from sub-district staff into supportive supervision checklist</td>
<td>DHMT, SDHMTs</td>
<td>March 2013 to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On-site supportive supervision in general but EPI in particular (2 visits per facility per year)</td>
<td>DHMT embarked on biannual on-site supportive supervision with much focus on EPI activities</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hold quarterly meetings to review performance &amp; share best practices</td>
<td>DHMT reviewed staff performance and indicators quarterly and shared best practices</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prepare and cascade a league table for measuring performance for awards of sub-district vaccination</td>
<td>DHMT prepared and used a league table to measure facility performance in EPI activities</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Motivated health workforce</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Award prize to best performing health facilities</td>
<td>Using the league table, the best 3 performing facilities were awarded</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Motivated health workforce</td>
<td></td>
</tr>
<tr>
<td>UMK</td>
<td>Redesign CHOs job description &amp; orientate staff</td>
<td>DHMT adapted CHOs job description and orientated CHOs</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective work schedules</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assigning mentor to new staff</td>
<td>New staff posted to the district were assigned mentors</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective work schedules</td>
<td></td>
</tr>
<tr>
<td>District</td>
<td>Activity</td>
<td>Implementation</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outreach services to underserved communities (25)</td>
<td>DHMT and health facilities’ staff intended to undertake outreach services to underserved (Island) communities <em>NB: Activities was not done because aluminum boat used for the outreach was spoilt</em></td>
<td>DHMT, SDHMTs, CHOs</td>
<td>March 2013 to August 2014</td>
<td>Effective outreach services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use attendance register and movement book at facilities</td>
<td>DHMT introduced attendance register and movement book at facilities and monitor use</td>
<td>DHMT, SDHMTs, CHOs</td>
<td>March 2013 to August 2014</td>
<td>Punctual work attendance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DHA and RHA to spot check on attendance register</td>
<td>DHMT spot checked attendance register of health facilities and RHA spot checked DHMT <em>NB: RHA spot check was very irregular</em></td>
<td>DHMT, RHA</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Local Health Committee members to sign CHOs outreach log books</td>
<td>LHC members and opinion leaders in the communities signed outreach, CWC and home visits log books of CHOs</td>
<td>Local Health Committees and opinion leaders in communities</td>
<td>March to August 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Support sub-district leaders and program officers on appraisal process</td>
<td>DHMT contacted and discussed appraisal issues with sub-district and programme in-charges during appraisal period</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Motivated staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Training supervisors in effective supportive supervision skills</td>
<td>DHMT trained SDHMTs in effective supportive supervision</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Effective supportive supervision</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Support CHOs to develop weekly work plan and share targets</td>
<td>SDHMTs together with CHOs developed weekly work. SDHMT discussed targets with CHOs</td>
<td>DHMT, SDHMTs</td>
<td>March 2013 to August 2014</td>
<td>Effective use of workplans</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Organize weekly core DHMT, core SDHMT meeting and DHMT/SDHT meetings to discuss workplan</td>
<td>Core DHMT and SDHMT held weekly meetings, and DHMT/SDHMT met to discuss workplans</td>
<td>DHMT, SDHMTs</td>
<td>March 2013 to August 2014</td>
<td>Informed staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establish a reward committee</td>
<td>DHMT established an award committee to work on modalities to reward hard working staff</td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td>Motivated health workforce</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reward deserving staff (SDHT and facility)</td>
<td>DHMT intended to reward best performing facilities based on criteria set by the reward committee. <em>NB: This activity was hampered by resource constraint</em></td>
<td>DHMT</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District</td>
<td>Activity</td>
<td>Implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>----------</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Introduce event register (SDHA and DHA)</td>
<td>A register was introduced at HCs and CHPS to record misunderstanding and issues requiring DHMT’s intervention in resolving. SDHMTs, CHO</td>
<td>March 2013 to August 2014</td>
<td>Well behaved staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Orientation on code of conduct and disciplinary guidelines</td>
<td>DHMT orientated health staff on code of conduct and disciplinary guidelines. DHMT</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Booklets on code of conduct distributed to sub-district staff after orientation</td>
<td>DHMT distributed copies of booklets on code of conduct to health staff. DHMT</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use service delivery data to monitor performance of facilities</td>
<td>DHMT monitored and measured facilities’ performance based on service delivery indicators. DHMT</td>
<td>March 2013 to August 2014</td>
<td>Improved work performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plan and conduct regular customer care training for all facility staff once a year</td>
<td>Customer care training for all facility staff was organized by DHMT. DHMT</td>
<td>March 2013 to August 2014</td>
<td>High ANC coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Durbars to sensitize communities on illegal collection of fees and importance on ANC services</td>
<td>Series of durbar was organized by CHO, SDHMT and DHMT to explain to the communities issues of illegal collection of fees and importance on ANC services. DHMT, SDHMTs, CHO</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provide essential drugs and equipment for ANC-IFA, Urine strips, HB meters etc.</td>
<td>DHMT ensured availability of essential drugs and equipment by constantly reviewing tally cards and checking stocks. DHMT</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attachment of CHO to Maternity ward</td>
<td>CHO were attached to the district hospital (Asesewa Government Hospital) in batches for two months each. DHMT, SDHMTs, CHO &amp; district hospital</td>
<td>March 2013 to August 2014</td>
<td>Quality ANC services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>In-service training for practicing Midwives</td>
<td>DHMT intended to organize refresher training for the very few midwives in the district. NB: This activity was not done due to financial constraints. DHMT, midwives</td>
<td>March 2013 to August 2014</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.2.3 Phase three

2.2.3.1 Evaluation of management strengthening and HR/HS bundles

In order to build the knowledge base of the overall effectiveness of the approach used in PERFORM, on-going data collection and analysis was needed. Two stages of analysis was undertaken.

1. Preliminary analysis of data undertaken by the CRTs in collaboration with the DHMTs was embedded throughout the project as part of the action research cycle.
2. Overall evaluation which included comparative analysis following the period of implementation of the HR/HS bundles (end of phase 2). This overall evaluation differs from the on-going evaluation of the HR/HS bundles in that this is taking place in the last year of the study and is including an inter-district and inter-country comparative analysis.

The final situation analysis took place after the implementation of the HR/HS bundles in each country in December 2014 and January 2015. This situation analysis was a one stage process, with data on the health workforce, DHMT, HS, local and national context being collected.

The initial and final situation analysis included some common core HR and health systems indicators across districts and countries to allow for the comparative analysis. These include management strengthening, workforce performance, HIMS, governance and leadership, finance etc. Where possible, these indicators have relied on routinely collected data and performance indicators to minimise disruption and to increase the chance of expanding and sustaining such an approach beyond the project period.

2.2.3.2 Output from the final situation analysis

The data has been analysed by the CRTs with input from the DHMTs in late 2014 and early 2015. A draft report based on the findings of the situation analysis and the ongoing analysis was prepared by the CRTs and presented at National Workshop 3 in each country. The purpose of National Workshop 3 was to validate the findings of the final situation analysis as well as serve as part of the research communication process. The report, apart from being a deliverable to the European Commission, will also be used for the inter-country comparative analysis process.

2.2.4 Ethics approval

The project received ethical approval from international and national ethics review boards. In addition to the approval, ethical clearance (GHS-ERC: 11/03/12) was received from the Ghana Health Service Ethical Review Committee, the project was approved by the Faculty of Medicine and Health Research
Ethics Committee at the University of Leeds (HSLTLM/11/053) and the LSTM Research Ethics Committee – both in the United Kingdom.

2.3 Data collection approach

2.3.1 Study areas and population

The study areas were AkN, KW and UMK. AkN has an estimated population of 120,378 with a 3.1% growth rate, living in 19 urban towns and about 150 rural communities covering an area of about 450km². The district has 8 health sub-districts. KW occupies 414km² and has estimated population of 126,000 people with 2.1% growth rate. Largely rural with 214 communities divided into 6 health sub-districts. UMK has a land mass of about 658km², predominantly rural with 198 communities of an estimated 102,570 inhabitants with 2.9% growth rate. The district has 6 health sub-districts.

Figure 3: Health sub-districts with communities in Akwapim North

Figure 4: Distribution of health facilities in Kwahu West
2.3.2 Study sample

Table 5 shows the category of respondents by districts for the Final Situation Analysis. All the sampled facilities were Ghana Health Service (GHS) health facilities except the district hospital of KW which belongs to the Christian Health Association of Ghana (CHAG), a faith-based private non-profit organization.

Table 5: Selected district health facilities of the study

<table>
<thead>
<tr>
<th>Respondents from:</th>
<th>Study district/municipal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AKN</td>
<td>KW</td>
</tr>
<tr>
<td>DHMTs</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>District Hospitals</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Health Centres</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>CHPS Zones</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Stakeholders</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Clients</td>
<td>238</td>
<td>245</td>
</tr>
</tbody>
</table>

2.3.3 Sampling procedure

All respondents of the in-depth interviews (IDIs) were purposively selected. They were made up of the District Directors of Health Services (DDHSs), District Public Health Nurses (DPHNs), District Health Information Officers (DHISs) and District Disease Control Officers (DDCOs) at the DHMTs. At the district hospital, Matrons and heads of Reproductive and Child Health (RCH) and Antenatal Care (ANC) units were interviewed. At the sub-district level, facility heads and in-charges of RCH and ANC units were interviewed, whilst Community Health Officers (CHOs) were interviewed at the CHPS Zone level. The IDIs were conducted by CRT at the respective facilities of respondents. Clients were randomly selected with the assistance of the in-charges of the ANC and Child Welfare Clinics (CWCs) for the exit interviews. Client exit interviews were conducted by the research team at CWC sites. All interviews were conducted between September and October, 2014.
2.3.4 Data collection techniques/tools

The data collection tools were structured questionnaires and IDI guides. Both structured questionnaire and IDIs guides were used to interview facility managers and staff, whilst IDI guide was used to interview the stakeholders. Structured questionnaire was used for exit interviews with clients and the other sub-district staff as well as that of the DHMT time use study.

2.3.5 Data analyses

Descriptive statistics was mainly used for most of the quantitative analyses. Mean score rating implementation. In the case of the DHMT time use, the 95% confidence interval was used.

The qualitative analysis was undertaken with the aid of the NVIVO software. All transcribed interviews from the IDIs were loaded into NVIVO. Using the standard PERFORM Coding Framework, 31 nodes were created and all files were coded. Queries were run to compile identified themes and quotations. These themes were summarized and appropriate quotations were selected to support the themes. The DHMTs’ diaries and documentation templates were critically reviewed for supplementary and confirmatory themes, narratives and quotations. The results are presented in summarized themes, quotations, figures in tables, boxes, graphs and charts.
3.1 Findings

3.2 Akwapim North District (AkN)

Most of the initially planned bundles as outline above in table 4 were taken up by DHMTs. However, the DHMT cancelled the initially planned activity “Develop and implement PPM for solar panels and fridges”. The reason ascribed was that, it was beyond the capacity of the DHMT. However, a new DDHS posted to the district reiterated there are basic elements involved in the PPME that DHMT can undertake. The activity was therefore reinstated (see table 6).

Table 6: Modification to Akwapim North bundle implementation

<table>
<thead>
<tr>
<th>Selected HR/HS bundle</th>
<th>Original Activity</th>
<th>Previous modification</th>
<th>Current modification</th>
<th>Reason for current modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure continuous functioning of solar panels and fridges</td>
<td>Develop and implement PPM for solar panels and fridges</td>
<td>Develop and implement PPM for fridges</td>
<td>Develop and implement PPM for solar panels and fridges</td>
<td>DHA to revert to core concept of PPME i.e. defrosting of fridges, checking of battery and cleaning of solar panels, and distill water of panels</td>
</tr>
</tbody>
</table>

3.2.1 Management strengthening

DHMT capacity in action research and problem analysis were built through 3 national workshops. CRT made a total of 10 field visits. Other monitoring approaches used were documentation templates, diaries, joint reviews and reflection meetings, telephone calls and email contacts.

Discussants observed that their knowledge in problem analysis (i.e., identification, analysis, and strategies) has improved. Their skills in understanding issues and possible solutions, anticipating potential challenges and solutions and identifying other resources has also improved through training programmes. Constant joint monitoring and supervision helped trace defaulters and in some cases facilities recorded no defaulters. Discussants further observed that their meetings have become participatory and decisive. However, decision making depends largely on leadership styles. Box 1 provides overview of some comments made by discussants.

“PERFORM approach to problem analysis helps us to identify possible challenges we may face at the implementation stage and a possible solution. It also helps us to identify our available resources and capacity. The analysis process gives us more insights as to why certain things are occurring and the ability to identify the major issues needed to address it” (AKN, DHMT Member).

“For example there are no allocation of funds for EPI supervision, so if malaria control program makes funds available for malaria monitoring, we try to include EPI supervision into it but make sure it doesn’t interfere with the main program” (AkN, DHMT member).

“The EPI activities helps us to do fellow up to know when a patients is due for a vaccine.................. we visit them at their sites regularly to look through their books this sometimes makes some facilities not to have defaulters” (AkN, DHMT member).
At meetings, we take a vote whenever we’re unable to reach on an agreement. My experience here at meetings has always been participatory and decisive. We’re always able to arrive at a desirable decision” (AkN, DHMT member).

Box 1: Comments on management strengthening in Akwapim North

3.2.2 Workforce performance

3.2.2.1 Bundle implementation and monitoring

According to the discussants, they observed improvement in the activities of the CHO's during their integrated monitoring and supervisory visits. Furthermore, issues raised during the monitoring and supervision visits are discussed at the DHMT meetings and necessary solutions identified. Finally, the DHMT inspect all the books to ensure records are properly taken and if the right vaccines are given. CHO's reviewed EPI registers every month to identify defaulters. The defaulters were traced and vaccinated during monthly home visits by CHO's. For effective defaulter tracing, records on defaulters identified are now kept in a separate book. Drop-ins were identified by taking records of where a client is coming from, why he/she has come and duration of stay in the community. Drop-outs were identified by visiting caregivers of clients. DHMT monitor this activities during monitoring visits to the facilities. Box 2 provides overview of some comments made by discussants.

“"Yes I can say there’s been some improvement especially during our monitoring and support visits, we do integrate anytime we move out, we look at activities under EPI, RCH, TB, Nutrition and others. So now anytime we move out, there’s something about all the units. When we meet at the DHMT, we do bring up these issues and problems that we have identified and a solution is arrived at” (AkN, DHMT Member).

“They ask us to bring our books and then they check through it to see if the information are properly recorded. They also check whether the vaccines given out are right and what has been used” (AkN, CHN).

Box 2: Comments on bundle implementation and monitoring in Akwapim North

3.2.2.2 Key stakeholders involvement in bundles implementation

According to the discussants, the DHMT involves stakeholders in planning and monitoring of their activities as well as decision making. Furthermore, stakeholders assist DHMT in adopting effective strategies to implement certain activities. Box 3 shows overview of some comments made by discussants.
“We have the District Assembly, who represent government at the community level, so whatever we do we see them as our major stakeholders ….. so we collaborate with them on different purposes; planning, taking decisions and implementing. Then we also have other stakeholders like the NGOs that is WATCH, PLAN and WILDAF (Women in Law and Development in Africa) who assist us with health education, school health and monitoring” (AkN, DHMT Member).

“During meetings and discussions the stakeholders also bring ideas as to what to do. Recently, we were looking at Safe Motherhood coverage and the input from the stakeholders were very good. So they play a role in the decision-making, monitoring and the implementation.” (AKN, DHMT Member).

Box 3: Comments on key stakeholders in bundle implementation in Akwapim North

3.2.2.3 Bundle effects

Respondents observed that their CWC attendance has improved and defaulter rate has reduced due to regular home visits and health talks. Regular monitoring and supervisory visits by the DHMT has kept staff on their toes and improve on their performance. It has also enabled supervisors to provide support and on the job training during monitoring. Finally, they bemoan that frequent and impromptu training and workshops are affecting their work schedules. Box 4 provides overview of some attestations of discussants.

“For the home, because we have increased its regularity, we have a lot of people coming for the CWC. It has also reduced the number of defaulters we had. During the home visits, we educate them on the importance of CWC, we give them health talks on family planning and ANC as well.” (AkN, CHN).

“DHMT frequent visits has put us on our toes and it also makes us aware whether we’re doing the right thing or not. Their unannounced visits also keeps us alert and we make sure work well to avoid punishment.” (AkN, CHN).

“Increase in the frequency of training at times affect our work. It crashes with our static or outreach days so we postpone to the following month.” (AkN, CHN).

Box 4: Comments on bundle effects in Akwapim North

3.2.2.4 Stakeholders’ perceptions of bundles

Supportive supervision by the DHMT enables the CHOs to do the right thing some discussants noted. Also, home visits have increased because of improved rapport between the WATCH volunteers and the CHOs. Furthermore, vaccines administering has improved. Finally, male involvement in CWC sessions has increased coverage. Box 5 provides overview of some comments made by discussants.

“The DHMT does supportive supervisory visit and support the CHOs on how to do things right. I also realized a good collaboration between the local NGO’S staff and the health facility staff. Since the WATCH project started CHOs do more home visits than before, because there’s support from WATCH volunteers or because they were part of the training of the volunteers they got to know them better so the rapport has improved.” (AkN, PLAN Ghana Stakeholder).

“I think there’s an improvement in how the CHOs administer the vaccines. I realized now CHOs explain reason for giving the vaccines and its adverse effects to the mothers. This is very important especially women who
come with their partners. So now when the mothers forget, the men prompt them. When the women are busy, the men bring the children for the vaccines and this increased coverage.” (AkN, PLAN Ghana Stakeholder).

Box 5: Comments on stakeholders perceptions of bundles in Akwapim North

3.2.2.5 Bundles effects on health workforce performance

Respondents observed that monthly problem analysis and review of work plan, though useful, increases their workload due to the large number of facilities in the district. Finally, PERFORM has built their capacity on how to build up genuine problem statement from the analysis process. Box 6 provides overview of some comments made by discussants.

“During DHMT meeting, we meet to review work plan and update strategies. Monthly problem analysis and review of work plan is useful but it increases our workload due to the large number of facilities in the district.” (AkN, DHMT Member).

“PERFORM approach was a good experience. Now I understand how to come up with a genuine problem.” (AkN, DHMT Member).

Box 6: Comments on Bundles effects on health workforce performance in Akwapim North

3.2.2.6 Waiting time

As shown in Figure 6 over 90% of clients (n = 238) indicated through exit interviews that waiting time less than 30 minutes are reasonable. However, as waiting time increased beyond 30 minutes and more, 24% of clients noted it as too long.

Figure 6: Rating of waiting time by clients

3.2.2.7 Time spent with health worker

Figure 10 shows that for less than 30 minutes time spent with the health worker, 99% rated this to be about right. However, as the time spent with the health worker increased beyond 30 minutes, about 13% of clients considered the time spent as too long.

Figure 10: Time spent with health worker
3.2.2.8 Health worker attitude

Ninety-eight percent of clients rated health worker attitude as good (see Figure 14).

3.2.2.9 Cleanliness of health facility

Figure 14 shows that 90% of clients considered the cleanliness of the health facility and its surroundings as good and 10% rated it as fair.

