

How to use Action Research to strengthen District Health Management:

A Handbook

Acknowledgements

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Introduction

About this handbook

This handbook is intended for healthcare researchers who work on strengthening health systems in lower and middle income countries (LMICs) and who are working with, or aim to work with, district health management teams within the public health system to strengthen workforce performance. The handbook will also be useful to research managers within a Ministry of Health (MOH), regional or district healthcare department setting and operating within the public health system. The World Health Organization (WHO) definition of a health system is followed here.

The WHO defines a health system as all actions and functions whose primary intent is the improvement of health. "A good health system delivers quality services to all people, when and where they need them. The exact configuration of services varies from country to country, but in all cases requires a robust financing mechanism; a well-trained and adequately paid workforce; reliable information on which to base decisions and policies; well-maintained facilities and logistics to deliver quality medicines and technologies"¹.

This handbook is concerned with the workforce of a health system. The following chapters provide detailed guidance on how to design and use action research in healthcare settings to create positive change in workforce management and objectively measure the scale of that change. It is assumed that readers will have a basic grounding in research. The content of this handbook draws on research carried out by the PERFORM project "Supporting decentralised

management to improve health workforce performance in Ghana, Uganda and Tanzania" 2011 – 2015 which adapted action research to inquire into decentralised management and provide new knowledge to district health management teams on how to effectively improve the performance of their staff. Details on the PERFORM project can be found on the back page. The practical experience of designing and using action research on PERFORM is included in boxes, highlighting project need, the options considered and choices made. As often as not, the research did not go as planned and how project researchers and participants handled those changes is explored. A more detailed methodology manual on conducting action research with a health workforce is available on request from the University of Leeds – refer to contact details at the end of this handbook.

This handbook is intended as a guide, not a protocol that must be read in a linear fashion. Each chapter will explore an aspect of design and implementation of action research in LMIC healthcare settings. All tools referred to in the handbook are included in appendices. The reader can click on the Return to contents page button at the bottom of each page to access the appendices without scrolling through the handbook. The tools included are intended as a sample only and should always be adapted to local contexts. The reader is encouraged to skip chapters and dip into sections as needed. Above all, this handbook seeks to be functional and accessible. The box below sets out what this handbook can and cannot do.

THIS HANDBOOK WILL:

- 1) Provide overall guidance on action research design that can be used at different times of performance management strengthening;
- 2) Highlight practical issues to remember throughout design and implementation;
- 3) Suggest methods and tools that could be used.

IT WILL NOT:

- 1) Provide a detailed off-the-shelf research protocol to import into different settings;
- 2) Provide fixed principles of design and implementation. These should be adapted to different contexts;
- 3) Provide a fixed set of methods. Methods should be tailored to the purpose, expertise and desired outcome of each project.

¹WHO http://www.who.int/topics/health_systems/en/

Action Research for District Management

The district is the most important operational level within a health system. For some time now, managerial responsibilities have been increasingly decentralised to district health management teams. This change from centralised to local planning poses a challenge to district health management teams, who become responsible for planning and managing their district health services to achieve the best possible health outcomes with the available workforce.

District health management teams (DHMTs) are often concerned with two aims: to ensure that their health programmes are benefiting the public and to meet specific health targets set by regional and national authorities. Achieving these aims depends significantly on the performance of local health workforce, that is, the availability and effectiveness of clinical, managerial and support staff. Workforce performance is largely a result of the way in which staff – and the resources they need to do their work – is managed. This can be thought of as performance management.

There is a wide range of strategies that DHMTs can use to strengthen workforce (or human resources (HR)) performance. However, research has shown that to be effective and sustained, it is necessary to select strategies that are appropriate for a local workforce and that the chosen strategies are integrated across HR management. This concept of linking and integrating HR management is called bundling (Buchan 2004). In addition, current thinking on health systems (HS) strengthening suggests that integrating strategies to strengthen HR with the five other health system building blocks (service delivery, information, financing, leadership & governance, medical products, vaccines and technologies) is necessary. It is more effective to combine HR and HS strengthening strategies, thereby creating a “bundle” of interventions.

To develop, track and assess the effectiveness of different HR/HS bundles, the PERFORM project used action research. Action research is a team based enquiry that aims to simultaneously improve (in this case) workforce performance and generate knowledge about the processes and strategies that work best to create that improvement. An action research team comprises health practitioners working with full time researchers (usually, but not always, academics) to address problems faced in their everyday practice. A team works through systematic spirals (see Figure 1) of planning, acting, observing and reflecting to:

- Identify and plan strategies to improve a situation or solve a problem
- Implement the changes needed (act)
- Observe and record the effects of the implemented changes
- Reflect and analyse the process and the effects of changes made.