3.2.2.10 Evolution of vaccination coverage in AkN

Both coverage of rotarix and pneumococcal vaccination increased from about 38% to 81% and 35% to 82% respectively in 2012 and 2013. The coverage however declined to 78% and 79% for rotarix and pneumococcal respectively in 2014. The increase of over 40% coverages of both vaccines in 2013 far outweighs the marginal decline of 3% in 2014. Figure 7 shows the vaccination coverage trends for the two vaccines.

![Figure 7: Trend in vaccination coverage for rotarix and pneumococcal in AkN (2012 - 2014)](image)

Rotarix and pneumococcal vaccinations recorded no client drop-ins over the period. Client drop-out for rotarix fluctuated between 2012 and 2014 observing a sharp decline from about 26% to 0.2% in 2013 then increased to 9% in 2014. However, pneumococcal vaccination client drop-out has been consistent, recording no drop-out in 2014 (see figure 8).

![Figure 8: Client drop-out and drop-in for rotarix and pneumococcal vaccination in AkN (2012 - 2014)](image)
3.1.3 Wider health system

Changes in the health system were noted to adversely affect the implementation of bundles and performance. Discussants (health facilities staff) observed the delay in NHIS claims payment affecting service delivery and performance. Secondly, lack of technical staff increased workload. Thirdly, service delivery was affected by frequent ad-hoc meetings and workshops organized by donors, national and regional levels, rampant electricity outages, facilities having to pay their own electricity bills, lack of staff accommodation, lack of transportation and the location on some facilities. Fourthly, the use of electronic tablets for data entry has improved their data quality and ensured all data can easily be reported. Finally, lack of laboratory equipment restricted them to perform only few tests. Laboratory services are also affected since NHIS accreditation of health centres within the district does not cater for lab services. Box 7 provides overview of some comments made by discussants.

“…….. we need health insurance to pay us the arrears since we need equipment like chairs and tables for outreaches, we will be able to do it. We also need money to fuel the plant……….. We also need equipment for the laboratory because for now we do only few tests.” (AkN, Physician Assistant).

“The district is faced with shortage of some critical staff like midwives, physician assistants, field technicians and others. Some old staff also don’t want to work. It has increased the workload on the few ones available. Ad hoc meetings and programmes by national, regional and donors is major challenge which DHMTs have no control over.” (AkN, DHMT member).

“Maintaining the cold chain systems in some facilities is challenging since even though fridges are available, electrical power is not connected or goes off frequently.” (AkN, DHMT member).

“Also accommodation for the staff is a problem ………. If you have quarters around, we could run afternoon and evening shift” (AkN, CHN).
“……….. Lakpa is closer to the main road. They used to frequent this place a lot and now with the increase in lorry fare and the location of the facility, they find it better to go to a different facility than taking a motorbike to this place which will cost more, so they don’t come there anymore and it has affected our attendance.” (AkN, CHN).

“Yes our returns going up as previously and we are also lucky that they have given us a “tablet-like” something so that when we put in the data it will go to them, at first it was the e-register but they have change it and is helping us because that one anytime you do a work you have to send it through and it goes through directly.” (AkN, Physician Assistant).

Box 7: Comments on wider health system

3.1.4 Unintended effects

According to the discussants, CHO’s inability to ride the motor bikes at some facilities, lack of motivation for the volunteers and lack of funds from the project affected implementation of the activities to address HR problems. Furthermore, discussants observed that data validation relating to
health information management takes a lot of their time. They also observed that intensified monitoring and supervision has increased their budget for fuel. Also, the frequency of defrosting the fridges creates lot of inconveniences to their work. Finally, due to other equally important responsibilities they find it difficult doing intensified monitoring and supervision at all facilities.

“Female CHO's do not like to ride the motorbikes and so some motorbikes are available but not in use. This is affecting implementation of some activities.” (AkN, CHN).

“………. sometimes CWC days coincides with market days for volunteers and they prefer to go to the market because they are motivated whiles helping us. This is not helping us with our work.” (AkN, CHN).

“Lack of funds to implement PERFORM activities affected its implementation. We mostly agree on targets and objectives but because of limited resources and logistics we’re not able to achieve them.” (AkN, DHMT Member).

“Data validation takes a lot of time of DHMT members.” (AkN, DHMT Member).

“The frequency in defrosting creates some inconveniences say when we defrost it today, the power may go off the whole of the following day and with that we’ll have to send the vaccines to the DHA so that when the lights are back we go for them.” (AkN, CHN).

“……….only thing is that we go out more so the only thing is to find a way of getting more fuel. When we get funds for fuel at least we know that the purpose for using the money is worthwhile. It will also help address the problem as a whole.” (AkN, DHMT Member).

“Due to other equally important activities, it might be difficult to do intensified monitoring in all facilities within the speculated time period.” (AkN, DHMT Member).

Box 8: Comments on unintended effects

3.1.4.1 Health worker perception of bundles design

The district had the second highest number of HR/HS bundle activities implemented. Figure 9 shows the five selected HR/HS bundles implemented. The mean ratings of respondents (n = 23) indicates that the use of workplans were rated the highest (4.8) and monitoring and supervision the lowest (3.5). However, generally all bundles were rated to have shown over moderate positive change with the overall mean rated score of 3.9. The main reasons assigned for these observed changes were improved supervision and feedback, increased home visits, improved meetings with community-based surveillance volunteers, availability of weekly and monthly workplans and adherence to preventive plan maintenance schedule.
Figure 9: Akwapim North bundle implementation assessment

### 3.1.5 Discussion

The district implemented specific HR/HS bundle activities to improve health workforce performance in the district. AkN district were the second best in terms of number of HR/HS bundle activities implemented compared with other study districts. Altogether, five HR/HS strategies and twelve activities were implemented to improve health workforce performance and strengthen management in AkN. The study findings from the final situation analysis are consistent with the project’s conceptual framework/theory of change. Consequently, regular monitoring and supervision by DHMT/SDHT ensued effective supportive supervision, participatory and decisive DHMT/SDHT meetings. Additionally, some factors like intensified home visits and improved record filling enabled effective defaulter tracing. The study’s approach of routine defaulter tracing and the introduction of EPI registers as a tool for effective defaulter tracing can influence the effectiveness of service delivery as well as improve health workforce performance.

Our analyses demonstrated that volunteers and community involvement were central to improvements in high awareness on vaccination. In AkN where EPI coverage increased, Volunteers and community involvement were more frequent than any other factor. They help to improve immunization coverage, because they deliver immunization and health messages in the community and mobilize the community members for CWC activities on a regular basis. It should be noted that the health managers at local level may have little control over maintenance critical service delivery equipment like solar panels and fridges. However, some rudimentary actions can help improve performance. For instance, AkN relied on the core concept of PPME i.e. the DHMT undertook defrosting of fridges, checking of battery and cleaning of solar panels, and distil water of panels which greatly helped improved staff performance.
Local level health managers must work strategically to improve health service delivery by involving more volunteers and community members in their activities. To do so, they need the requisite skills and leadership to explore diverse strategies and optimize limited resources. The use of AR in management strengthen has confirmed that through a facilitated and structured planning process managers could make improvements with very little external inputs (Cassels & Janovsky, 1992). However, longstanding commitment from all stakeholders is needed to ensure the availability of resources for effective health service delivery.

3.1.6 Conclusion and Recommendations for AkN

Conclusion
Using the AR approach to implement selected strategies to address the identified vaccination problem of the district has shown promising results. Client drop-out for rotarix declined from about 26% in 2012 to 9% in 2014. Meanwhile pneumococcal vaccination client drop-out consistently declined from 39% to zero in 2014. Both rotarix and pneumococcal coverages increased by over 40% in 2013 but marginally declined by 3% in 2014. There was management strengthening, improving health workforce performance, rebound effect on the wider health system and some desirable unintended effects. Experiences in AkN suggests that change in staff attitude and the effective use of available resources can significantly improve health workforce performance.

Recommendation
The recommendations are as follows:

Leadership & Governance
1. DHMT must be strategized to accommodate ad-hoc meetings, workshops and programmes organized by RHA, GHS, NGOs and other stakeholders not to seriously disrupt their planned work schedules.
2. DHMT must maintain regular and continuous communication with community leaders and other relevant stakeholders (i.e., CBSVs, civil society organizations, NGOs and community health organizations) at all levels to improve EPI activities.
3. DHMT should develop an integrated monitoring and supervision programme through a consultative process with all stakeholders to avoid duplication of activities and effort and waste of competing resources. This will strengthen collaboration and exploit the comparative advantages of stakeholders.
4. The Servicing of the solar panel fridges should be decentralized. Solar fridges can also be replaced with gas or kerosene fridges for easy replenishment

Service delivery
5. The DHMT should liaise with community stakeholders (e.g. community leaders etc.) to provide appropriate place for CWC sessions.
6. Targeted home visits of EPI activities should be replicated in other program areas

**Financing**

7. Given the erratic financial situation of the DHMT, available resources should be aligned and used for workplan activities to ensure the comprehensiveness and effective use of resources to the detriment of implementing unplanned activities.

### 3.1.7 Summary of findings for AkN

Key findings were:

**Management strengthening**
1. DHMT’s use of AR approach has improved their problem analysis capabilities (i.e., identification, analysis, and strategies).
2. Intensified monitoring and supervision visits has improved staff performance and enabled DHMT to make decisive decisions based on the monitoring and supervisory visits finding.

**Workforce performance**
1. Frequent and ad-hoc meetings, trainings and workshops hampers and distorts staff work schedules.
2. Supportive supervision enables CHOs to rightly perform their responsibilities.
3. Participation of volunteers in CWC activities has improved the rate of home visiting as well as rate of vaccine administration. Male involvement in the CWC sessions has also increased coverage.
4. The mean rating of HR/HS bundles implemented were similar with an overall mean score of 3.9. Workplan was rated highest (4.8) while monitoring and supervision was scored the lowest (3.5).

**Wider health system**

Overall, bundles implementation affected some of the health system building blocks in the following areas: (1) lack of finances with focus on PERFORM activities affected the implementation of some activities in both the district and facility; (2) the general lack of technical and non-technical staff in the district increased workload and thus puts immersed pressure on the available staff; (3) service delivery was also affected by other external factors such as the recurrent power outages, bad roads network, unplanned workshop and ad-hoc meetings by donors, regional and national level; (4) Vaccination defaulter rate has reduced and there has been significantly increased CWC attendance through joint constant monitoring and supervision visits, regular home visits and effective health talks on the media.; and (5) Majority of clients (90%) indicated waiting time of less than 30 minutes reasonable. Furthermore, most clients (99%) thought it was right to spend less than 30 minutes with the health worker, they considered any time beyond 30 minutes as too long. Majority of the clients were contented with staff attitude with 98% indicating staff attitude as good. About 90% of clients rated the cleanliness of health facility and surroundings as good and 10% rated it as fair.
Unintended effects
The implementation of PERFORM had other unintended effects on other DHMT work. Firstly, CHO’s inability to ride the motor bike, lack of motivation for the volunteers and lack of funds from PERFORM negatively affected implementation of the project activities. Secondly, monthly data validation improved the data management of DHMT, even though it was time consuming. Increasing number of monitoring and supervision visits increased DHMTs budget for fuel which is not sustainable due to its associated financial implication.

3.1.8 Key recommendations for policy makers or DHMT for AkN

Policy Makers
The RHA should institute periodic HR needs assessment to support their recruitment and retaining both technical and non-technical staff. In the short-term, RHA should endeavor to post some needed technical staff such as midwives, physician assistants, field technicians etc. to the district, since lack of such technical staff is affecting service delivery.

DHMT
The DHMT must re-integrate supportive supervisory visits as an integral part of their routine work.

3.2 Kwahu West District (KW)

As data management began to improve at facility level, DHMT started recording drop-ins. Hence, in order to solve the problem of drop-ins, two activities were introduced (see table 7).

Table 7: Kwahu West additional selected activities

<table>
<thead>
<tr>
<th>Selected HR/HS strategy</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve data management at all levels</td>
<td>Enforce use of separate log books for drop-in and drop-out</td>
</tr>
<tr>
<td></td>
<td>Train all staff on logistics management</td>
</tr>
</tbody>
</table>

3.2.1 Management strengthening

DHMT capacity in action research and problem analysis were built through 3 national workshops. CRT made a total of 12 field visits over the period April 2013 to August 2014. Other monitoring approaches used were documentation templates, diaries, joint reviews and reflection meetings, telephone calls and email contacts. Respondent observed that PERFORM approach to problem analysis has made it possible for them to tackle key challenges facing the district. Discussants further observed that regular meetings helped in reviewing district activities and decisions. Finally they observed that staff trainings boost their performance. Box 9 provides some comments made by respondents.

“…. Before PERFORM we were using the problem tree analysis which is not different. The difference between that of PERFORM using the bundle and the strategy is not much, so that it is what we were using now. With PERFORM, the same activity in a different strategy or in a different form, we identify our problem which was drop out of EPI and PCV, and then we look at other bundles for HR monitoring and supervision as well as...”
training. ... So what we do is that at the end of every month we make sure when they are submitting their reports, they come along with their tally book then we cross check the numbers of children they dosed and tallied in the book to the reporting format that they are submitting to us. We then identify the gaps and teach or coach them again for them to do the right thing. Also, periodically, we visit them on site as to how they are conducting the CWC activity. So with PERFORM, this is what we have been doing and as it is action oriented we identified the problem and solve it with them.” (KW, DHMT Member).

“If you don’t know the root cause of any problem you will tackle it in the way that the problem still persist but perform way of solving the problem will let you know the cause. i.e this is what is causing the problems. This is why we are having the drop out and drop in, so we tackle it from that angle” KW, DHMT Member).

“When such issues come up we meet as a DHMT then we discuss as to how to go about it. Then the officer in charge in that field will bring ideas as to how to go about it” (KW, DHMT Member).

“Sometimes after training, we go for monitoring, you can see that, they perform better” (KW, DHMT Member).

Box 9: Comments on management strengthening in Kwahu West

3.2.2 Workforce performance

3.2.2.1 Bundle Implementation and Monitoring

Discussants observed joint DHMT and facility meetings helps in finding lasting solutions to problems. Furthermore, lessons learnt from PERFORM activities had improved service delivery in EPI. Distribution of immunization logistics is now based on performance. Box 10 provides some observations made by respondents.

“Whenever we hold meetings with the facilities, it could be training or monitoring and supervision. We are able to have fruitful discussions and we also know some of the key problems facing us. This in a way helps both the district and the facilities to revise their notes on what they are doing. This is also a way of benefiting from PERFORM project.” (KW, DHMT member).

“We motivate them by giving them the necessary material they need so as to encourage them to continue doing well. This is not to say that we neglect those who are not doing well. We still encourage them. For example during the NID, we distribute materials based on the performance of the coverage areas when it comes to TB and tracing defaulters.” (KW, DHMT member).

Box 10: Comments on Bundle implementation and Monitoring in Kwahu West

3.2.2.2 Key stakeholder involvement in bundles Implementation

Collaborating with government agencies (Ministries of Food and Agriculture), International NGOs (e.g. HUNGER Project) and other local stakeholders increased district coverage in its heath activities. Furthermore, broad consultation made with relevant stakeholders during bundle implementation helped us in resolving some challenges. Box 11 provides some comments made by respondents.

“In social mobilization, when we have challenges with say this indicator we go on air to talk about it. Like we were having low coverage for measles 2. They were not bringing the children for measles 2 and hence not receiving LLINs. So when we went on air, FM station, involved the opinion leaders, Chiefs to educate their
people and within shortest time the coverage started picking up. Also, when there’s NID we go on air to talk about the NID and we don’t only say the pending campaign we tell them even after the campaign you’re supposed to send your child to the vaccination section until the say the child is five years. So they give us the opportunity for us to that social mobilization and create awareness. The assembly’s information service they give us the information van and the health insurance they also give their pickup to use. (KW, DHMT member).

“HUNGER Projects also supports us by building facilities or sometimes sponsoring our programs.” (KW, CHN).

Box 11: Comments on stakeholders’ involvement in Kwahu West

3.2.2.3 Bundle Effects

Reward system introduced during PERFORM project had motivated staff and improved performance. Furthermore data validation at sub-district level had improved data quality. Box 12 provides overview of some comments made by discussants.

“With the facility performance reward system, I think there is a bit of competition because when they submit the report and you say they have scored this, they are conscious. People want to come early, want to do quality work, want to validate their data before they come. Hitherto they were doing it before but along the line they stopped and people just bring their reports without the sub-district leader knowing because you have to sit together and validate. You also have targets for each month. For instance if at half year you are still at 30% then there is something wrong. So these are the things you have to teach them look at.” (KW, DHMT Member).

“The data validation has helped units at the DHMT to understand each other’s report and to appreciate the consistencies in the same indicators in different format” (KW, DHMT Member).

Box 12: Comments on bundle effects in Kwahu West

3.2.2.4 Stakeholders Perception of Bundles

Respondents observed that monitoring and supervision, and the use of attendance register checked the activities of health staff. Action research has helped in finding solutions to low attendance of health facility by patients. Box 13 shows some of the comments made by respondents.

“It should continue especially the monitoring and supervision. It is very important. Because the guy will be sitting in the village and doing nothing and even if the client are not coming to the facility, he does not care. The health management team are doing enormous job. The monitoring and supervision must continue especially on special diseases like TB, the core disease and all those things. When attendance is going down formally nobody cares but it’s not like that now.” (KW, Ministry of Food & Agriculture Stakeholder).

Box 13: Comments on perception of bundle in Kwahu West

3.2.2.5 Bundle effect on health workforce performance

Respondents observed that PERFORM projects had helped improve staff approach to work in the sense that staff now think broader and find root causes of problems. Furthermore, training on vaccination has improved staff performances especially recent trainings on new vaccinations. Finally the filling of attendance register, tally cards recording, events register has improved. Box 14 provides some attestations of respondents.
“PERFORM approach is having a positive impact. There nothing negative that I can think of because it’s now helping us to think broader. So now we don’t just go there looking at the figures alone. It was like you’re not performing or you’re not meeting you target. As to what is contributing to the reason why the person is not meeting the target, we did not pay detailed attention. Now we ask them a lot of question to get to the bottom and you’ll realized it was something they could have really handled at their level. So with the exposure that we have gotten from PERFORM, if we build health workers understanding and capacity to think through issues they’ll be able to know their limits and when to call others.” (KW, DHMT Member).

Box 14: Comments on bundle effect on workforce performance in Kwahu West

3.2.2.6 Waiting time

Over 90% of clients (n = 245) indicated that waiting time of less than 30 minutes was reasonable. However, as waiting time increased beyond 30 minutes and more, 20% thought it was too long (see figure 2).

3.2.2.7 Time spent with health worker

About 75% of clients consider less than 30 minutes time spent with the health worker as about right. However, as time spent with the health worker increased beyond 30 minutes, about 32% of clients indicated that the time spent as too long (see figure 10).

3.2.2.8 Health worker attitude

Figure 14 shows that 98% of clients indicated that health worker attitude was good.

3.2.2.9 Cleanliness of health facility

Eight-six percent of clients rated the cleanliness of health facility and surroundings as good and 14% as fair (see figure 14).

Figure 10: Rating of time spent with the health worker
### 3.2.2.10 Status of KW vaccination problem

The coverages of rotarix and pneumococcal vaccinations increased from about 63% to 94% and 50% to 92% respectively over the period. The coverage however marginally declined to about 88% for rotarix in 2014. Figure 11 shows the vaccination coverage trends for the two vaccines.

![Graph showing vaccination coverage trends for rotarix and pneumococcal vaccines](image)

**Figure 11:** New vaccine vaccination coverage trend in Kwahu West

Figure 12 shows clients drop-ins and drop-outs for the two vaccines from 2012 to 2014. Pneumococcal vaccination recorded no client drop-ins over the period. However, rotarix recorded marginal (0.3%) drop-ins in 2014. Both rotarix and pneumococcal vaccinations recorded steady decline in drop-out rate over the period.

![Graph showing vaccination drop-ins and drop-outs](image)

**Figure 12:** New vaccine vaccination drop-in and drop-out trends in KW (2012 - 2014)

### 3.2.3 Wider health system

Discussant observed that the wider health system affected their bundle implementation and performance in the following areas: (1) lack of finances affected the implementation of some activities in both the district and facility; (2) lack of technical and non-technical staff puts immersed pressure on the few
available ones; and (3) service delivery was also affected by the frequent power outages, bad roads network; unplanned workshop and ad-hoc meetings by donors, regional and national level and lack conducive place for CWC sessions. Box 15 shows some comments made by respondents.

Some factors which affects are the flow of resources. Sometimes we need to organize some basic training but we don’t have the funds to do it. For vaccines the whole year we’ve not run short of vaccines but sometimes the needles and syringes that we use we run short and there’s a peculiar problem with us as a district because the Holy Family Hospital is a bigger place that most people come to deliver there’s always pressure on our EPI logistics. Sometimes too we run short of logistics we have to fall on other sister districts for support. When they have they give but sometimes they also don’t have.” (KW, DHMT Member).

“...... sometimes we run short and there’s pressure on our logistics and then some commodities will not come from say national and you wouldn’t have control over it, you plan that you want to do training on logistic management and stock taking but if the funds are not available it’s you can’t do it. For example if HIV test kits doesn’t come from national, it’s beyond us... so some of these things hinder our effort.” (KW, DHMT Member).

“With the drugs for instance, the frequent light outs doesn’t help us at all. Sometimes you go collect drugs from the MHA and you can’t put it in a refrigerator because the light could be off for three days and wouldn’t even know when it is coming and maybe the following day too you have weighing so you’ll have to send it back to the MHA and it’s a problem.” (KW, CHN).

“The place that we do the CWC session is too small that sometimes prevented people from coming. Some of them if they see how congested the place is and also the queue that they have to join then they turn their back.” (KW, CHN).

Box 15: Comments on wider health system in Kwahu West

3.2.4 Unintended effects

Although PERFORM has generally improved performances in service delivery such as management of other logistics (besides EPI logistics) like HIV and RDT test kits, respondent however raised some effects of the project on their activities. The monthly data validation is very tedious and time consuming. Data validation is not done in other programme areas (e.g. Morbidity reports, FH reports etc) Furthermore, discussant observed that, even though the onsite supportive supervision was good, it affected administrative work of DHMT. Though the benchmark for two EPI visits per year per facility was a realistic plan, other ad hoc activities and staff shortages makes it difficult to achieve. Paying particular attention to vaccine wastages shifted focus from other areas. Box 16 are some comments made.

“Data from all reporting facilities need to be validated, reconciled figures in tally book with EPI. It is not easy when you have to add daily tally to arrive at monthly figures. It is very tedious and time consuming.” (KW, DHMT Member).

“We all agree that the onsite supportive supervision was good, but the EPI 2 visit to each facility per year is very difficult to achieve, not when we there are staff shortages in most units. The onsite supportive supervision even deprived the DHMT of other activities which are equally important.” (KW, DHMT Member).
“….. PERFORM has brought some improvement in our work but the emphasis on PERFORM is too much. Vaccine usage monitoring is good but that is not all that we do. Some units only places emphasis on that which affects our appraisal in other area. But in all I think PERFORM has led to improved services. (KW, CHN).

“For everything to work well, staff issues should also be addressed. Some staffs do more than they are supposed to do which affects their performances…… that is the reality on the ground.” (KW, DHMT member).

Box 16: Comments on unintended effects in Kwahu West

3.2.4.1 Health worker perception of bundles design

The district had the least number of HR/HS bundle activities implemented. The mean rating by health staff (n = 15) of HR/HS bundles implemented were similar with an overall mean score of 4.3. Supportive supervision was rated highest (4.5) and performance reward the lowest (4.2). Thus there was perceived much positive change in these activities (see figure 13). The main reasons assigned are improved knowledge in vaccine administration, proper recordings of drop-in and drop-out, proper management and wastage, feedbacks, and introduction of the reward system motives staff to hardwork.

![Figure 13: Kwahu West bundle implementation assessment](image)

3.2.5 Discussion

In decentralised health systems, where enhanced responsibility and ‘decision space’ for human resource management (HRM) is devolved to district levels (Bossert & Beauvais, 2002), there are potentially many cost-effective workforce performance solutions available to health managers within their resource constraints (Marchal et al., 2010). In order to reduce drop-out rate of rotarix and pneumococcal, KW implemented integrated set of HR/HS strategies. The project’s conceptual framework for KW which aimed to improve health workforce performance by improving on defaulter tracing, supportive supervision and motivating health staff (non-financial rewards) was generally corroborated by the study.
findings. This was achieved through the implementation of specific HR/HS activities. Of the three study districts, KW implemented the least number of HR/HS bundle activities. In total, three strategies and eleven activities were implemented to improve health workforce performance and strengthen management.

Staff training in rotarix and pneumococcal vaccination, data validation, use of separate log books (drop-ins & drop-outs) and logistics management training improved data management leading to effective defaulter tracing. Staff orientation on supervision checklist, on-site supportive supervision and quarterly performance reviews improved DHMT and SDHMT monitoring and supervision. Furthermore, improved performances in some activities such as management of EPI logistics (e.g. cold chain system, EPI vaccines) had cascading effect on management of other logistics like HIV and RDT test kits. This notwithstanding, paying particular attention to some areas of service delivery may shifted focus from other areas. For instance, in KW, greater focus on EPI services shifted attention from other services like ANC. Hence, especially in the use of AR, there is need to highlight the use of ‘systems thinking’ in order to consider potential unintended as well as intended consequences of any action within the wider system.

Health managers at local levels may have little control over restrictive budget ceilings on human resource (HR) expenditure set by central governments and limited financing available for supplies and equipment (Wang, Collins, Tang, & Martineau, 2002). However, collaboration and broad consultation with NGO’s and relevant stakeholders can helped in overcoming logistics challenges. Hence, managers must develop an integrated and harmonized monitoring and supervision programme through a consultative process with all stakeholder to avoid duplication of activities and effort, and waste of competing resources. This will strengthen collaboration and exploit the comparative advantages of stakeholders. The findings confirmed Cassels & Janovsky, (1992) assertion that managers could make improvements with very little external inputs by using AR strategy in management strengthening through a facilitated and well-structured planning process. Furthermore, AR can improved staff capabilities in problem analysis (i.e., identification, analysis, and strategies). There is however high propensity that higher level policy decisions (e.g. delay in disbursement of funds) could restrain what managers could achieve. Also, the non-financial support characteristic of action research strategy could affect staff enthusiasm.

3.2.6 Conclusion and Recommendations for KW

Conclusion
The AR approach which was used to support the implementation of selected strategies to address the identified vaccination problem of the district has shown promising results. There was management strengthening, improving health workforce performance, it had a reflective effect on the wider health
system and some desirable unintended effects, example management of other logistics like HIV and RDT test kits. The study results suggest that change in staff attitude, effective monitoring and supervisory visits and staff motivation can significantly improve health workforce performance.

**Recommendation**

*Leadership & Governance*

1. DHMT should develop an integrated and harmonized monitoring and supervision programme through a consultative process with all stakeholder to avoid duplication of activities and effort and waste of competing resources. This will strengthen collaboration and exploit the comparative advantages of stakeholders.
2. DHMT should consider other management approach like spot checks, attendance books, event register and movement books which can reduce absenteeism and improve staff performance.
3. DHMT must maintain regular and continuous communication with community leaders and other relevant stakeholders (i.e., CBSVs, civil society organizations, NGOs and community health organizations) at all levels to improve EPI activities.

*Health Information*

1. Given the time constraining nature of the data validation, SDHMTs and DHMT must strategize properly to make the activity sustainable.

**3.2.7 Summary of findings for KW**

*Management strengthening*

1. DHMT capacity in action research and problem analysis were built through national workshops.
2. Joint review, telephones call and email contacts were approach used to monitor activities implementation process.
3. Regular joint DHMT and facility meetings helped in finding lasting solutions to workforce problems. Distribution of immunization logistics is now based on performance indicators and tally records.

*Workforce performance*

1. Facility performance reward (nonfinancial) system introduced during PERFORM project had motivated staff and improved performance.
2. Data validation at sub-district level had improved data quality at all levels. However, this is very tedious and time consuming.
3. PERFORM approach to problems analysis, staff training and joint DMHT meetings helped in boosting performance and strengthening management.
4. Collaboration and broad consultation with NGO’s and other stakeholders helped in overcoming logistics challenges.
5. Majority (90%) of client interviewed indicated that waiting time of less that 30minutes was reasonable. About 98% indicated that health worker attitude was good and 75% of clients consider less than 30minutes time spent with the health worker as about right.
6. The mean rating of HR/HS bundles implemented were similar with an overall mean score of 4.3. Supportive supervision was rated highest (4.5) and performance reward the lowest (4.2).

**Wider health system**

Overall, bundles implementation affected some of the health system building blocks in the following areas: (1) lack of finances with focus on PERFORM activities affected the implementation of some activities in both the district and facility; (2) the general lack of technical and non-technical staff in the district, increased workload and thus puts immersed pressure on the available staff; and (3) service delivery was also affected by other external factors such as the recurrent power outages, bad roads network, unplanned workshop and ad-hoc meetings by donors, regional and national level; (4) The coverages of rotarix and pneumococcal vaccinations increased from about 63% and 50% in 2012 to 88% and 92% respectively in 2014. Both rotarix and pneumococcal vaccinations recorded steady decline in drop-out rate over the period (from 18% to zero for rotarix and 38% to 3% for pneumococcal).

**Unintended effects**

The implementation of PERFORM had other unintended effects on other DHMT work. Firstly, the improved performances in service delivery such as management of EPI logistics (e.g. cold chain system, vaccines) had a ripple effect on the management of other logistics like HIV and RDT test kits. Finally, paying particular attention to vaccine wastages shifted focus from other areas.

### 3.2.8 Key recommendations for policy makers or DHMT for KW

**Policy Makers**

1. The RHA should institute periodic HR needs assessment to support their recruitment and retaining both technical and non-technical staff. In the short-term, RHA should endeavor to post some need technical staff such as midwives, physician assistants, field technicians etc. to the district, since lack of such technical staff is affecting service delivery.

2. DHMT must be strategized to accommodate ad-hoc meetings, workshops and programmes organized by RHA, GHS, NGOs and other stakeholders in order not to seriously disrupt their planned work schedules.

3. The RHA should intensify its monitoring and supervisory visits to the DHA and sub-districts as a way to strengthen collaboration and ensure efficiency in service delivery.

### 3.3 Upper Manya Krobo District (UMK)

An attempt by the DHMT to involve Local Health Committees (LHCs) in attendance monitoring of CHO resulted in a disagreements between the committees and CHO in some communities. The DHMT therefore resolved to the following modification (see table 8).
Table 8: Modification to UMK bundle implementation

<table>
<thead>
<tr>
<th>Selected HR/HS strategy</th>
<th>Original activity</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance monitoring</td>
<td>Local Health Committee members, DHA and RHA to spot check on attendance register of health staff</td>
<td>DHA and RHA to spot check on attendance register of health staff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local Health Committee members to sign CHO outreach log books</td>
</tr>
</tbody>
</table>

3.3.1 Management strengthening

DHMT capacity in action research and problem analysis were built through 3 national workshops. CRT made a total of 12 field visits in the period April 2013 to August 2014. Other monitoring approaches used were documentation templates, diaries, joint reviews and reflection meetings, telephone calls and email contacts. Enhanced PERFORM continuous monitoring and supervision improved DHMT’s monthly, quarterly and annually reporting. Moreover, the DHMT’s introduction of event register was initially welcomed but later is some cases abused by in-charges. Other good management tools introduced were spot checks and movement books. There was noticeable improvement in core management meetings, which was participatory and decision-making based on consensus building. Box 17 provides some comments made by respondents.

“.....for example like I said initially by applying PERFORM approach to address our ANC issues, we saw that we have few midwives post filled, we did not have enough midwives but we have a lot of community health officers so we tried to build capacity of the community health officers so that they would be able to provide basic ANC services so that we can increase our ANC coverage ......... PERFORM activity like attachment to the district hospital’s maternity ward has built CHO’s capacity in ANC services – example emergency delivery, palpation, screening - and should continue”. (UMK, DHMT member).

“I want the event book abolished........as a staff if I did something wrong, I think the punishment should be verbal instead of asking me to weed or dig a pit otherwise my name will go into the event register for vacating post. I had that experience when my in-charge asked me to dig a pit. Though my action wasn’t right I think the punishment wasn’t fair. I was thinking the event register is used to record incidence where say if I slapped someone or insult another, it could be written in there but not a punishment as this.” (UMK, CHO).

“Most activities introduced by the DHMT had brought about checks in the system and monitoring as well as improved service delivery in the district....The importance of spot checks is that it puts staff on their toes i.e. another eye is looking so they should do their things effectively”(UMK, CHO).

“Now we come together often during our meetings. We sit and discuss issues and arrived at a point that we all agree. And before every meeting, we have our agenda ..... Where we didn’t achieve some of the things in the previous meetings, we re-strategized. For every meeting, a quorum of at least 3 DHMT members are now needed except instances where the meeting concerned a particular unit e.g. if it is NID program and the Disease Control officer will have to travel on that day it means we have to reschedule. ........some people now feel reluctant to come for meetings because at the end of the day there was no money to implement strategies. But with the coming of PERFORM they made us aware that even when there are no funds it is important to strategize for problems solving. So PERFORM has influenced some of our practices.”(UMK, DHMT member).

Box 17: Comments on management strengthening in Upper Manya Krobo
3.3.2 Workforce performance

3.3.2.1 Bundle implementation and monitoring

DHMT implemented and monitored work plan activities. Progress were analysed during DHMT meetings and joint DHMT and facilities performance review meetings (i.e., quarterly, bi-annually and annually). Spot checks were also used to monitor activities. The use of attendance register, movement book, event register and spot checks improved staff presence at the health facilities. Box 18 provides some attestations by discussants.

“PERFORMS activities are very helpful, the movement book helps monitor our movements, and the weekly plan inform us the activities that we do each day. If we don’t do the weekly plans and you come to work, you will not have anything on your itinerary. Without the movement book we used to go out and return anytime but with the introduction of it we now make sure we log into it before going out so that we don’t get into trouble when someone comes to the facility.” (UMK, CHO).

“And identifying the problem, we then incorporate it into our work plan to help us achieve our goal. We discuss progress, problems and solutions during our quarterly, half year and annually performance review meetings with the facilities. Opinions of all stakeholders are considered. However, minor issues are resolved instantly….also, we analyze progress and if the strategy we are using is not the best, you find the next the strategy to make a move ahead.” (UMK, DHMT member).

Box 18: Comments on bundle implementation and monitoring in Upper Manya Krobo

3.3.2.2 Key stakeholders involvement in bundles implementation

Respondents confirmed international NGOs (e.g. PLAN Ghana) donate logistics and other infrastructure for health service delivery. They were also involved in staff monitoring. Community leaders were involved in staff monitoring and client mobilization for CWC. Box 19 shows some observation by a respondent.

“PLAN Ghana are very helpful with Infrastructure, PLAN built CHPS compounds….. they give us delivery set, equipment, oxygen cylinders, buckets all through the watch project. Another NGO’s the HUNGER project epicenters, we have two. They been providing vaccines, fridge and then solar panel. WATCH project have some officers who also monitor our staff and the community volunteers ……..we involve community volunteers and some opinion leaders in monitoring whereby they sign in the notebooks of the CHO’s who visit the communities to indicate that they do those visits in that community….also Dade Manste normally beat the gongon for us when we are going for outreach like CWC or home visits.” (UMK, DHMT member).

Box 19: Comments on stakeholders’ involvement in bundles implementation in UMK

3.3.2.3 Bundles effects

Discussants attest that CHO’s attachment to the district hospital has enhanced CHO’s confidence in ANC service delivery. Furthermore, staff performance regarding ANC services and referrals have improved and ANC coverage has increased. Box 20 shows perception of some respondents.
Box 20: Comments on perception on bundles effects in Upper Manya Krobo

3.3.2.4 Stakeholder’s perceptions of bundles

The DHMT’s stakeholder (from HUNGER Project) interviewed considered spot checks as an important management tool. Box 21 shows some comments on the perception of stakeholders on the bundles.

Box 21: Comments on stakeholder’s perception on bundles in Upper Manya Krobo

3.3.2.5 Effects of bundles on health workforce performance

DHMT respondents observed that their skills in problem analysis have improved due to the action research training. Improved monitoring has reduced absenteeism. Some respondents observed that improved staff appraisal has helped improve on staff performance. Data management has also improved. DHMT now embark on regular monitoring visits. Box 22 shows perception of some respondents.

Box 22: Comments on bundles effects on health workforce performance in UMK district

Through the training we also have more knowledge about referrals so if anything we do refer them. The maternity training has boosted my confidence, today I cared for two pregnant women. Now the ANC cards are being filled well, we’re able to fill the gaps in the ANC registers, we now do counseling, check their fungal heights and head in vaginal deliveries." (UMK, CHN).

“Actually their performance is okay as to the services we’re delivering now compared to the past. Because if I should compare to the past most of the things we do here, e.g. total number of clients we attend to, it’s very improved. And if you look at our IGF generation and other things, I’m happy with it.” (UMK, DHMT member).

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“Through the training we also have more knowledge about referrals so if anything we do refer them. The maternity training has boosted my confidence, today I cared for two pregnant women. Now the ANC cards are being filled well, we’re able to fill the gaps in the ANC registers, we now do counseling, check their fungal heights and head in vaginal deliveries.” (UMK, CHN).

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“Actually their performance is okay as to the services we’re delivering now compared to the past. Because if I should compare to the past most of the things we do here, e.g. total number of clients we attend to, it’s very improved. And if you look at our IGF generation and other things, I’m happy with it.” (UMK, DHMT member).
“Previously, we didn’t take our data seriously. We do not do our documentation very well but now there’s improvement. We do documentation on every activity because anytime they can come around they inspect it. Now we do proper documentation. For instance the home visit, when we go we’ll not let the volunteers sign or the midwife endorse it. But now because of that spot check they told us when we go for these visit our in-charge should endorse that we went. The spot checks are very good. Current appraisal is also good because you are able to identify your weakness, on your performance.” (UMK, CHN).

“PERFORM activities have put us in shape….with the attendance book we weren’t writing our names and also movement book, we just leave the place and go but PERFORM made us know the importance of documenting. With the attendance book staff do not absent themselves from work unnecessarily…..one way or the other most staff do not want to absent themselves from work because when you take the attendance book all staff are regularly at post recently.” (UMK, CHO).