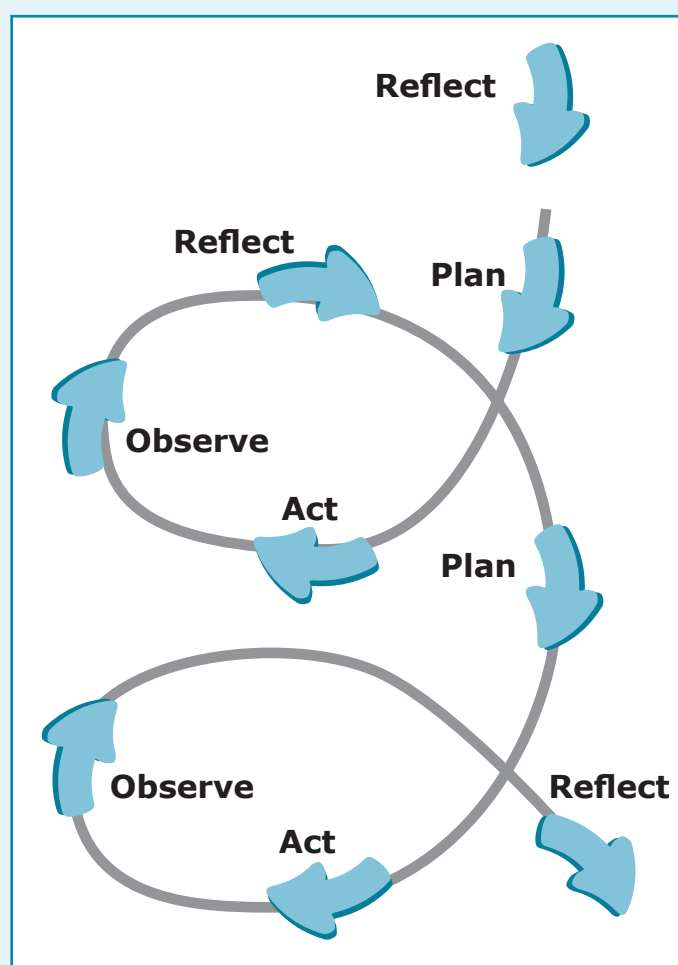


Figure 1: An Action Research Cycle

Action research continues in ongoing spirals until a decision is taken to stop.

Action research (AR) builds and strengthens local capacity to tackle endemic problems new and creative ways. It enables district health management teams to identify, act on and monitor areas of concern relating to their workforce. AR empowers DHMTs to make changes within their local contexts. It can strengthen district health management because it makes ongoing change processes more explicit. The observation and reflection stages help management teams to adapt their actions and plan more effective interventions, which are also analysed to feedback into a positive spiral of performance improvement over time. For some staff, participating in an AR project can be the first opportunity they have to identify the root causes of problems they face, in depth, and from multiple perspectives. With this new knowledge, it can become clear that money is not a necessary precondition for workforce performance improvement - small changes in existing management practice, such as introducing log books or duty rosters so that there is clarity about where staff is working and what they are doing during the working day, can make a big difference.

This handbook fills a unique gap in AR for health services. There are numerous texts on 'how to do' AR in different sectors in high income country settings that can act from a significantly different infrastructure and capacity base. This handbook is for LMIC settings and focuses on how AR can be of practical use to improve workforce performance when, very often, no additional resources are available.

The next chapter will take the reader through research design, focusing on principles. Being clear on principles allows the resulting research design to be flexible within local situations and needs. A generic research design that can be adapted to different contexts is also introduced and each stage considered in detail in later chapters. The handbook concludes by revisiting key take-home messages for researchers and research managers to remember when designing and using action research in their own unique settings.

Designing Action Research with a Health Workforce

AR is a way of doing research that also seeks to strengthen local capacity to positively change current practices while creating new knowledge. Success depends on genuine collaboration between researchers and practitioners and a change to conventional research roles. It is essential that an AR team agree on common principles guiding their overall research design. A team that agrees general principles underlying their own AR gains freedom in finding ways to follow those principles to achieve intended outcomes - rather than being hostage to a research protocol that may not suit local situations.

Principles

Time spent negotiating clear principles underpinning a research design is valuable and should be part of any project initiation phase. For effective AR, the following minimal principles are suggested, although readers are free to add more.