“PERFORM activities puts us on the spot so even though you’ll have to go for quarterly monitoring, we are pushed to go on regular ones outside of the quarterly visits.” (UMK, DHMT member).

Box 22: Comments on effects of bundles on health workforce performance in UMK

3.3.2.6 Waiting time

Over 90% of clients considered waiting time less than 30 minutes as reasonable. However, as waiting time increased beyond 30 minutes and more, 17% observed it to be too long (see figure 2).

3.3.2.7 Time spent with health worker

Only half of the clients (50%) indicated that less than 30 minutes time spent with the health worker was about right. However, as time spent with the health worker increased beyond 30 minutes, 35% of clients considered the time spent as too long (see figure 10).

3.3.2.8 Health worker attitude

All clients (100%) rated health worker attitude as good (see figure 14).

3.3.2.9 Cleanliness of health facility

About 82% of clients considered the cleanliness of the health facility and its surroundings as good, 11% as poor, and 7% as fair (see figure 14).
3.3.2.10 Status of UMK ANC coverage problem

Using 4% of the district population as expected deliveries, figure 15 shows ANC coverage trend. With the inception of PERFORM activities in 2013, the coverage increased marginally from about 74% to 79% in 2013, but decline to 72% in 2014. The decline was ascribed to inability to meet ANC service targets at ‘island’ communities (communities on islands with difficult access requiring ferry boat).

3.3.3 Wider health system

Respondents observed that changes in the wider health system blocks affected their overall bundles implementation and performance. These were first delays in financial disbursements such as delays in NHIS claims payments and government subventions. Secondly, lack of appropriate and adequate technical and non-technical staff. Thirdly, ad-hoc workshops and meetings by donors and region/national interrupt planned activities. Fourthly, inadequate logistic supplies (i.e., vaccine fridge, transportation, accommodation and medicine supply). Fifthly, data management was hampered by poor internet access and communication. Finally they noted that NGOs support (i.e., PLAN Ghana, Phillips Foundation and HUNGER Project), community leaders and volunteers are crucial to service delivery. Box 23 shows some attestation from respondents.
There are a lot of things that are needed to boost the morale of our service delivery here. Means of transport is one, for about a year now we don’t have a vaccine fridge as a health center for a year now. We store in a cold box so every day you have to be coming up and down and be monitoring the vaccine.” (UMK, Physician Assistant).

“.....the motorbike and the roads and logistics, the raincoats sometimes we go for outreach and it will be raining or drizzling......so they have to give us those logistics that we need. And sometimes when we go for home visits the place is very bushy we need wellington boots. We need a motor bike. We do not have lights. No communication network here.” (UMK, CHN).

“... there are a many instances where lack of funds have hindered the implementation of activities especially when it has to do with provision of equipment or logistics, if there are no funds that one can use, we can’t do it.” (UMK, DHMT member).

“We don’t get our drugs on time even if we will get it, it will delay before we get them. Secondly, our major challenge is our motorbike here. We have only one motorbike with about seven communities to serve supposing......sometimes we had to take a car or walk before we can render our services to our clients. Most of our roads are also not good, at times the bike cannot go so you have to walk.” (UMK, CHO).

“.... infrastructure is a challenge here. We do not have accommodation to even stay closer to the facility. As a health centre, you do not have the time to close and you must come early as well. You may close early ..... then they will call you to come back from that far place again. Maybe by the time you get here the patient might have died. So they should try and get us accommodation close to the facility.” (UMK, Enrolled Nurse).

Box 23: Comments on wider health system in Upper Manya Krobo

3.3.4 Unintended effects

DHMT bemoans they could have achieved more if PERFORM brought resources. CRT observed that the project’s inability to financially support implementation of the bundles affected DHMT and staff motivation. CHO respondents observed that attachment to the hospital maternity wards, though useful, affected routine CHOs services, mainly immunization. Also, CRT’s regular monitoring visits disrupted planned district meetings. Introduction of event register at facility level created tension between some staffs and in-charges. Furthermore, the signing of CHOs home visit books by community volunteers was not implemented early because structured. Intensified DHMT monitoring affected reporting writing due to inadequate staff strength. Additionally, internal leadership crises at a point affected smooth implementation of DHMT’s activities. DHMT found PERFORM documentation approach (diaries) tedious and time consuming. However, bundles implementation facilitated more interaction between DHMT and facilities in-charges which enabled prompt resolution of operational challenges at all levels. Box 24 are some comments made.

“Lack of funds, staff reluctance to implement some of the activities due to workload and lack of logistics were some of the challenges we faced trying to implement some of the activities. We are unable to achieve some agreed targets and objectives due to limited resources and logistics e.g. our boat for outreach services to island communities is spoilt and we also lack life jackets and fuel”. Our performance has increased but the resources that we need to work with are inadequate.” (UMK, DHMT member).

“Mostly, CHOs’ weekly workplan was inconsistent with sub-districts’ plan because staff understanding on the link between the two was inadequate thereby causing them to perform tasks outside of the district’s bigger
plan…some are reluctant in the preparation of the plans…..some staff not drawing out individual work plans but relying on monthly itineraries.” (UMK, DHMT member).

“DHMT sometimes postponed scheduled district meeting because of crashed activities resulting from inadequate staff numbers to form quorum due to PERFORM visits, unplanned workshop meetings at the regional level.” (PERFORM CRT member).

“…. I think the maternity attachment was very good, though the program affected our schedule a bit especially CWC outreach but it has also sharpen the memories of the CHO’s and their performance has improved afterwards. PERFORM has achieved the desired outcome.” (UMK, CHO).

“Keeping up-to-date documentation is a challenge because it consumes a lot of time, meanwhile we have a lot of other equally important things to do. It’s good because we’re able to identify our problems, sit to analyze, strategize and prioritize our activities but I think we are having problems because we don’t have enough staff.” (UMK, DHMT member).

“The DDHS was reported to have been absent from work for about a month incommunicado to the DHMT. Members reiterated that this has resulted in leadership vacuum in terms of direction and logistics support. This will in the long run affect the execution of the planned activities of the district.” (PERFORM CRT member).

Box 24: Comments on unintended effects in Upper Manya Krobo

3.3.4.1 Health worker perception of bundles design

The district had the highest number of HR/HS bundle activities implemented. On average over 90% of bundle activities were rated to have achieved moderate positive changes with an overall mean score of 3.6. As shown in Figure 16 capacity building was rated highest (4.1) and award system the lowest (3.0). Reasons given for these perceived positive changes were improved supervision and feedbacks, improved outreach service with sub-district support, training and mentoring, use of workplans, use of event registers, and improvement in documentation of activities.

![Figure 16: Upper Manya Krobo bundle implementation assessment](image)

**Figure 16: Upper Manya Krobo bundle implementation assessment**

1= No change; 2= Slight change; 3= Moderate change; 4= Much change; 5= Major change
3.3.5 Discussion

The district implemented specific HR/HS bundle activities to improve ANC coverage. The project’s theory of change which aimed to improve health workforce performance and effects on the wider health system with focus on increasing ANC coverage was largely confirmed by the findings. This was achieved through the implementation of specific HR/HS activities. Of the three study districts, UMK implemented the highest number of HR/HS bundle activities. In total, twelve HR/HS strategies and twenty-two activities were implemented to improve health workforce performance and strengthen management. Thus, the orientation of health staff on job description improved efficiency and effectiveness in work schedules. Due to inadequate number of midwives in the district, DHMT could not assign new staff to mentors (midwives) as planned. Additionally, staff inability to undertake outreach services to island communities is a major problem affecting health outcome in the district. The DHMT and facilities lack logistics (boat, life jacket etc.) required for services to underserved island communities.

Absenteecism, productivity and quality of care were highlighted as areas of workforce performance that need to be addressed, particularly in the public sector (Vujicic et al, 2009). Through the bundle implementation, staff absenteeism was observed to have been reduced through attendance monitoring by introduction of attendance register, staff movement book, spot check by DHMT and signing of home visit books by community leaders. However, the introduction of event register aimed at checking the behaviour of staff, was in some instances abused by in-charges. Staff appraisal and reward motivated staff. The study findings refuted the claim of illegal collection of fees by health staff. Rather, clients make false claims for money for health care services (e.g. ANC) which are free of charge. Capacity and confidence of staff (CHOs) in ANC service delivery was enhanced through attachment of staff to ANC unit and maternity wards of the district hospital. The findings in UMK corroborate the argument that in decentralised health systems, where enhanced responsibility and ‘decision space’ for resource management is devolved to district levels, there are potentially many cost-effective workforce performance and management strengthening solutions available to health managers within their resource constraints (Bossert & Beauvais, 2002 and Marchal et al., 2010).

As a policy, in resource-poor settings like Ghana, a sustainable and cost-effective workforce performance and management strengthening interventions (e.g. regular team meetings, use of workplans, spot checks, attendance book, event register, movement books and staff appraisal) should be adopted to address management and workforce problems. The findings confirmed that by using AR in management strengthening through a facilitated and structured planning process, managers could make improvements with very little external inputs (Cassels & Janovsky, 1992). Action research can improve staff problem analysis capabilities (i.e., identification, analysis, and strategies). However, it
was evident from the study that, even though some successes were achieved, higher level policy
decisions (e.g. delay in disbursement of funds) acted as a constraint on what managers could achieve.
Furthermore, the non-financial support nature of action research affected staff motivation.

3.3.6 Conclusion and Recommendations for UMK

Conclusion
The implementation of HR/HS strategies to address selected ANC problem by AR approach has shown
some desirable results. Thus, bundles implementation has facilitated DHMT and facilities in-charges
interaction which has enabled prompt resolution of operational challenges at all levels. There were
observable effect on management strengthening, workforce performance, and cascading effect on the
wider health system as well. However, PERFORM activities resulted in certain negative unintended
effects, for instance, CRT’s regular monitoring visits disrupted planned district meetings and Intensified
DHMT monitoring affected reporting writing. The study suggest that change in staff attitude can
significantly improve health workforce performance.

Recommendation
The study makes the following recommendations for UMK DHMT:

Leadership & Governance
1. DHMT should institute regular ANC refresher training for CHOs and annual attachment of new
CHO to the district hospital. This will build capacity of CHOs in basic ANC service delivery
to complement the few and aging midwives in the district.
2. DHMT must establish Local Health Committees in all CHPS zones and communities where
they are non-existent. This would ensure effective community participation in service delivery.
3. DHMT needs to strengthen and sustain community volunteers’ involvement in monitoring of
staff at CHPS level.
4. DHMT must step up efforts to repair their boat. This would help improve service coverage in
“island” communities to reduce morbidities and mortalities in especially children and women.
5. DHMT must maintain regular and continuous communication with community leaders and
other relevant stakeholders (i.e., CBSVs, civil society organizations, NGOs and community
health organizations) at all levels to improve EPI activities.

Health Information
1. DHMT should ensure that data is validated at the sub-districts level before submission. This
will improve data quality for decision making.
2. DHMT must institute a mentoring programme for young and new staff. This would help
develop their practical skills in critical areas of service delivery.
3. DHMT must be strategized to accommodate ad-hoc meetings, workshops and programmes organized by RHA, GHS, NGOs and other stakeholders not to seriously disrupt their planned work schedules.

3.3.7 Summary of findings for UMK

Key findings were:

Management strengthening
1. CRT’s constant monitoring and supervision improved DHMT’s monthly, quarterly and annually reporting.
2. DHMT’s use of AR approach has improved their problem analysis capabilities (i.e., identification, analysis, and strategies).
3. The introduction of some new staff management activities have reduced absenteeism at all levels (e.g., spot checks, attendance book, event register, movement books and staff appraisal).
4. There was noticeable improvement in core management meetings, due to its participatory and decision-making nature.

Workforce performance
1. NGOs play major role in health service delivery. They donate logistics and infrastructure as well as engaging in monitoring activities.
2. CHOs attachment to the district hospital has enhanced their confidence and improved ANC service delivery thereby increasing coverage.
3. Stakeholders considered spot checks as an important management tool.
4. Over 90% of clients considered waiting time before seeing a health worker as reasonable whiles half of clients interviewed considered time spent with the health worker as ‘about right’. Furthermore, 82% of clients considered the cleanliness of the health facility and its surroundings as good. On average, over 90% of bundle activities were rated to have moderately achieved positive changes with an overall mean score of 3.6.

Wider health system
Changes in health system building blocks affected the overall bundles implementation and performance through: (1) the general lack of technical and non-technical staff in the district, increased workload and thus puts immersed pressure on the available staff; (2) DHMT planned activities were interrupted due to ad-hoc workshops and meetings by donors and region/national; (3) inadequate logistic supplies (i.e., vaccine fridge, transportation, accommodation and medicine supply) affected service delivery; (4) Poor network coverage hampered access into the DHIMS; and (5) Community leaders and volunteers mobilization effort helped improve CWC activities.
ANC coverage increased marginally from about 74% to 79% in 2013, but decline to 72% in 2014. The decline was attributed to inability to meet ANC service targets at ‘island’ communities due to lack of logistics like ferry boat and life jackets.

*Unintended effects*

The implementation of PERFORM activities had unintended effect on DHMT and facilities’ staff work. Firstly, PERFORM did not provide any intervention funding unlike other known donor projects. This negatively affected staff motivation. Secondly, DHMT found PERFORM documentation approach (diaries) tedious and time consuming. Thirdly, CRT’s regular monitoring and supervisory visits sometimes, disrupted planned district meetings. Finally, intensified DHMT monitoring and supervisory visits affected their report writing due to inadequate number of staff.

### 3.3.8 Key recommendations for policy makers or DHMT for UMK

The recommendations were:

*Policy Makers*

1. The RHA should institute periodic HR needs assessment to support their recruitment and retaining of both technical and non-technical staff. In the short-term, RHA should endeavor to post some needed technical staff such as midwives, physician assistants, field technicians etc. to the district, since lack of such technical staff is affecting service delivery.

2. RHA must intensify its monitoring and supervisory visits to DHA and sub-districts. This can be done through scheduled visits and spot checks.

3. RHA must support DHMT’s effort to repair boat. This would help improve service coverage in “island” communities to reduce morbidities and mortalities in especially children and women.

### 3.4 Comparison of the three districts

#### 3.4.1 Management Strengthening

All DHMTs capacity in action research and problem analysis was done by 3 national workshops. CRT conducted field visits: AkN (10), KW (12) and UMR (12). Other monitoring approaches were introduced by the CRT namely, documentation templates, diaries, joint reviews and reflection meetings, telephone calls and email contacts.

In the light of this, some districts introduce management tools such as spot checks and movement books. Respondents from all districts also observed an appreciable improvement in DHMT management meetings, which was participatory in terms of decision-making.
However, decision making depended largely on leadership styles. PERFORM approach to problem analysis (i.e., identification, analysis, and strategies) was also noted to have assisted all DHMTs in tackling key challenges and identifying other resources. They observed that staff trainings boost their performance. The DHMTs of AkN and KW integrated EPI monitoring activities with others (e.g. malaria) while UMK introduced an event register, spot check and movement book. The event register was initially welcomed but later abused by some in-charges.

Finally all district reported that enhanced PERFORM continuous monitoring and supervision visits improved DHMT’s monthly, quarterly and annually reporting of crucial data such as defaulters, service coverages, staff movement, logistics need and events. Tables 9, 10, 11, 12 and 13 provides summaries of the various comments made by respondents on PERFORM approach, monitoring and supervision, meetings, training and district innovations.

Table 9: Compilation of comments on the use of PERFORM approach

<table>
<thead>
<tr>
<th>Districts</th>
<th>Some quotation on PERFORM approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>AkN</td>
<td>&quot;PERFORM approach to problem analysis helps us to identify possible challenges we may face at the implementation stage and a possible solution. It also helps us to identify our available resources and capacity. The analysis process gives us more insights as to why certain things are occurring and the ability to identify the major issues needed to address it&quot; (AKN, DHMT Member).</td>
</tr>
<tr>
<td>KW</td>
<td>'&quot;... Before PERFORM we were using the problem tree analysis which is not different. The difference between that of PERFORM using the bundle and the strategy is not much, so that it is what we were using now. With PERFORM, the same activity in a different strategy or in a different form, we identify our problem which was drop out of EPI and PCV, and then we look at other bundles for HR monitoring and supervision as well as training. ... So what we do is that at the end of every month we make sure when they are submitting their reports, they come along with their tally book then we cross check the numbers of children they dosed and tallied in the book to the reporting format that they are submitting to us. We then identify the gaps and teach or coach them again for them to do the right thing. Also, periodically, we visit them on site as to how they are conducting the CWC activity. So with PERFORM, this is what we have been doing and as it is action oriented we identified the problem and solve it with them.&quot; (KW, DHMT Member).</td>
</tr>
<tr>
<td>UMK</td>
<td>&quot;......for example like I said initially by applying PERFORM approach to address our ANC issues, we saw that we have few midwives post filled, we did not have enough midwives but we have a lot of community health officers so we tried to build capacity of the community health officers so that they would be able to provide basic ANC services so that we can increase our ANC coverage ......... PERFORM activity like attachment to the district hospital’s maternity ward has built CHO’s capacity in ANC services – example emergency delivery, palpation, screening - and should continue”. (UMK, DHMT member).</td>
</tr>
</tbody>
</table>

Table 10: Compilation of comments on monitoring and supervision

<table>
<thead>
<tr>
<th>Districts</th>
<th>Some quotation on monitoring and supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td>AkN</td>
<td>&quot;For example there are no allocation of funds for EPI supervision, so if malaria control program makes funds available for malaria monitoring, we try to include EPI supervision into it but make sure it doesn’t interfere with the main program” (AkN, DHMT member).</td>
</tr>
</tbody>
</table>
Table 11: Compilation of comments on meetings

<table>
<thead>
<tr>
<th>Districts</th>
<th>Some quotation on meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>AkN</td>
<td>“At meetings, we take a vote whenever we’re unable to reach on an agreement. My experience here at meetings has always been participatory and decisive. We’re always able to arrive at a desirable decision” (AkN, DHMT member).</td>
</tr>
<tr>
<td>KW</td>
<td>“When such issues come up we meet as a DHMT then we discuss as to how to go about it. Then the officer in charge in that field will bring ideas as to how to go about it” (KW, DHMT Member).</td>
</tr>
<tr>
<td>UMK</td>
<td>“Now we come together often during our meetings. We sit and discuss issues and arrived at a point that we all agree. And before every meeting, we have our agenda ..... Where we didn’t achieve some of the things in the previous meetings, we re-strategized. For every meeting, a quorum of at least 3 DHMT members are now needed except instances where the meeting concerned a particular unit e.g. if it is NID program and the Disease Control officer will have to travel on that day it means we have to reschedule. ……some people now feel reluctant to come for meetings because at the end of the day there was no money to implement strategies. But with the coming of PERFORM they made us aware that even when there are no funds it is important to strategize for problems solving. So PERFORM has influenced some of our practices.” (UMK, DHMT member).</td>
</tr>
</tbody>
</table>

Table 12: Compilation of comments on training

<table>
<thead>
<tr>
<th>Districts</th>
<th>Some quotation on training</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW</td>
<td>“Sometimes after training, we go for monitoring, you can see that, they perform better” (KW, DHMT Member).</td>
</tr>
</tbody>
</table>

Table 13: Compilation of comments on district innovations

<table>
<thead>
<tr>
<th>Districts</th>
<th>Some quotation on district innovations</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMK</td>
<td>“I want the event book abolished.......as a staff if I did something wrong, I think the punishment should be verbal instead of asking me to weed or dig a pit otherwise my name will go into the event register for vacating post. I had that experience when my in-charge asked me to dig a pit. Though my action wasn’t right I think the punishment wasn’t fair. I was thinking the event register is used to record incidence where say if I slapped someone or insult another, it could be written in there but not a punishment as this.” (UMK, CHO).</td>
</tr>
</tbody>
</table>

3.4.1.1 DHMT time use

Figure 17 show the distribution of the total mean times spent on major activities by district health managers. They spent the highest mean time on managing and monitoring service provision (2.7 hours: 95% CI: 2.5 - 2.9). This was followed by General management activities (2.2 hours: 95% CI: 2.1 - 2.4) and human resource activities (1.4 hours: 95% CI: 1.2 - 1.5). In comparison, mean time use for financial management (0.8 hours, 95% CI: 0.6 to 0.9) and management of material resources (0.5 hours, 95% CI: 0.4 to 0.6) were considerably lower. Clinical activities were conducted on average for only 0.1 hours
(95% CI: 0.07 to 0.12). Travelling accounted for 0.8 hours (95% CI: 0.8 to 0.9) and non-productive activities (excluding breaks) for 0.3 hours (95% CI: 0.2 to 0.3) of the mean working time.

![Graph showing time use of district health managers (hours)](image)

**Figure 17**: Total mean time use of district of district health managers (hours)

### 3.4.1.2 Key Management challenges of DHMTs

Comparative analysis of the initial situation analysis (ISA) and the final situation analysis (FSA) findings indicates that some management challenges of the DHMTs still persist. Table 14 provides a summary of the old and new challenges.

**Table 14: Management challenges of DHMTs**

<table>
<thead>
<tr>
<th>DHMT</th>
<th>Old and persisting</th>
<th>Challenges</th>
<th>No more mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>AkN</td>
<td>1. Inconsistent flow of government funds; 2. Inadequate transportation (vehicle, fuel etc.); 3. Persistent call for adhoc meetings leading to clash programmes; 4. Rampant &amp; fluctuating power outages; 5. Lack of accommodation;</td>
<td>1. Lack of technical staff.</td>
<td>1. Irregular water supply 2. Lack of social amenities.</td>
</tr>
</tbody>
</table>
### Challenges

<table>
<thead>
<tr>
<th>DHMT</th>
<th>Old and persisting</th>
<th>New</th>
<th>No more mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMK</td>
<td>1. Socio-cultural factors (e.g. language); 2. Poor social infrastructure and amenities (e.g. bad roads, poor drinking water sources etc.); 3. Persistent call for adhoc meetings leading to clash programmes;</td>
<td>1. Lack of technical and non-technical staff; 2. Delays in financial disbursements; 3. Inadequate logistic supplies (i.e., vaccine fridge, transportation, accommodation and medicine supply); 4. Poor internet access and communication</td>
<td></td>
</tr>
</tbody>
</table>

### 3.4.2 Workforce Performance

#### 3.4.2.1 Bundle implementation and monitoring

Table 15 shows the observations of district respondents which ranges from service delivery, monitoring and supervision and meetings. Most discusants noted improvement in service delivery in terms of coverage and distribution of logistics (KW), marked improvement in monitoring and supervision in terms of spot checks and supervisory visits (AkN and UMK), and increased DHMT meetings (all districts), performance review meetings as well as joint meetings with facilities and other stakeholders (KW and UMK).

Table 15: Compilation of observations on bundle implementation and monitoring

<table>
<thead>
<tr>
<th>Districts</th>
<th>Bundles focus</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW</td>
<td>Service delivery</td>
<td>“We motivate them by giving them the necessary material they need so as to encourage them to continue doing well. This is not to say that we neglect those who are not doing well. We still encourage them. For example during the NID, we distribute materials based on the performance of the coverage areas when it comes to TB and tracing defaulters.” (KW, DHMT member).</td>
</tr>
<tr>
<td>AkN</td>
<td>Monitoring &amp; supervision</td>
<td>“Yes I can say there’s been some improvement especially during our monitoring and support visits, we do integrate anytime we move out, we look at activities under EPI, RCH, TB, Nutrition and others. So now anytime we move out, there’s something about all the units. When we meet at the DHMT, we do bring up these issues and problems that we have identified and a solution is arrived at” (AkN, DHMT Member). “They ask us to bring our books and then they check through it to see if the information are properly recorded. They also check whether the vaccines given out are right and what has been used” (AkN, CHN).</td>
</tr>
</tbody>
</table>
| UMK       |               | “PERFORMS activities are very helpful, the movement book helps monitor our movements, and the weekly plan inform us the activities that we do each day. If we don’t do the weekly plans and you come to work, you will not have anything on your
### Table 16: Compilation of observations on key stakeholders’ involvement

<table>
<thead>
<tr>
<th>Districts</th>
<th>Bundles focus</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW</td>
<td>Meetings</td>
<td>“Whenever we hold meetings with the facilities, it could be training or monitoring and supervision. We are able to have a fruitful discussions and we also know some of the key problems facing us. This in a way helps both the district and the facilities to revise their notes on what they are doing. This is also a way of benefiting from PERFORM project.” (KW, DHMT member).</td>
</tr>
<tr>
<td>UMK</td>
<td></td>
<td>“After identifying the problem, we then incorporate it into our work plan to help us achieve our goal. We discuss progress, problems and solutions during our quarterly, half year and annually performance review meetings with the facilities. Opinions of all stakeholders are considered. However, minor issues are resolved instantly….also, we analyze progress and if the strategy we are using is not the best, you find the next the strategy to make a move ahead.” (UMK, DHMT member).</td>
</tr>
</tbody>
</table>

### 3.4.2.2 Key stakeholders involvement in bundles implementation

Respondents noted the few stakeholders in their districts were involved in their planning and monitoring activities (AkN and UMK), assist in resolving challenges during bundle implementation (KW), provided logistics support (KW and UMK), and were invited to some of their joint meetings (AkN). Table 16 shows overview of some attestations of discussants.
<table>
<thead>
<tr>
<th>Districts</th>
<th>Bundles focus</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><em>there takes care of routine vaccination and our stakeholders have been helpful.</em>” (KW, DHMT member).</td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>“WATCH Ghana and Hunger projects also supports us by building facilities or sometimes sponsoring our programs.”</em> (KW, CHN).</td>
</tr>
<tr>
<td>UMK</td>
<td>Monitoring &amp; supervision</td>
<td><em>“PLAN Ghana are very helpful with Infrastructure, PLAN built CHPS compounds .... they give us delivery set, equipment, oxygen cylinders, buckets all through the watch project. Another NGO’s the HUNGER project epicenters, we have two. They been providing vaccines, fridge and then solar panel. WATCH project have some officers who also monitor our staff and the community volunteers .......we involve community volunteers and some opinion leaders in monitoring whereby they sign in the notebooks of the CHOs who visit the communities to indicate that they do those visits in that community....also Dade Manste normally beat the gongon for us when we are going for outreach like CWC or home visits.” (UMK, DHMT member).</em></td>
</tr>
<tr>
<td>AKN</td>
<td>Meetings</td>
<td><em>“During meetings and discussions the stakeholders also bring ideas as to what to do. Recently, we were looking at Safe Motherhood coverage and the input from the stakeholders were very good. So they play a role in the decision-making, monitoring and the implementation” (AKN, DHMT Member).</em></td>
</tr>
</tbody>
</table>

### 3.4.2.3 Bundle effects

Respondents from all the districts observed that regular monitoring and supervisory visits as well as training have improved their performance (AkN, KW and UMK). However, AkN also noted that frequent and impromptu training and workshops are affecting their work schedules. KW also indicated that the reward system introduced during PERFORM project and data validation exercise introduced at sub-district levels had motivated staff and improved performance. Table 17 provides overview of some comments made by discussants.

Table 17: Compilation of observations on bundle effects

<table>
<thead>
<tr>
<th>Districts</th>
<th>Bundles focus</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>AKN</td>
<td>Monitoring &amp; supervision</td>
<td><em>“For the home, because we have increased its regularity, we have a lot of people coming for the CWC. It has also reduced the number of defaulters we had. During the home visits, we...”</em></td>
</tr>
</tbody>
</table>
**Districts** | **Bundles focus** | **Observations**
--- | --- | ---
 |  | educate them on the importance of CWC, we give them health talks on family planning and ANC as well.” (AkN, CHN).
 |  | “DHMT frequent visits has put us on our toes and it also makes us aware whether we’re doing the right thing or not. Their unannounced visits also keeps us alert and we make sure work well to avoid punishment.” (AkN, CHN).
KW | Performance | “With the award system I think there is a bit of competition because when they submit the report and you say they have scored this, they are conscious. People want to come early, want to do quality work, want to validate their data before they come. Hitherto they were doing it before but along the line they stopped and people just bring their reports without the sub-district leader knowing because you have to sit together and validate. You also have targets for each month. For instance if at half year you are still at 30% then there is something wrong. So these are the things you have to teach them look at.” (KW, DHMT Member).
UMK |  | “Actually their performance is okay as to the services we’re delivering now compared to the past. Because if I should compare to the past most of the things we do here, e.g. total number of clients we attend to, it’s very improved. And if you look at our IGF generation and other things, I’m happy with it.”(UMK, DHMT member).
AkN | Training | “Increase in the frequency of training at times affect our work. It crashes with our static or outreach days so we postpone to the following month.” (AkN, CHN).
UMK |  | “Through the training we also have more knowledge about referrals so if anything we do refer them. The maternity training has boosted my confidence, today I cared for two pregnant women. Now the ANC cards are being filled well, we’re able to fill the gaps in the ANC registers, we now do counseling, check their fungal heights and head in vaginal deliveries.”(UMK, CHN).
KW | Data management | “The data validation has helped because sometimes we don’t understand the report we write, so at the validation when it is being discussed, there you can learn.” (KW, DHMT Member).

### 3.4.2.4 Stakeholders’ perceptions of bundles

In all districts, stakeholders considered monitoring and supervision as an important management tool (i.e., spot checks, home visits and use of attendance register). In AkN, improved rapport between the stakeholder volunteers and the CHO(s) was noted to have improved vaccines administration and male involvement in vaccination. Table 18 shows some observations on the perception of stakeholders on the bundles.
<table>
<thead>
<tr>
<th>Districts</th>
<th>Bundles focus</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>AkN</td>
<td>Monitoring &amp; supervision</td>
<td>“The DHMT does supportive supervisory visit and support the CHO’s on how to do things right. I also realized a good collaboration between the local NGO’S staff and the health facility staff. Since the WATCH project started CHO’s do more home visits than before, because there’s support from WATCH volunteers or because they were part of the training of the volunteers they got to know them better so the rapport has improved.” (AkN, PLAN Ghana Stakeholder).</td>
</tr>
<tr>
<td>KW</td>
<td></td>
<td>“It should continue especially the monitoring and supervision. It is very important. Because the guy will be sitting in the village and doing nothing and even if the client are not coming to the facility, he does not care. The health management team are doing enormous job. The monitoring and supervision must continue especially on special diseases like TB, the core disease and all those things. When attendance is going down formally nobody cares but it’s not like that now.” (KW, Ministry of Food &amp; Agriculture Stakeholder)</td>
</tr>
<tr>
<td>UMK</td>
<td></td>
<td>“Such activities as the hospital attachment and spot checks are very relevant because just as I said about the untrained TBAs, we think that they should not be doing the work but they are still doing it, the people believe that they can do it for them and they are still doing it. If the nurse can do emergency delivery fair enough, that will solve a problem. And it’s very relevant, I think that it is the best things we have done for some time now. We shouldn’t assume that unless there is a midwife before a delivery can be held at a clinic. No that shouldn’t be the case, we should give some basic training…. if there are complications then that one they can find a way of overcoming it. But I think it was a good idea, it was a good thing to do.” (UMK, HUNGER Project Stakeholder).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Spot checks is good. There should be regular monitoring of health staff and any staff including those of us at the hunger project. Spot checks is one way of monitoring, so should be done. It puts staff on their toes that another eye is looking so they should do their things effectively. If they think that they are in the rural area they can do whatever they like and nobody will check them.” (UMK, HUNGER Project Stakeholder).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Yes the activities should be sustainable and what we should also do is that there should be a designated desk at every directorate to do just record monitoring and spot checks which will come with report and I think if one person is hired to do it that will bring the difference.” (UMK, HUNGER Project Stakeholder).</td>
</tr>
<tr>
<td>AkN</td>
<td>Service delivery</td>
<td>“I think there’s an improvement in how the CHO’s administer the vaccines. I realized now CHO’s explain reason for giving the vaccines and its adverse effects to the mothers. This is very important especially women who come with their partners. So now when the mothers forget, the men prompt them. When the women are busy, the men bring the children for the vaccines and this increased coverage.” (AkN, PLAN Ghana Stakeholder).</td>
</tr>
</tbody>
</table>
3.4.2.5 Bundles effects on health workforce performance

Respondents of all the districts observed that monthly performance reviews using the PERFORM approach has not only build their capacity but also their performance in terms of improved coverage, problem solving, planning, and data management. However, this has also increased their workload. Table 19 provides overview of some comments made by respondents.

Table 1: Compilation of bundle effects on health workforce performance observations

<table>
<thead>
<tr>
<th>Districts</th>
<th>Bundles focus</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMK</td>
<td>Monitoring &amp; supervision</td>
<td>“PERFORM project’s Action Research approach has equipped us (DHMT) with requisite skills to effectively undertake problem analysis. We are able to monitor district’s objectives through constant problem and performance analysis ….. it has helped to identify overlapping problems requiring same solution. For example, in the recent district’s review meetings, a decline in malnutrition indicator was identified, thereby prompting a discussion on the adaptation of active case search to solve the problem.” (UMK, DHMT member).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“PERFORM activities puts us on the spot so even though you’ll have to go for quarterly monitoring, we are pushed to go on regular ones outside of the quarterly visits.”(UMK, DHMT member).</td>
</tr>
<tr>
<td>AkN</td>
<td>Performance</td>
<td>“During DHMT meeting, we meet to review work plan and update strategies. Monthly problem analysis and review of work plan is useful but it increases our workload due to the large number of facilities in the district.” (AkN, DHMT Member).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“PERFORM approach was a good experience. Now I understand how to come up with a genuine problem.” (AkN, DHMT Member).</td>
</tr>
<tr>
<td>UMK</td>
<td></td>
<td>“PERFORM activities have put us in shape….with the attendance book we weren’t writing our names and also movement book, we just leave the place and go but PERFORM made us know the importance of documenting. With the attendance book staff do not absent themselves from work unnecessarily…..one way or the other most staff do not want to absent themselves from work because when you take the attendance book all staff are regularly at post recently.”(UMK, CHO).</td>
</tr>
</tbody>
</table>
| KW        | Data management| “PERFORM approach is having a positive impact. There nothing negative that I can think of because it’s now helping us to think broader. So now we don’t just go there looking at the figures alone. It was like you’re not performing or you’re not meeting you target. As to what is contributing to the reason why the person is not meeting the target, we did not pay detailed
<table>
<thead>
<tr>
<th>Districts</th>
<th>Bundles focus</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMK</td>
<td></td>
<td>“Previously, we didn’t take our data seriously. We do not do our documentation very well but now there’s improvement. We do documentation on every activity because anytime they can come around they inspect it. Now we do proper documentation. For instance the home visit, when we go we’ll not let the volunteers sign or the midwife endorse it. But now because of that spot check they told us when we go for these visit our in-charge should endorse that we went. The spot checks are very good. Current appraisal is also good because you are able to identify your weakness, on your performance.” (UMK, CHN).</td>
</tr>
</tbody>
</table>

### 3.4.2.6 Waiting time

Majority of clients in all districts rated waiting time less than 30 minute as reasonable. However, as waiting time increases, districts showed concern with 24% (AkN), 20% (KW) and 17% (UMK) indicating that the time was too long (see figure 2).

### 3.4.2.7 Time spent with health worker

Districts varied in their time ratings with the health worker (figure 10). For less than 30 minutes time spent with the health worker, 99% (AkN), 75% (KW) and 50% (UMK) stated this to be about right. However, as time spent with the health worker increased beyond 30 minutes, about 13% (AkN), 32% (KW) and 35% (UMK) considered the time spent as too long. Relatively fewer clients consider these times spent as too short. The substantial differences in time spent with health worker (HW) across the three districts was attributed to HW experience and service delivery dynamics (i.e. approach and HW attitude); number of health workers at post; Geographical factors (e.g. disruptions from rain during CWC due to lack of proper infrastructure in some districts); Kind of immunisation client received etc.

### 3.4.2.8 Health worker attitude

Generally nearly 98% of clients rated the health worker attitude as good (see figure 14).

### 3.4.2.9 Cleanliness of health facility

Figure 14 shows that 90% of clients (AkN), 86% (KW) and 82% (UMK) considered the cleanliness of the health facility and its surroundings as good. However, relatively fewer clients rated them as fair, and in UMK 11% rated conditions as poor.
### 3.4.2.10 Composition of DHMTs

As shown in table 20 all districts witnessed staff changes. In AkN even though there were staff changes in the DHMT, their number reminder unchanged, however, their gender ratio changed in favour of women. In both KW and UMK, their numbers and gender ratios changed in favour of men and women respectively.

**Table 20: State of DHMTs’ composition**

<table>
<thead>
<tr>
<th>DHMT</th>
<th>Initial Situation</th>
<th>Core DHMT members</th>
<th>Final situation</th>
<th>Core DHMT members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gender ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male/female</td>
<td></td>
<td>Male/female</td>
</tr>
<tr>
<td>AkN</td>
<td></td>
<td>6:4</td>
<td></td>
<td>4:6</td>
</tr>
<tr>
<td></td>
<td>DDHS, PHN, DCO,</td>
<td>DDHS, PHN, DCO,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health Promotion</td>
<td>Health Promotion</td>
<td></td>
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<tr>
<td>KW</td>
<td>MDHS, DDNS (PH),</td>
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<td>MDHS, DDNS (PH),</td>
<td>6:4</td>
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<td>UMK</td>
<td>DDHS, PHN, DCO,</td>
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<td>DDHS, PHN, HIO,</td>
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<td>and PHN (n=8).</td>
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<td>ant and HRO (n=6).</td>
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### 3.4.3 Wider Health System

Generally, respondents from all the districts observed that changes in financing, human resources, service delivery and medicine/equipment components of the health system blocks negatively affected their bundle implementation and overall performance. However, the use of electronic data entry device in AkN was noted to have enhanced data usage. Table 21 shows respondents observations on changes in the health system.