1) Take a structured approach

A structured approach is important. A structure can be a set of simple stages to follow or a set of fundamental criteria to abide by during the research process. By taking a structured approach, the information required for research purposes will be clear throughout. A simple structure acts as a boundary for the research to change as needed, without losing sight of overall research objectives.

2) See the team as co-participants & co-researchers

AR challenges researchers and practitioners to take on different roles compared to conventional research. DHMTs play an active role - rather than have the research done to them, the research is done with and by them, enabling local capacity strengthening from the outset. Researchers move into a facilitation role while practitioners are more actively involved in research activities such as data collection and analysis. For this reason, practitioners can be called co-researchers, while researchers may be seen as co-participants actively shaping the research output. The relative roles and responsibilities of co-participants and co-researchers should be discussed and agreed from the outset to avoid confusion and reduce conflict.

3) Learn the art of facilitation

Researchers are obliged to learn the art of facilitation. In conventional research, researchers tend to have great control over research decisions (such as research questions, methodologies, analysis). In AR, researchers are required to become facilitators - facilitating local practitioners to continually set research questions, make observations and undertake reflection and analysis in ongoing spirals. Researchers may need training in facilitation skills to undertake this new role.

4) Reach clear agreement on intended outcomes

Part of early project initiation discussions should include agreement on the intended outcomes, and in particular, a clear and targeted focus on outcomes that are seen as locally important by DHMTs. For the PERFORM project, the outcomes sought were improved performance of the DHMT and district workforce generally. However, any areas of health services could be targeted for change.

5) Be flexible

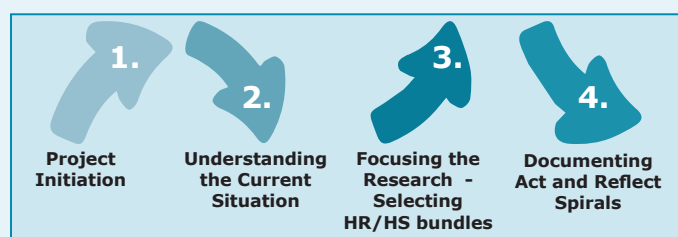
AR, above all, seeks change. Change should be expected and allowed within a project. However, such change should still follow the principles above. For instance, an early project structure could change but the need for a structured approach still exists. Intended outcomes may change but there would still be a need for the AR team to clearly agree on what those changed outcomes should be.

6) Inform and communicate with each other

An AR team need to keep talking to each other and key stakeholders. Key stakeholders could include central MOH staff, frontline service delivery workers, or development donors working in a district. By informing and communicating with each other, an AR team will stay abreast of changes within the project and local contexts, identify opportunities and threats, and promote learning for co-researchers and co-participants.

Generic design

Based on the principles set out above, a simple and generic research design is presented. It starts with a situation analysis phase (that can act as a baseline), moving into AR spirals, and concluding with a final situation analysis that can also function as an end line. This design can be adapted by readers as required.



1) Project Initiation

At the beginning of a project, it is strongly advised to spend time agreeing project principles, roles and responsibilities. When doing so, consider the unique capabilities and strengths of each participant (whether individual or institutional) and how these differ.

Take advantage of these differences when agreeing responsibilities. Allow flexibility for negotiation of roles over time especially if some participants wish to build their skills in a new area. For example, some DHMT members may be keen to build their skills in using research methods or in analysis of routine data.

PERFORM EXPERIENCE

The project needed to identify co-researchers and clarify roles and responsibilities for four years of AR across three countries and with 9 DHMTs.

The main option considered was working in some way with MOH, especially since the AR was to be conducted in the public health system.

The Country Research Teams (CRTs) together with the MOH chose participating DHMTs in each country. They then contacted local DHMTs to gain their consent to participate. European partners (EPs) were introduced by CRTs during a first project workshop, except for one country where a workshop was held to discuss collaboration and communication between CRTs and DHMTs in particular (see Appendix 1 for an overview of PERFORM roles, responsibilities and tasks to indicate how detailed this could be over the course of a project).

The consequence of our choice was that all co-researchers knew what was expected of them at each stage of the project. However, not all co-researchers carried out the tasks assigned to them for various reasons. In retrospect, placing a CRT or EP researcher in each district may have improved communication. It is also important for success to ensure that each co-researcher has the skill, knowledge and confidence to do the allocated task.

At this stage, also consider ethics. AR projects still require an ethical approach to research. Potential co-researchers should be fully informed about the nature of the project and their consent obtained before commencing any research activities. It should be emphasised that participation is voluntary and that co-researchers are at liberty to withdraw at any time – and especially that doing so will not negatively affect their career prospects.