**Table 21: Compilation of observations on changes in the health system**

<table>
<thead>
<tr>
<th>Districts</th>
<th>Health system component</th>
<th>Observations</th>
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</thead>
<tbody>
<tr>
<td>AkN</td>
<td>Finance</td>
<td>“....... we need health insurance to pay us the arrears since we need equipment like chairs and tables for outreaches, we will be able to do it. We also need money to fuel the plant............ We also need equipment for the laboratory because for now we do only few tests.” (AkN, Physician Assistant).</td>
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<tr>
<td>KW</td>
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<td>“Some factors which affects are the flow of resources. Sometimes we need to organize some basic training but we don’t</td>
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<td>Districts</td>
<td>Health system component</td>
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<td>have the funds to do it. For vaccines the whole year we’ve not run short of vaccines but sometimes the needles and syringes that we use we run short and there’s a peculiar problem with us as a district because the Holy Family Hospital is a bigger place that most people come to deliver there’s always pressure on our EPI logistics. Sometimes too we run short of logistics we have to fall on other sister districts for support. When they have they give but sometimes they also don’t have” (KW, DHMT Member).</td>
</tr>
<tr>
<td>UMK</td>
<td>Human resources</td>
<td>“…….. sometimes we run short and there’s pressure on our logistics and then some commodities will not come from say national and you wouldn’t have control over it, you plan that you want to do training on logistic management and stock taking but if the funds are not available it’s you can’t do it. For example if HIV test kits doesn’t come from national, it’s beyond us… so some of these things hinder our effort” (KW, DHMT Member).</td>
</tr>
<tr>
<td>AkN</td>
<td>Service delivery</td>
<td>“The district is faced with shortage of some critical staff like midwives, physician assistants, field technicians and others. Some old staff also don’t want to work. It has increased the workload on the few ones available. Ad hoc meetings and programmes by national, regional and donors is major challenge which DHMTs have no control over.” (AkN, DHMT member).</td>
</tr>
<tr>
<td>AkN</td>
<td></td>
<td>“Maintaining the cold chain systems in some facilities is challenging since even though fridges are available, electrical power is not connected or goes off frequently.” (AkN, DHMT member).</td>
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<td>“Also accommodation for the staff is a problem .......... If you have quarters around, we could run afternoon and evening shift” (AkN, CHN).</td>
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<td>“………. Lakpa is closer to the main road. They used to frequent this place a lot and now with the increase in lorry fare and the location of the facility, they find it better to go to a different facility than taking a motorbike to this place which will cost more, so they don’t come there anymore and it has affected our attendance.” (AkN, CHN).</td>
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<tr>
<td>KW</td>
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<td>“With the drugs for instance, the frequent light outs doesn’t help us at all. Sometimes you go collect drugs from the MHA and you can’t put it in a refrigerator because the light could be off for three days and wouldn’t even know when it is coming and maybe the following day too you have weighing so you’ll have to send it back to the MHA and it’s a problem.” (KW, CHN).</td>
</tr>
<tr>
<td>Districts</td>
<td>Health system component</td>
<td>Observations</td>
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<tr>
<td>UMK</td>
<td></td>
<td>“The place that we do the CWC session is too small that sometimes prevented people from coming. Some of them if they see how congested the place is and also the queue that they have to join then they turn their back.” (KW, CHN).</td>
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<td>“There are a lot of things that are needed to boost the morale of our service delivery here. Means of transport is one, for about a year now we don’t have a vaccine fridge as a health center for a year now. We store in a cold box so every day you have to be coming up and down and be monitoring the vaccine.” (UMK, Physician Assistant).</td>
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<td>“.....the motorbike and the roads and logistics, the raincoats sometimes we go for outreach and it will be raining or drizzling.....so they have to give us those logistics that we need. And sometimes when we go for home visits the place is very bushy we need wellington boots. We need a motor bike. We do not have lights. No communication network here.” (UMK, CHN).</td>
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<td></td>
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<td>“We don’t get our drugs on time even if we will get it, it will delay before we get them. Secondly, our major challenge is our motorbike here. We have only one motorbike with about seven communities to serve supposing.....sometimes we had to take a car or walk before we can render our services to our clients. Most of our roads are also not good, at times the bike cannot go so you have to walk.” (UMK, CHO)</td>
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<td>“.... infrastructure is a challenge here. We do not have accommodation to even stay closer to the facility. As a health centre, you do not have the time to close and you must come early as well. You may close early .... then they will call you to come back from that far place again. Maybe by the time you get here the patient might have died. So they should try and get us accommodation close to the facility.” (UMK, Enrolled Nurse).</td>
</tr>
<tr>
<td>AkN</td>
<td>HMIS</td>
<td>“Yes our returns is going up as previously and we are also lucky that they have given us a “tablet-like” something so that when we put in the data it will go to them, at first it was the e-register but they have change it and is helping us because that one anytime you do a work you have to send it through and it goes through directly.” (AkN, Physician Assistant).</td>
</tr>
</tbody>
</table>

AkN and KW coverages of rotarix and pneumococcal vaccination increased by about 40% and over 25% respectively between 2012 and 2014 (figures 7 and 11). While client drop-out rate of rotarix fluctuated between 2012 and 2014 in AkN district (see figure 8), both rotarix and pneumococcal vaccinations recorded steady decline in drop-out rate over the period in KW (see figure 12). Using 4% of the district population as expected deliveries, UMK ANC coverage increased marginally from about 74% to 79% in 2013, but decline to 72% in 2014 (see figure 15). The decline was attributed to inability
to meet ANC targets at ‘island’ communities (communities on islands with difficult access requiring ferry boat).

Overall, clients (n=646) observed that there has been moderate change in quality of service delivery. Over 50% of respondent from all districts observed that waiting time has improved while an average of about 79% perceived there has been change in time spent with health worker (see figure 18).

![Figure 18: Change in quality of service](image)

### 3.4.4 Unintended effects

All the districts noted appreciable unintended effects in the implementation of PERFORM bundles which they perceived affected their performance. The unintended effects include: (1) data management increased workload from the data validation exercise; (2) service delivery increased administrative duties, the defrosting of fridges and increased monitoring activities; and (3) finances in terms of lack of financial support for PERFORM bundles implementation which was noted to be demotivating and not resourceful in providing funds for activities. In UMK, internal leadership crisis affected implementation for a period. Table 22 shows respondents observations on the unintended effects.

<table>
<thead>
<tr>
<th>Districts</th>
<th>Health system component</th>
<th>Observations</th>
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<tbody>
<tr>
<td>AkN</td>
<td>HMIS</td>
<td>“Data validation takes a lot of time of DHMT members.” (AkN, DHMT Member).</td>
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<tr>
<td>KW</td>
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<td>“Data from all reporting facilities need to be validated, reconciled figures in tally book with EPI. It is not easy when you have to add daily tally to arrive at monthly figures. It is very tedious and time consuming.” (KW, DHMT Member).</td>
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<tr>
<td>UMK</td>
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<td>“Keeping up-to-date documentation is a challenge because it consumes a lot of time, meanwhile we have a lot of other equally important things to do. It’s good because we’re able to identify...”</td>
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Table 22: Compilation of observations on unintended effects
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<th>Districts</th>
<th>Health system component</th>
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<td>our problems, sit to analyze, strategize and prioritize our activities but I think we are having problems because we don’t have enough staff.” (UMK, DHMT member).</td>
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<tr>
<td>AkN</td>
<td>Service delivery</td>
<td>“Female CHO’s do not like to ride the motorbikes and so some motorbikes are available but not in use. This is affecting implementation of some activities.” (AkN, CHN).</td>
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<td>“.......... sometimes CWC days coincides with market days for volunteers and they prefer to go to the market because they are motivated whiles helping us. This is not helping us with our work.” (AkN, CHN).</td>
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<td>“The frequency in defrosting creates some inconveniences say when we defrost it today, the power may go off the whole of the following day and with that we’ll have to send the vaccines to the DHA so that when the lights are back we go for them.” (AkN, CHN).</td>
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<td></td>
<td>“Due to other equally important activities, it might be difficult to do intensified monitoring in all facilities within the speculated time period.” (AkN, DHMT Member).</td>
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<tr>
<td>KW</td>
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<td>“We all agree that the onsite supportive supervision was good, but the EPI 2 visit to each facility per year is very difficult to achieve, not when we there are staff shortages in most units. The onsite supportive supervision even deprived the DHMT of other activities which are equally important.” (KW, DHMT Member).</td>
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<td>..... PERFORM has brought some improvement in our work but the emphasis on PERFORM is too much. Vaccine usage monitoring is good but that is not all that we do. Some units only places emphasis on that which affects our appraisal in other area. But in all I think PERFORM has led to improved services. (KW, CHN).</td>
</tr>
<tr>
<td>UMK</td>
<td></td>
<td>“Mostly, CHO’s weekly workplan was inconsistent with sub-districts’ plan because staff understanding on the link between the two was inadequate thereby causing them to perform tasks outside of the district’s bigger plan.....some are reluctant in the preparation of the plans.....some staff not drawing out individual work plans but relying on monthly itineraries.” (UMK, DHMT member).</td>
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<td>“DHMT sometimes postponed scheduled district meeting because of crashed activities resulting from inadequate staff numbers to form quorum due to PERFORM visits, unplanned workshop meetings at the regional level.” (PERFORM CRT member).</td>
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<td>.... I think the maternity attachment was very good, though the program affected our schedule a bit especially CWC outreach but it has also sharpen the memories of the CHO’s and their performance has improved afterwards. PERFORM has achieved the desired outcome.” (UMK, CHO).</td>
</tr>
<tr>
<td>AkN</td>
<td>Finance</td>
<td>“Lack of funds to implement PERFORM activities affected its implementation. We mostly agree on targets and objectives but because of limited resources and logistics we’re not able to achieve them.” (AkN, DHMT Member).</td>
</tr>
<tr>
<td>UMK</td>
<td></td>
<td>“Lack of funds, staff reluctance to implement some of the activities due to workload and lack of logistics were some of the challenges we faced trying to implement some of the activities. We are unable to achieve some agreed targets and objectives due to limited resources and logistics e.g. our boat for outreach</td>
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<td>Districts</td>
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<td>Observations</td>
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<tr>
<td>KW</td>
<td>Human resource</td>
<td>“For everything to work well, staff issues should also be addressed. Some staffs do more than they are supposed to do which affects their performances…… that is the reality on the ground.” (KW, DHMT member).</td>
</tr>
<tr>
<td>UMK</td>
<td>Leadership</td>
<td>“The DDHS was reported to have been absent from work for about a month incommunicado to the DHMT. Members reiterated that this has resulted in leadership vacuum in terms of direction and logistics support. This will in the long run affect the execution of the planned activities of the district.” (PERFORM CRT member).</td>
</tr>
</tbody>
</table>

3.4.4.1 Health worker perception of bundles

All districts observed improvement in areas of management strengthening, workforce performance and the wider health system. However, the district adjudged best performing district (KW) at the beginning of PERFORM intervention observed major improvement in HR/HS bundles implemented, followed by the average (AkN) and poor (UMK) performing districts respectively. Figure 19 shows that KW achieved much change in bundle implementation (4.3), followed by AkN (3.9) and UMK (3.6) in that order.

![Figure 19: Overall Perceived rating of improvement in selected HR/HS bundle](image)

1= No change; 2= Slight change; 3= Moderate change; 4= Much change; 5= Major change

4.1 Discussion

Management strengthening

Most discussants noted marked improvement in monitoring and supervision in terms of spot checks and supervisory visits (AkN and UMK), and increased DHMT meetings (all districts), performance review meetings as well as joint meetings with facilities and other stakeholders (KW
and UMK). AkN and UMK DHMTs respondents noted the involvement of stakeholders in their districts in planning and monitoring activities. In KW and UMK districts, stakeholders provided logistics support. Respondents from all the districts observed that regular monitoring and supervisory visits as well as training have improved their performance. They also acknowledged that frequent and impromptu training and workshops are affect their work schedules. In all districts, stakeholders considered monitoring and supervision as an important management tool (i.e., spot checks, home visits and use of attendance register). Respondents of all the districts observed that monthly performance reviews using the PERFORM approach has not only build their capacity but also their performance in terms of improved coverage, problem solving, planning, and data management. However, this has also increased their workload.

**Workforce performance**

Majority of clients in all districts rated waiting time less than 30 minute as reasonable. Districts varied in their time ratings with the health worker (figure 10). There was substantial differences in client perception regarding time spent with the health worker across the three districts. The differences in time spent with health worker (HW) was attributed to HW experience and service delivery dynamics (i.e. approach and HW attitude); number of HWs at post; geographical factors (e.g. disruptions from rain during CWC due to lack of proper infrastructure in some districts); kind of immunisation client received etc. All districts observed improvement in areas of management strengthening, workforce performance and the wider health system. However, KW observed major improvement in HR/HS bundles implemented, followed by AkN and poor UMK respectively.

**Wider Health System**

Generally, respondents from all the districts observed that changes in financing, human resources, service delivery and medicine/equipment components of the health system blocks negatively affected their bundle implementation and overall performance. AkN and KW coverages of rotarix and pneumococcal vaccination increased moderately between 2012 and 2014. While client drop-out rate of rotarix fluctuated between 2012 and 2014 in AkN district, both rotarix and pneumococcal vaccinations recorded steady decline in drop-out rate over the period in KW. UMK ANC coverage increased marginally. The decline was attributed to inability to meet ANC targets at ‘island’ communities (communities that were difficult to access, requiring ferry boat). Clients observed that there has been moderate change in quality of service delivery. Some respondent from all districts observed that waiting time has improved while majority perceived there has been change in time spent with HW.

Notwithstanding these improvement, there were both positive and negative unintended effects observed. These were: (1) data management increased workload from the data validation exercise; (2)
service delivery increased administrative duties, the defrosting of fridges and increased monitoring activities; (3) lack of financial support for PERFORM bundles implementation which was noted to be demotivating and not resourceful in providing funds for activities; (4) in UMK, internal leadership crisis affected implementation for a period

**Decision space choices in human resource management**

District management members considered the policy formulation domain decision space such as setting staffing norms, required skill levels or working conditions as narrow. Generally, planning domain decision space including for example district staff posting, contracting additional staff and staff hiring and firing was considered as moderate. DHMTs considered their decision space for setting staff incentives and salaries schemes of contractual staff as moderate. For “performance management and supervision” domain, the overall rating was wide. Continuing education/training domain obtained mixed grading from narrow to wide, and for HR information systems, the overall grading was wide.

District managers do have some control over various HR domains. However, they are faced with a number of constraints in the execution of their autonomy such as erratic financing and interference from regional, national and donors. The findings suggest that the DHMTs have fairly varying decision spaces choices on HR issues. Furthermore, for effective and efficient health service planning, management and implementation, fluid decision space of district managers is critical.

**Other human resource management issues**

As Mshelia *et al.* (2013) observed, the changing context of districts, competing needs of other projects and duties were some challenges faced by the DHMTs will face. In the face of these, DHMTs have over the years developed “coping strategies” to ensure improved performance such as: (a) reliance on internal and external resources; (b) attempts to forecast ad-hoc programmes from the regional and national levels; and (c) integrating region and donor activities into work plans. Furthermore, to deal with other health workforce challenges such as shortage of certain categories of workforce (i.e., technical and non-technical staff), DHMTs have employed measures like: (a) qualified staff study leave refusals yearly; (b) orientation, mentoring and in-service training for new staff as and when needed and funds were available, to make them more versatile; and (c) reliance on community volunteers support in routine programmes. However, inadequate finance has been cited as a major impediment to the smooth implementation of decentralization in the district (*Sakyi et al.*, 2011). Additionally, effective district level HRM influences health worker motivation and job satisfaction. Furthermore, health workers were found to be reluctant to work in areas with insufficient rural incentive schemes and poor working environments with non-availability of medical and technical equipment (*Bonenberger et al.*, 2014). An earlier study in Ghana by *Agyepong et al.* (2004) also attests to this as absence of essential tools and equipment were noted as among the major
workplace obstacles for public health workers.

The results demonstrate that the DHMTs will use various management strengthening approaches to improve their performance and also enhance service delivering in the light of scarce financial resources and high level of political influences.

4.2 Limitations

The limitations encountered were:

1. Research team was unable to have full complement of health staff perception on the bundle activities because some staff were on leave during the endline survey.
2. Some of the health staff interviewed during the endline survey in certain facilities, had been working in the district for less than a year and therefore had vague knowledge of the HR/HS bundles.
3. Unlike other donor sponsored projects, PERFORM provided no resources to the study districts. This occasionally made the DHMTs and some health facilities staff grumble about the project’s activities.
4. The PERFORM documentation approach was different from DHMT’s traditional method of documentation. Thus, the DHMTs were unenthusiastic in keeping updated diaries and records of events.
5.1 Study conclusion and recommendations

5.2 Conclusions

Studies in the three districts has clearly demonstrated the usefulness of AR approach to problem solving. The implementation of selected HR/HS bundles/strategies to address the identified vaccination and ANC problems in the study districts have all shown promising results. To various degrees, management was strengthened, some improvements were observed in health workforce performance. These then affected the wider health system with some desirable unintended effects.

In management strengthening, the main tenet for strengthening across the three districts were monitoring and supervision visits, regular meetings were synonymous to decision making and the introduction of some new staff management activities have reduced absenteeism at all levels. The noticeable areas in health workforce performance were that first, frequent and ad-hoc meetings, trainings and workshops hampers and distorts staff work schedules. However, participation of volunteers in CWC activities, introduction of a credible reward system, data validation, mentoring programmes for young and new staff, and stakeholders support have positive effect on performance.

The overall bundles implementation effected on the health systems were in the areas negatively affecting their finances; negatively affecting the health workforce by increased workload and thus puts immersed pressure on the available staff; and service delivery was also affected by other external factors such as the recurrent power outages, bad roads network, unplanned workshop and ad-hoc meetings by donors, regional and national level.

The positive unintended effects of bundles implementation were using lessons learnt from data validation to inform other district management issues; lack of funds from the PERFORM negatively affected implementation of the project activities; increasing number of monitoring and supervision visits increased DHMTs budget for fuel which is not sustainable due to its associated financial implication; DHMT found PERFORM documentation approach (diaries) tedious and time consuming; and the regular monitoring and supervisory visits sometimes, disrupted planned district meetings.

Clients in all districts observed that waiting time less than 30 minutes before seeing a health worker was reasonable. However, they varied in their rating of less than 30 minutes spent with the health worker as “right” and “about right’. Overwhelmingly, clients considered the cleanliness of the health facility and its surroundings as good. Furthermore, they contended that staff attitude as good. Generally, all DHMTs rated HR/HS bundles implementation to have achieved moderate success. However, some activities were rated to have achieved higher success such as supportive supervision.
In sum, the study results suggests that change in staff attitude, use of available resources, effective monitoring and supervisory visits and staff motivation can significantly improve health workforce performance.

5.3 Recommendations

The recommendations are as follows:

National policy makers

1. GHS Head Office should continuously advocate and negotiate with the Ministry of Finance to improve on its funds disbursement to the sector ministry to enable the usual quarterly regular disbursement to RHAs and DHMTs.

Regional policy makers

1. RHA must where feasible coordinate and manage the ad-hoc meetings, workshops and programmes from GHS Head Office, NGOs and other stakeholders so as not to seriously disrupt their planned work schedules of DHMTs.

2. RHA in consultation with DHMTs, make monitoring and supervisory visits, data validation exercises and mentoring programmes for young and new staff (i.e., technical and non-technical) a “must-do” things for annual peer review assessment. To sustain these, DHMTs must be made to development implementation plans for these with clearly defined budgets.

3. RHA in conjunction with the DHMTs of the three study districts should roll out the AR approach to problem solving to the remaining districts in the region.

Researchers

1. CRT and DHMTs recognising the importance of the PERFORM approach to health workforce performance must develop an exit strategy to facilitate smooth exit from the districts.

2. CRT and their paired partners should use the lessons learnt from implementation of this PERFORM project to develop another health workforce performance project with clearly defined endline indicators to both quantitatively and qualitatively evaluate its effects.
6.1 References


Annexes

Annex 1: Problem tree for Akwapim North

EPI target not met on new

Low coverage of EPI vaccines (Rota and Low CWC turnout

Inadequate M & S visits to health facilities

Lack of EPI defaulter tracing

Non availability of constant vaccine supply at the health facilities

Low CWC turnout

Inadequate M & S visits to health facilities

Lack of EPI defaulter tracing

Low community involvement

Crash programmes

Inadequate M & S skills by DHMT

CHNs not effectively monitoring EPI

Non availability of constant vaccine supply at the health facilities

Frequent breakdown of solar fridges

Low CWC turnout

Inadequate M & S visits to health facilities

Lack of EPI defaulter tracing

Low community involvement

Crash programmes

Inadequate M & S skills by DHMT

CHNs not effectively monitoring EPI

Non availability of constant vaccine supply at the health facilities

Frequent breakdown of solar fridges

Low CWC turnout

Inadequate M & S visits to health facilities

Lack of EPI defaulter tracing

Low community involvement

Crash programmes

Inadequate M & S skills by DHMT

CHNs not effectively monitoring EPI

Non availability of constant vaccine supply at the health facilities

Frequent breakdown of solar fridges

Wrong timing of immunisation sessions

Some ad hoc meetings and trainings at the district

Sub district health staff not trained on M & S

Non adherence to monitoring

Lack of skills in monitoring and

CHNs not analyzing and interpreting their data
Annex 2: Problem tree for Kwahu West

Implementation of new vaccine vaccination schedule not as planned

High drop-out rate of Pneumo & Rota

Poor utilization of EPI data collection tools

Reluctance to use new vaccine algorithm tools

Planned outreach Service not followed

Supportive supervision scheduled to Sub-mun. not followed as planned

Same EPI indicators on several reporting tools

Inadequate knowledge of staff on data and its use/importance

Inadequate competencies staff (i.e., staff skills)

Insufficient generation of IGF to support service delivery at sub municipal

Lack of co-ordination and collation of CHPS activity plan and budget for the month at sub

High cost of hired public transport

Interference of regional & national Programmes (i.e., ad

Lack of supportive supervision to CHPS by some sub municipal

Inadequate knowledge of sub municipal leaders on the need for supportive
Annex 3: Problem tree for Upper Manya Krobo

Low coverage of ANC services leading to poor birth outcome

Low availability of ANC (46% of targeted facilities provide)

Inadequate number of midwives

Community Health Nurses/Officers don’t have capacity to

Lack of suitable accommodation for staff in the CHPS

Inadequate number of trained midwives

Inadequate structured in-service

Lack of equipment for service provision

Low utilization of ANC services (39% of pregnant women attend at least 4 ANC)

Women don’t return for

Staff attitudes like shouting, not showing much

Illegal collection of fees at ANC

Poor quality of care mothers receive at the ANC e.g., not checking HB, urine etc

Inadequate knowledge for staff on customer care & patients charter

Ignorance of indigenous community folks and socio-cultural beliefs

Lack of continuous capacity building/ training for practicing midwives &

Unavailability of testing kits for HB, urine, RDTs especially at the periphery

Inadequate monitoring & supervision
Annex 4: Problem prioritization matrix

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Priority problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank from 1 to 3</td>
<td></td>
</tr>
<tr>
<td><strong>Time to solve the problem</strong></td>
<td></td>
</tr>
<tr>
<td>1=the most time</td>
<td></td>
</tr>
<tr>
<td>3=the least time</td>
<td></td>
</tr>
<tr>
<td><strong>Cost to solve the problem</strong></td>
<td></td>
</tr>
<tr>
<td>1=the highest cost</td>
<td></td>
</tr>
<tr>
<td>3=the lowest cost</td>
<td></td>
</tr>
<tr>
<td><strong>Impact of the problem on workforce performance</strong></td>
<td></td>
</tr>
<tr>
<td>1=the least impact</td>
<td></td>
</tr>
<tr>
<td>3=the most impact</td>
<td></td>
</tr>
<tr>
<td><strong>Availability of resources to solve the problem</strong></td>
<td></td>
</tr>
<tr>
<td>1=the least available</td>
<td></td>
</tr>
<tr>
<td>3= the most available</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
</tbody>
</table>
Annex 5: Antenatal client exit interview questionnaire

<table>
<thead>
<tr>
<th>Date:</th>
<th>District:</th>
<th>Facility:</th>
<th>No:</th>
<th>Sex:</th>
</tr>
</thead>
</table>

We are conducting a survey with users of our health centre to find out what you think about our services. This will help us improve quality to future clients. Your answers are strictly confidential and we thank you for your participation and honesty.

Q1. Did you visit this health facility in the last 6 months?


If answer to this question is no, then discontinue interview (as cannot collect baseline data).

Q2. Did you come for antenatal care?


If answer to this question is no, then discontinue interview

Q3. How old was your pregnancy when you first came for ANC?


Now I will like to ask you questions about the services you received today

Q4. How long did you wait before you saw the health care worker?


Q5. Was the waiting time reasonable or too long?


Q6. How long was your consultation with the health worker?


Q7. Was your consultation with the health care worker too short, too long or about the right amount of time?


Q8. Did you have any privacy during your consultation?


Q9. Did the health worker give you any advice about your health problem?


Q10. Did you understand this advice?
Q11. Did the health worker tell you whether or not to return?

Q12. How was the attitude of the health care worker towards you?

Q13. How was the cleanliness of the health centre and surroundings?

Q14. Overall, what do you think about the service you received today?

Q15. If you compare now with previous visits, have you noticed any changes in relation to waiting times?

Q16. If you compare now with previous visits, have you noticed any changes in relation to length of consultation?

Q18. If you compare now with previous visits, have you noticed any changes in relation to quality of services?
Q19. Are there any other comments you wish to make?
Annex 6: Immunization client exit interview questionnaire

We are conducting a survey with users of our health centre to find out what you think about our services. We would like to ask you a few questions about the vaccines your child received today. This will help us improve quality to future clients. Your answers are strictly confidential and we thank you for your participation and honesty.

Interview mothers/caregivers whose child has just received immunisations.

Q1.Did you visit this health facility last year?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>Yes</th>
<th>2</th>
<th>No</th>
<th>3</th>
<th>N/A</th>
</tr>
</thead>
</table>

If answer to this question is no, then discontinue interview (as cannot collect baseline data).

Q2.Did you come here for immunisations for your child?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>Yes</th>
<th>2</th>
<th>No</th>
<th>3</th>
<th>N/A</th>
</tr>
</thead>
</table>

Q3.Did your child receive any immunisations?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>Yes</th>
<th>2</th>
<th>No</th>
<th>3</th>
<th>N/A</th>
</tr>
</thead>
</table>

Q4.What immunisations did your child receive today?

- [ ] BCG
- [ ] Measles
- [ ] DTP
- [ ] Polio
- [ ] Rota
- [ ] Penta
- [ ] Rubella
- [ ] Pneumococcal
- [ ] Yellow fever
- [ ] vitamin A
- Other, please specify .................................................................
- [ ] Unable to name

Q5.How long did you wait before you saw the health care worker?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>&lt; 30mins</th>
<th>2</th>
<th>30mins–1hr</th>
<th>3</th>
<th>1-2hrs</th>
<th>4</th>
<th>&gt; 2hrs</th>
</tr>
</thead>
</table>

Q6.Was the waiting time reasonable or too long?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>No waiting time</th>
<th>2</th>
<th>Reasonable</th>
<th>3</th>
<th>Too long</th>
<th>4</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

Q7.How long did you spend with the health worker?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>&lt; 5mins</th>
<th>2</th>
<th>5 – 15mins</th>
<th>3</th>
<th>16-30mins</th>
<th>4</th>
<th>&gt; 30mins</th>
</tr>
</thead>
</table>
Q8. Was your time with the health care worker too short, too long or about the right amount of time?


Q9. Did the health worker give you any information about the side effects of the immunisation?


Q10. Did you understand this information?


Q11. Did the health worker tell you when to return for the next immunisation?


Q12. How was the attitude of the health care worker towards you?


Q13. How was the cleanliness of the health centre and surroundings?


Q14. Overall, what do you think about the service you received today?


Q15. If you compare now with previous visits, have you noticed any changes in relation to waiting times?


Comments:

Q16. If you compare now with previous visits, have you noticed any changes in relation to length of time with the health worker?


Comments:
Q17. If you compare now with previous visits, have you noticed any changes in relation to quality of services? 


Comments:

Q18. Are there any other comments you wish to make?
Annex 7: In-depth interview guide for Stakeholders

<table>
<thead>
<tr>
<th>Introduction: key components</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Thank you</td>
<td>Q1. Please introduce yourself. What is your job/title? Please describe what you do. How long have you been in this job?</td>
</tr>
<tr>
<td>2. Introduce yourself</td>
<td>I will like to ask you a few questions about the activities which the DHMTs have been implementing in the district as part of the PERFORM project.</td>
</tr>
<tr>
<td>3. Explain purpose of interview</td>
<td>Q2. Are you aware of the PERFORM project? If yes, proceed to Q3. If no, please refer the respondent to the information sheet and/or project briefing note so they can read about the project later.</td>
</tr>
<tr>
<td>4. Confidentiality &amp; anonymity</td>
<td>Q3. Are you aware of any changes to work or activities related to workforce improvement that are currently being implemented or planned in the district?</td>
</tr>
<tr>
<td>5. Duration</td>
<td>If yes, please describe these activities to me.</td>
</tr>
<tr>
<td>6. Explain how the interview will be conducted</td>
<td></td>
</tr>
<tr>
<td>7. Ask them to sign consent form if not already done.</td>
<td></td>
</tr>
</tbody>
</table>

**Questions**

- Chose quiet place where can talk freely
  1. Ask factual questions before opinion.
  2. Use probes as needed.
<table>
<thead>
<tr>
<th>Q4. Have you (or your organization) been involved in the implementation and/or monitoring of these activities? If yes, please explain which activities you are involved in and how you are involved.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5. In your opinion, have these activities solved the problems or addressed the issues which they were intended to solve? Please explain why or why not citing outcomes from the activities.</td>
</tr>
<tr>
<td>Q6. Do you think that these activities are enough to address the issues/problems they are focused on? If not, how can they be improved?</td>
</tr>
<tr>
<td>Q7. Do you think the outcomes of these activities are sustainable? Do you think the problems are likely to reoccur? Why or why not?</td>
</tr>
<tr>
<td>Q8. Do you have any comments?</td>
</tr>
<tr>
<td>- Please refer respondent to the information sheet and/or project briefing note so they can read about the project later.</td>
</tr>
<tr>
<td><strong>Closing: key components</strong></td>
</tr>
<tr>
<td>1. Describe next steps</td>
</tr>
<tr>
<td>2. Thank you</td>
</tr>
<tr>
<td>I will be analyzing the information you and others have given me and preparing a report based on your responses. Thank you for your time.</td>
</tr>
</tbody>
</table>
Annex 8: In-depth interview guide for sub-district managers

### Introduction: key components
- Thank you
- Introduce yourself
- Explain purpose of interview
- Confidentiality & anonymity
- Duration
- Explain how the interview will be conducted
- Opportunity for questions

**I want to thank you for taking the time to meet with me today. My name is ___________________________ and I would like to talk with you about the PERFORM project. Specifically, we are trying to find out your views on the activities implemented as part of the PERFORM project in ............ district. The interview should take about ........ hour. I will be taping the session because I don’t want to miss any of your comments. I explained these procedures to you when we set up this meeting. Although I will be taking some notes during the session, I can’t possibly write fast enough to get it all down. Because we are on tape, please be sure to speak up so that we don’t miss your comments. All responses will be kept confidential. This means that your interview responses will only be shared with research team members and we will ensure that any information we include in our report does not identify you as the respondent. Remember, we don’t have to talk about anything you don’t want to and you may ask for the recorder to be switched off at any time or end the interview if you wish. Do you have any questions about the PERFORM project or about what I have just explained? Are you willing to participate in this interview? Are you happy for me to record our conversation?**

### Questions
- Choose quiet place where you can talk freely
  1. Ask factual questions before opinion.
  2. Use probes as needed.

<table>
<thead>
<tr>
<th>Q1. Please introduce yourself.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- What is your job/title?</td>
</tr>
<tr>
<td>- Please describe what you do.</td>
</tr>
<tr>
<td>- How long have you been in this job?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q2. Have you heard of the PERFORM project before?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- If yes, what do you think is the aim of the PERFORM project?</td>
</tr>
<tr>
<td>- If no, please refer the respondent to an information sheet and/or briefing note so they can read about the project later.</td>
</tr>
</tbody>
</table>
Q3. Are you aware of any changes to work or activities related to workforce improvement that are currently being implemented or planned in the district?
   - If yes, can you please describe them? How is this activity/activities being implemented in your facility?
   - If no, prompt with some examples from the bundle work plan.

**If still no, skip to question 7.**

Q4. How do you monitor progress in the implementation?
   - Do you have a record of these monitoring activities? (E.g. quarterly or annual report). If yes, can I have a copy of this document please?
   - Have you made any changes to these monitoring activities recorded here? If yes, please explain why these changes were needed.

Q5. In your opinion, have the activities achieved the desired outcomes which were set out at the beginning of the implementation? Please explain why or why not.

Q6. In your opinion, have these activities or changes helped you and your colleagues perform better and to achieve your targets?
   - If so, how? What do you believe are the reasons for this?
   - If not, why is this?

Q7. Do you have any comments?
   - Please refer respondent to the information sheet and/or project briefing note so they can read about the project later.

**Closing: key components**
- Describe next steps
- Thank you

I will be analyzing the information you and others have given me and preparing the next version of this tool. Thank you for your time.
Annex 9: In-depth interview guide for sub-district staff

<table>
<thead>
<tr>
<th>Introduction: key components</th>
<th>I want to thank you for taking the time to meet with me today. My name is __________________________ and I would like to talk with you about the PERFORM project. Specifically, we are trying to find out your views on the activities implemented as part of the PERFORM project in ___________ district. The interview should take about _______ hour. I will be taping the session because I don’t want to miss any of your comments. I explained these procedures to you when we set up this meeting. Although I will be taking some notes during the session, I can’t possibly write fast enough to get it all down. Because we are on tape, please be sure to speak up so that we don’t miss your comments. All responses will be kept confidential. This means that your interview responses will only be shared with research team members and we will ensure that any information we include in our report does not identify you as the respondent. Remember, we don’t have to talk about anything you don’t want to and you may ask for the recorder to be switched off at any time or end the interview if you wish. Do you have any questions about the PERFORM project or about what I have just explained? Are you willing to participate in this interview? Are you happy for me to record our conversation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Thank you</td>
<td>Q8. Please introduce yourself. - What is your job/title? - Please describe what you do. - How long have you been in this job in this facility?</td>
</tr>
<tr>
<td>• Introduce yourself</td>
<td>Q9. In your view, who are the relevant stakeholders with regard to human resources in the district? - Why are they important? - Would you say you are an important stakeholder in the district? The interviewer may have to explain the concept of stakeholder to respondent(s)</td>
</tr>
<tr>
<td>• Explain purpose of interview</td>
<td>Q10. Are you aware of any changes to work or activities related to workforce improvement that are currently being implemented or planned in the district? - If yes, can you please describe them? How is this activity/activities being implemented in your facility? - If no, prompt with some examples from the bundle work plan. <strong>If still no, skip to question 9.</strong></td>
</tr>
<tr>
<td>• Confidentiality &amp; anonymity</td>
<td></td>
</tr>
<tr>
<td>• Duration</td>
<td></td>
</tr>
<tr>
<td>• Explain how the interview will be conducted</td>
<td></td>
</tr>
<tr>
<td>• Opportunity for questions</td>
<td></td>
</tr>
</tbody>
</table>
Q11. Were you involved in the planning of these activities?
   - If yes, How and why?
   - If no, why not?
Q12. Were you involved in monitoring the implementation of the activities?
   - If yes, how?
   - If you haven’t been involved in monitoring, why not?
Q13. In your opinion, have these activities achieved the desired outcomes which were set out at the beginning of the implementation?
   - Please explain why or why not.
Q14. In your opinion, have these activities or changes helped you and your colleagues perform better and to achieve your targets?
   - If so, how? What do you believe are the reasons for this?
   - If not, why is this?
Q15. Would you like to see this activity continue?
   - If yes, why
   - If no, why not?
Q16. Do you have any comments?
   - Please refer respondent to the information sheet and/or project briefing note so they can read about the project later.

**Closing: key components**

- Describe next steps
- Thank you

I will be analyzing the information you and others have given me and preparing the next version of this tool. Thank you for your time.
Annex 10: In-depth interview guide for DHMT members

**Introduction: key components**
- Thank you
- Introduce yourself
- Explain purpose of interview
- Confidentiality & anonymity
- Duration
- Explain how the interview will be conducted
- Opportunity for questions

I want to thank you for taking the time to meet with me today. My name is ……………………………… and I would like to talk with you about the health workforce in ………………… district. Specifically, as part of the PERFORM project, we are trying to understand the factors affecting workforce performance in order to find ways to improve the performance of the health workforce in ………………… district.

The interview should take about one hour. I will be taping the session because I don’t want to miss any of your comments. I explained these procedures to you when we set up this meeting. Although I will be taking some notes during the session, I can’t possibly write fast enough to get it all down. Because we are on tape, please be sure to speak up so that we don’t miss your comments.

All responses will be kept confidential. This means that your interview responses will only be shared with research team members and we will ensure that any information we include in our report does not identify you as the respondent. Remember, we don’t have to talk about anything you don’t want to and you may ask for the recorder to be switched off at any time or end the interview if you wish.

Do you have any questions about the PERFORM project or about what I have just explained? Are you willing to participate in this interview? Are you happy for me to record our conversation?

**Questions**
- Chose quiet place where can talk freely
- Ask factual questions before opinion.
- Use probes as needed.
- Include note taker

Q17. Please introduce yourself.
- What is your role within the DHMT?
- Please describe what you do.

Q18. How does the DHMT discuss and/or agree before decisions are taken (for example, key decisions to with budget, or planning new programmes)?

Q19. Can you describe a typical DHMT meeting (who comes, is there an agenda, who sets the agenda, what happens)?