Confidentiality is a cornerstone of ethical research. While carrying out any aspects of an AR project, all information obtained through the work should be protected from public view by conducting any interviews or focus groups in a private place; using protected space on computer servers and restricted access to filing cabinets (if paper is used). Bear in mind that in the course of conducting a project, researchers may find out about workforce issues that could require disciplinary action. This information is deemed confidential in a research project. Personal information should be kept anonymous when making results public. These responsibilities should be borne in mind whether research is conducted in a very local district site or whether DHMTs share information within a country or with international partners. Applying for national ethics approval before conducting AR will ensure that researchers have adequately considered how to address these issues. Be aware that gaining national ethics approval can be a lengthy process (up to one year in some countries) and build this into the project timetable.

2) Understanding the Current Situation

Some action research studies start with a 'reconnaissance phase' or situation analysis (Titchen and Binnie 1994) to collect evidence about the nature of the problem to be addressed and provide a baseline against which to compare any subsequent changes.

3) Focusing the Research - Selecting HR/HS bundles

Next, DHMTs use the situation analyses to identify and prioritise the problems they face and select the human resource/health system (HR/HS) bundles to address those problems. It is valuable for participating co-researchers, especially from different districts, to share these selections.

4) Documenting Act and Reflect Spirals

AR is used to implement the HR/HS bundles, to observe and reflect on their progress and on the basis of this information, learn and make changes to the selected strategies. A variety of conventional research methods can be used to conduct observation and reflection. It is expected that the bundle would change over the course of AR spirals to achieve intended objectives.

5) Understanding the Final Situation

A final situation analysis is a cut off point for the AR spirals. It allows an AR team to step back and take stock of whether, and to what extent, problems have been solved or have evolved over the period of an action research project. It is essential to consider how a final situation analysis will be conducted before the project commences.

to see results. However, the investments required will make a return through improved skills and knowledge of district teams, in their management practices and therefore, in improved workforce performance. Last, given the various investments required by AR, it will be more effective to focus on key problem areas identified by co-researchers rather than taking a scattergun approach and seeking to change everything at the one time.

PERFORM EXPERIENCE

The project needed to understand how effective AR had been in strengthening workforce performance.

The option we considered was to conduct initial and final situation analyses to track change in workforce performance.

Our choice was to defer consideration of what a final situation analysis might consist of until DHMTs had started to implement their HR/HS bundles. It was always envisaged that a full report would be created that would analyse data collected for the situation analysis and compare this data in a final evaluation phase. The importance of quantitative data for outcome assessment was inadequately emphasised.

*The consequences of our choice were that we focused on more than just workforce performance - rather district **management strengthening**, workforce **performance** and **service delivery** as three areas of interest. Reports were returned with dominance of qualitative data collection during AR spirals that led to a focus on qualitative meta-analysis of these three areas between districts in the final reports (with less emphasis on quantitative data).*

Before closing this chapter, there are three practical issues to remember when designing action research in LMIC district health settings. First, the need for clear and shared principles underpinning design is reemphasised because spending time doing so will ensure ownership of research activities. Such ownership is essential in AR since co-researchers are required to have an active stake in a project. Health workers are busy people working in low resource settings. They need to be persuaded that their limited time can be effectively used on an AR project. Second, do not forget that doing AR requires time from all co-researchers and co-participants; requires different sets of expertise in research and bundles implementation; and also requires materials such as meeting rooms, paper, pens, and computers and so on. AR is not 'free': the process consumes time and resources, requires the engagement of those who participate to be effective, and takes time

Understanding the Current Situation

Before AR can begin, it is important to understand the unique local situation of a DHMT. A situation analysis will create a baseline for later AR spirals and provide an opportunity to foster and strengthen effective working relations between co-researchers. To conduct a situation analysis, aim to make best use of routinely collected data to simplify the collection process and minimize disruption in the daily work of a DHMT. Remember to record and highlight best as well as problematic work practices.

A situation analysis can be conducted in two steps.

Step One

The first step is to agree and collect a minimum data set between all participating research sites. Depending on the focus of the project, this could include basic information on the health workforce, the composition of a DHMT, the local health system and local and national influences on DHMT performance.

It is faster to collect, and more sustainable to use, existing (or secondary) data. Such sources include data routinely collected:

- Internal to a DHMT such as from the Health Management Information System; reports; plans; budgets; minutes of meetings and so on,
- External to a DHMT by other institutions and agencies that a DHMT collaborates with such as MOH, Ministry of Finance, NGOs, development donors and so on. Requests for access to information may be made in writing (see Appendix 2).