Q20. How do you perceive the participation of each member of the DHMT during a meeting?
| Q21. | In your opinion how are the views of each member of the DHMT taken into consideration when decisions are made?  
- Can you give specific examples?  
| Q22. | How often does the DHMT meet as a group?  
- Do all members attend these meetings?  
- If not, why?  
- Are there minutes of these meetings?  
- What happens with these minutes?  
| Q23. | How do you identify problems? [NB not how DHMTs did this initially, but focus on how they do it now].  
- Can you give us some examples of recent problems identified by DHMT?  
- How did you identify them?  
| Q24. | Since the beginning of the project, does your team undertake analysis of problems that arise in the district?  
- If yes, please give a specific example.  
- How often do you do this? and When?  
| Q25. | How does the process of problem analysis inform prioritization and planning? (Which causes do you focus on?)  
| Q26. | In your opinion, is the problem analysis process useful?  
- What factors have helped and/or hindered this process?  
| Q27. | How do you, as a team, usually decide which strategies to use to address workforce problems?  
- How often? When?  
| Q28. | How do you include these strategies in the overall district work plan?  
| Q29. | In your opinion, is the strategy development useful as part of developing your annual work plan?  
| Q30. | What workforce strategies are included in your district work plan for this year?  
- Why did you include them?  
| Q31. | Are there some workforce strategies that you did not include in the district work plan?  
- Why did you leave them out?  

| Q32. | Has sufficient money been set aside in your budget for the implementation of each workforce strategy included in your work plan? |
| Q33. | In your view, has the PERFORM project had any impact on the **composition** of DHMT (attraction and attrition)?  
   - If yes, please explain. Why has this happened? How was it managed? |
| Q34. | In your opinion, has the PERFORM project had an impact on the **practices** of DHMT?  
   *For example, do you now spend more time on the management strengthening intervention and so have less time for other tasks? Do you now receive more resources or attract projects? Do you receive requests to share expertise outside the district? (Explain problem solving and strategy development approach)* |
| Q35. | How do you track (monitor) the activities in the district workplan?  
   - How do you keep a record of this (e.g. quarterly/annual report)?  
   - Have you made any changes to the way you track these?  
   - Do you have a record of these monitoring activities? (E.g. quarterly or annual report). If yes, can I have a copy of this document please?  
   - Have you made any changes to these monitoring activities recorded here? If yes, please explain why these changes were needed. |
| Q36. | In your view, who are the relevant stakeholders in the district?  
   - Why are they important?  
   - Have you identified and involved relevant stakeholders in the planning of the bundles? If yes, how and why? |
| Q37. | Have these stakeholders been involved in monitoring the implementation of the bundles?  
   - If yes, how? |
| Q38. In your opinion, have the bundles achieved the desired outcomes which you set out at the beginning of the project? If yes, please explain why. If no, why not. |
| Q39. In your opinion, has the PERFORM project helped your work in the district? - If so, how? - If not, why not? What about staff performance? Please explain why or why not. |
| Q40. Is there anything more you would like to add or do you have any comments about the PERFORM project which we have not already discussed? |

### Closing: key components
- Describe next steps
- Thank you

I will be analyzing the information you and others have given me and preparing the next version of this tool. Thank you for your time.
Annex 11: Health Facility data collection form

1. Questionnaire serial number | | | | __ |

2. Today’s date | | |/| |/| | | | | | __ |
   day / month/ year

3. Starting time | | |:::| | |
   hour : minutes

4. Name of the person filling this form: | ________________________________ |

5. Position of the person filling this form | ________________________________ |

6. Country name | ________________________________ |

7. District name | ________________________________ |

8. Health Facility name | ________________________________ |

9. Health Facility official code (if available) | | | | __ |
   Write | 9 | 9 | 9 | 9 | 9 | if not available

10. Type of health facility | | |
    Hospital with specialties | 1 |
    Hospital without specialties | 2 |
    PHC with beds and deliveries | 3 |
    PHC without beds | 4 |
    Health post | 5 |

11. Calendar year for the data reported here | | | | |

12. Population in the catchment area of the health facility | | | | | | | | | | __ |

13. Population: women in child bearing age | | | | | | | | | | __ |

14. Population: under-fives | | | | | | | | | | __ |

**Human resources in the previous calendar year**

Check the payroll or list of staff towards the middle of the calendar year reported here.

15. **TOTAL** number of staff in the payroll | | | | |

16. Number of staff with **ONLY management** or **administrative** activities (e.g. accountant) | | | | |
17. Number of staff with in laboratory, imaging, pharmacy and other technical supporting services (e.g. pharmacists)  
18. Number of staff other technical staff (e.g. clinicians, nurses, health promotion, education, public health staff)  
19. Number of staff orderlies, cleaning, non-qualified staff  
20. Check that \( q_{16} + \ldots + q_{19} \)  

<table>
<thead>
<tr>
<th>Yes</th>
<th>1</th>
<th>No</th>
<th>2</th>
</tr>
</thead>
</table>

21. Source document for issues under heading 0  

| Health report | 1 | District report | 2 | Other | 3 |

### Activities in the previous complete calendar year

22. Total number of curative total outpatient consultations (OPD), including adults and children  
23. Number of curative new consultations (or new cases), including adults and children  
24. Number of curative total outpatient consultations, only children  
25. Number of curative new consultations (or new cases), only children  
26. Total number of beds available  
27. Total number of inpatients discharged  
28. Total number of occupied bed-days  
29. Total number of major surgical operations  
30. Total number of minor surgical procedures  
31. Total number of new ANC consultations  
32. Number of ANC contacts  
33. Total number of deliveries  
34. Number of vaginal deliveries  
35. Number of caesarean sections  
36. Number of still births  
37. Number of DTP1 doses administered to under-1s  
38. Number of DTP3 doses administered to under-1s  
39. Do you have specific resources (human, infrastructures) uniquely dedicated to TB patients (e.g. TB clinic)
40. Do you have specific resources (human, infrastructures) **uniquely** dedicated to HIV suspected or AIDS patients (e.g. VCT)

| Yes | 1 |
|-----|
| No  | 2 |

41. Source document for issues under heading 0

<table>
<thead>
<tr>
<th>Health report</th>
<th>facility</th>
<th>District report</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Budget and accounts**

42. What was the **total income budgeted** for the last fiscal year?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

43. What was the **total expense budgeted** for the last fiscal year?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

44. What was the amount **budgeted for salaries**?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

45. What was the real **income in the last fiscal year**?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

46. What was the real **expenditure in the last fiscal year**?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

47. What was the real **expenditure for salaries**?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

48. Source document for issues under heading 0

<table>
<thead>
<tr>
<th>Health report</th>
<th>facility</th>
<th>District report</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Ending time | | |
Annex 12: District level data collection form

1. Population in the district

2. List the 5 most common diseases in the district

<table>
<thead>
<tr>
<th>Adults</th>
<th>Under 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
<td>5.</td>
</tr>
</tbody>
</table>

3. Number of DHMT in post

4. Number of DHMT posts that have been changed over the previous 12 months

5. Number of DHMT posts that have been unfilled for at least 3 months over the past 12 months

INFORMATION SYSTEMS

6. How many district HMIS reports should be prepared each year?

7. How many HMIS reports are available and complete for the previous 12 months?

8. Is there a system for recording human resources data in the district?

| Yes | 1 | No | 2 |

9. Is the system for recording human resources data in the district up to date and used by management?

| Yes | 1 | No | 2 |

SUPPLIES AND TECHNOLOGY

10. How often are supplies (medicines and consumables) delivered to the district?

| Weekly | 1 | Monthly | 2 | Quarterly | 3 | Other | 4 |
11. Provide information on stock-out of the 5 most frequently used medicines in the district

<table>
<thead>
<tr>
<th>5 most frequently used medicines</th>
<th>Stock-out frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[ Days not available/365 days x100%]</td>
</tr>
<tr>
<td></td>
<td>(if no exact data available provide estimate e.g. 20% (est))</td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
</tbody>
</table>

**LOCAL, REGIONAL AND NATIONAL CONTEXT**

12. Please give details of any ongoing or completed local, national or regional projects on issues related to health workforce in the table below

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Level (Local, Regional, National)</th>
<th>Status (Completed, Ongoing)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td></td>
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<tr>
<td>7.</td>
<td></td>
<td></td>
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<tr>
<td>8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. Are there any policies on health workforce?

| Yes | 1 | No | 2 |

14. If yes to 11 above, are the policies

| National | 1 | Regional | 2 | Local | 3 | Other | 4 |
We are conducting a survey with staff of health facilities to find out what you think about the implementation of PERFORM activities. We would like to ask you a few questions about the activities. This will help us in the final evaluation of the activities implemented. Your answers are strictly confidential and we thank you for your participation and honesty.

<table>
<thead>
<tr>
<th>Selected HR/HS bundles</th>
<th>Implementing activities</th>
<th>Components</th>
<th>Improvement ratings</th>
<th>Give ONE (1) main reason for your rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensify monitoring &amp; supervision</td>
<td>1. Develop a monthly supervision schedule to be implemented at the sub-district level</td>
<td>Improvement in development of monthly supervision schedule</td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in usage of monthly supervision schedule</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Training SDHMT supervisors (mainly CHO) in supportive supervision</td>
<td>Improvement in supportive supervision by SDHMT Supervisors</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Conduct monthly and quarterly monitoring</td>
<td>Improvement in monthly monitoring &amp; supervision by DHMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected HR/HS bundles</td>
<td>Implementing activities</td>
<td>Components</td>
<td>Improvement ratings</td>
<td>Give ONE (1) main reason for your rating</td>
</tr>
<tr>
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<td>----------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td>and supervision visit respectively by DHMT and SDT</td>
<td>Improvement in quarterly monitoring &amp; supervision by DHMT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improvement in monitoring supervision by SDT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improvement in quarterly monitoring &amp; supervision by SDT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensify EPI defaulters tracing at health facilities levels</td>
<td>1. Train SDHMT on filling of EPI forms</td>
<td>Improvement in training of SDHMT on EPI forms filling</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Ensure completeness of records in EPI register</td>
<td>Improvement in completeness of records in EPI register</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected HR/HS bundles</td>
<td>Implementing activities</td>
<td>Components</td>
<td>Improvement ratings</td>
<td>Give ONE (1) main reason for your rating</td>
</tr>
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<td>---------------------------------------------------------------------------</td>
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<td>------------------------------------------</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Not at all (1)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Slightly (2)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Moderately (3)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Much (4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Major (5)</td>
<td></td>
</tr>
<tr>
<td>3. Monthly review of EPI register to identify defaulters by CHOs</td>
<td>Improvement in EPI defaulter identification by CHOs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Embark on monthly home visits to vaccinate EPI defaulters</td>
<td>Improvement in monthly home visits for vaccination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. CBSV DHMT SDHMT CHO meetings to encourage volunteers' involvement in tracing houses of defaulters</td>
<td>Improvement in CBSV DHMT SDHMT CHO meetings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration with stakeholders in community</td>
<td>1. Task CBSVs to mobilize community members for EPI services</td>
<td>Improvement in CBSV community mobilization for EPI services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected HR/HS bundles</td>
<td>Implementing activities</td>
<td>Components</td>
<td>Improvement ratings</td>
<td>Give ONE (1) main reason for your rating</td>
</tr>
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<td>-----------------------</td>
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<td>----------------------------------------</td>
</tr>
<tr>
<td>mobilization for EPI services</td>
<td></td>
<td>Improvement in attendance of EPI services</td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td>2. Involve community members in planning CWC activities</td>
<td></td>
<td>Improvement in involvement of community members in planning CWC activities</td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td>Use of workplans</td>
<td>Develop and share weekly/monthly/annual workplans provided with regular work plans</td>
<td>Improvement in development of WEEKLY workplans</td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in the use of WEEKLY workplans</td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in development of MONTHLY workplans</td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in the use of MONTHLY workplans</td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in development of ANNUAL workplans</td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td>Selected HR/HS bundles</td>
<td>Implementing activities</td>
<td>Components</td>
<td>Improvement ratings</td>
<td>Give ONE (1) main reason for your rating</td>
</tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improvement in the use of ANNUAL workplans</td>
<td></td>
</tr>
<tr>
<td>Ensure continuous functioning of solar panels and fridges</td>
<td>Develop and implement PPM for solar panels &amp; fridges</td>
<td>Improvement in defrosting of fridges</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in cleaning of solar panels i.e. defrosting of fridges, cleaning &amp; checking solar panels batteries, distilling water of panels</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in the number of functional solar panels &amp; fridges</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex 14: Kwahu West bundles evaluation form

We are conducting a survey with staff of health facilities to find out what you think about the implementation of PERFORM activities. We would like to ask you a few questions about the activities. This will help us in the final evaluation of the activities implemented. Your answers are strictly confidential and we thank you for your participation and honesty.

<table>
<thead>
<tr>
<th>Selected HR/HS bundles</th>
<th>Implementing activities</th>
<th>Components</th>
<th>Improvement ratings</th>
<th>Give ONE (1) main reason for your rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve data manageme n t at all levels</td>
<td>Train and retrain all staff including MHA on new vaccine (EPI)</td>
<td>Improvement in EPI new vaccine <strong>TRAINING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in EPI new vaccine <strong>RETRAINING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conduct monthly data validation per facility by comparing tally books</td>
<td>Improvement in monthly data validation exercise</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enforce use of separate log</td>
<td>Improvement in the use of <strong>SEPARATE</strong> log</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected HR/HS bundles</td>
<td>Implementing activities</td>
<td>Components</td>
<td>Improvement ratings</td>
<td>Give ONE (1) main reason for your rating</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------</td>
<td>------------</td>
<td>---------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td>books for drop-in and drop-out</td>
<td>books for drop-in and drop-out</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Train all staff on logistics management</td>
<td>Improvement in logistic management training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve supportive supervision to sub municipals as planned</td>
<td>On-site supportive supervision in general but EPI in particular (2 visits per facility per year)</td>
<td>Improvement in on-site supportive supervision in general</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hold quarterly meetings to review performance and share best practices</td>
<td>Improvement in quarterly performance review meetings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reward best performing facilities (drop rate of PCV and Rota 10% and below)</td>
<td>Prepare and cascade a league table for measuring performance for awards of Sub-municipal vaccination</td>
<td>Improvement in the assessment of sub-municipal performance using league tables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected HR/HS bundles</td>
<td>Implementing activities</td>
<td>Components</td>
<td>Improvement ratings</td>
<td>Give ONE (1) main reason for your rating</td>
</tr>
<tr>
<td>------------------------</td>
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<td>------------</td>
<td>---------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td>Give prize to best performing health facilities</td>
<td>Improvement in performance reward system</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex 15: Upper Manya Krobo bundles evaluation form

We are conducting a survey with staff of health facilities to find out what you think about the implementation of PERFORM activities. We would like to ask you a few questions about the activities. This will help us in the final evaluation of the activities implemented. Your answers are strictly confidential and we thank you for your participation and honesty.

<table>
<thead>
<tr>
<th>Selected HR/HS bundles</th>
<th>Implementing activities</th>
<th>Components</th>
<th>Improvement ratings</th>
<th>Give ONE (1) main reason for your rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retention</td>
<td>Redesign CHO's job description and orientate staff on it</td>
<td>Improvement in orientation on job description</td>
<td>Not at all (1), Slightly (2), Moderately (3), Much (4), Major (5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assigning mentor to new staff</td>
<td>Improvement in mentorship of new staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use temporary staffing measures</td>
<td>Outreach services to underserved communities (25)</td>
<td>Improvement in outreach services to underserved communities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attendance monitoring</td>
<td>Use attendance register and movement book at facilities</td>
<td>Improvement in the use of attendance register</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in the use of attendance movement book</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected HR/HS bundles</td>
<td>Implementing activities</td>
<td>Components</td>
<td>Improvement ratings</td>
<td>Give ONE (1) main reason for your rating</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------</td>
<td>------------</td>
<td>---------------------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td></td>
<td>DHA and RHA to spot check on attendance register</td>
<td>Improvement in spot check on attendance register by <strong>DHA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in spot check on attendance register by <strong>RHA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Local Health Committee members to sign CHO’s outreach log books</td>
<td>Improvement in Local Health Committee members signing CHO’s outreach log books</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular open appraisal</td>
<td>Support sub-district leaders and programme officers on appraisal process</td>
<td>Improvement in the appraisal process by sub-district leaders</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in the appraisal process by programme officers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular supportive supervision</td>
<td>Training supervisors in effective supportive supervision skills</td>
<td>Improvement in training in effective supportive supervision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of workplans</td>
<td>Support CHO to develop weekly work plan and share targets</td>
<td>Improvement in the development of weekly workplans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected HR/HS bundles</td>
<td>Implementing activities</td>
<td>Components</td>
<td>Improvement ratings</td>
<td>Give ONE (1) main reason for your rating</td>
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<td>----------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in sharing of targets</td>
<td>Not at all (1)</td>
<td>Slightl y (2)</td>
</tr>
<tr>
<td>Team meetings</td>
<td>Organize weekly core DHMT, core SDHMT meeting and DHMT/SDHMT meetings to discuss workplan</td>
<td>Improvement in SDHMT meetings to discuss workplan</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improvement in DHMT/SDHMT meetings to discuss workplan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduce robust award system</td>
<td>Reward deserving staff (SDHMT and facility)</td>
<td>Improvement in best worker award system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enforce code of conduct and disciplinary procedure</td>
<td>Introduce event register (SDHA and DHA)</td>
<td>Improvement in use of the event register</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Orientation on code of conduct and disciplinary guidelines</td>
<td>Improvement in the orientation on code of conduct</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Booklets on code of conduct distributed to</td>
<td>Improvement in availability of code of conduct booklets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected HR/HS bundles</td>
<td>Implementing activities</td>
<td>Components</td>
<td>Improvement ratings</td>
<td>Give ONE (1) main reason for your rating</td>
</tr>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td></td>
<td>sub-district staff after orientation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information system</td>
<td>Use service delivery data to monitor performance of facilities</td>
<td>Improvement in the use of service delivery data for performance monitoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enhance participation of pregnant women in ANC services</td>
<td>Plan and conduct regular customer care training for all facility staff once a year</td>
<td>Improvement in customer care training</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Durbars to sensitize communities on illegal collection of fees and importance on ANC services</td>
<td>Improvement in community sensitization of illegal fee collection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provide essential drugs and equipment for ANC - IFA, Urine strips, HB meters etc.</td>
<td>Improvement in the supplies of essential drugs and equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity building</td>
<td>Attachment of CHOs to maternity ward</td>
<td>Improvement in the CHO attachment to maternity ward</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

114
<table>
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<tr>
<th>Selected HR/HS bundles</th>
<th>Implementing activities</th>
<th>Components</th>
<th>Improvement ratings</th>
<th>Give ONE (1) main reason for your rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Not at all (1)</td>
<td>Slightly (2)</td>
</tr>
<tr>
<td>In-service training for practicing midwives</td>
<td>Improvement in in-service training for practicing midwives</td>
<td>Moderate (3)</td>
<td>Much (4)</td>
<td>Major (5)</td>
</tr>
</tbody>
</table>

**Give ONE (1) main reason for your rating**

- Not at all (1)
- Slightly (2)
- Moderately (3)
- Much (4)
- Major (5)
Annex 16: Consent form for Interviews

Supporting decentralized district management teams in order to improve health workforce performance (PERFORM Project)

Consent Form- Interview
I have read the project information sheet. I have had the opportunity to discuss this research study with a staff member or investigator of the research study team. I have had my questions answered by them in the language I understand. The risk and benefits have been explained to me. I understand that my participation in this study is voluntary and that I may choose to withdraw at any time. I freely agree to participate in this research study.

I consent to participate in the study on testing data collection tools as part of the PERFORM Project.

I consent for this interview to be recorded.

Participant Printed Name:__________________________________________
Participant Signature:__________________________________________ Date:__________

Research Staff/Interviewer
I, the undersigned, have fully explained the relevant details of the PERFORM project to the participant named above and believe that the participant has understood and has willingly given their consent.

Printed Name:__________________________________________ Date:__________
Signature:__________________________________________ Role in the Study:_________________________