Where there are information gaps, it may be necessary to undertake primary data collection through:

- a) key informant interviews
- b) focus group discussion with DHMT members

Key informant interviews are used when it is important to gain insight into experiences, behaviours, attitudes, values of individuals. They vary in formality and structure (see Appendix 3 on dealing with difficult situations in an interview and a sample invitation letter and consent form). A focus group discussion is a moderated discussion that is used to explore the extent of shared beliefs, values and behaviours. A focus group can vary in formality and structure (see Appendix 4 on dealing with difficult situations in a focus group and a sample invitation letter and consent form).

Data from step one should be analysed within the AR team. The different roles and responsibilities in analysis should have been discussed at the beginning of the

project, with flexibility allowed for these responsibilities to evolve over the course of a project.

The collected data from step one will be in the form of numbers and text. Numerical data can be analysed by calculating proportions or percentages (see Appendix 5). Data in the form of text can be analysed using a framework approach (see Appendix 6). The whole team should then reflect on the issues emerging from these analyses. Some of these issues, for instance, could include staff absenteeism rates and how decisions are made within the DHMT.

Step Two

Step two is the time to ask “but why?” The AR team reflects on the analysis from step one. A researcher(s) can act as facilitator(s) in this reflective discussion. A note taker should begin to compile a list of follow-on questions that need to be answered before problematic areas of workforce performance can be identified and HR/HS bundles selected to address them. As well as the methods noted in step one, additional methods that could help to answer these follow on questions are set out in Table 1. The data collected to answer these follow on questions should be analysed, with the whole team coming together to reflect on the results.

Table 1: Research Methods

When it is important to...	Use
Explore the range and magnitude of behaviour, attitudes and values among a large group, either at one point or several points in time	Survey (see Appendix 5)
Gain insight into behaviour, actions, activities and interactions	Non-participant observation (see Appendix 7)
Understand how staff of different cadres, experience, gender (or other criteria) spends their work-time	Time-motion study (see Appendix 8)
Rapidly assess the ability in communication, decision-making or problem solving of staff members	Individual or group self-assessment by the DHMTs (see Appendix 9)
Identify internal and external factors that influence the performance of an organisation	SWOT analysis (see Appendix 10)

It is very likely that results will include both number (quantitative) and text (qualitative) outputs. By triangulating the results from different methods to probe into the same problem, a rich understanding of a problem can be gained from different perspectives. The AR team will then have a reliable base with which to identify the unique workforce problems in their district and prioritize actions to address them.

PERFORM EXPERIENCE

The project needed to find out about the HR and HS situation at the beginning of the project. Some key indicators of the HR/HS situation were selected such as staff numbers, staff distribution, and staff performance; service utilisation, medicine and equipment availability, and how the DHMT operated on a daily basis.

The option we considered was to use a district survey that would rely mostly on secondary data. Later, it was discovered that secondary data was of poor quality/at times not available, so later options to use interviews and focus groups were developed.

Our choice was to use a survey that was filled in by the participating DHMTs. Where there were gaps in the data, the DHMTs discussed problems with the CRTs. The CRTs led the analysis supported by an EP and shared with the DHMTs. DHMTs in each country met in a national workshop to share and compare their results and build capacity in AR.

The consequence of our choice was that members of the DHMT became more aware of wider health problems in their district, outside of their area of clinical expertise. On the other hand, health facility level data may not have been robust enough so that some problems may have been missed.

analysis, consider collecting data that can be compared between districts to allow for cross-district comparison and learning. If your AR project is transnational, remember that there is likely to be differences in data availability, in opinions about data relevance and in definitions of personnel and services. Third, the situation analysis is the basis for subsequent HR/HS strategy selection but the resulting bundle may require additional data to track implementation. Last, all methods presented above are samples only and should always be adapted for local circumstances and contexts.

Before closing this chapter, there are four practical issues to remember when conducting a situation analysis for AR with a health workforce. First, when collecting information bear in mind the triangle of data quality, the cost of collection, and the sustainability of the data source. Using existing data sources as far as possible is cheaper and faster than creating new data through interviews and focus groups. However, these existing sources may not provide the required information. Also bear in mind that a final situation analysis will require similar data to be collected in order to make a comparison valid. Teams should ask themselves whether data is likely to be available and accessible in the foreseeable future and if not, consider using an alternative more sustainable source for data in an initial (and final) situation analysis. Second, following up the need for replicability in a final situation

Focusing the Research

A situation analysis will provide detailed understanding of the current problems and best practice in a DHMT. As part of planning in AR spirals, it is necessary to clearly target the issues of workforce performance that are of importance to a DHMT and can be tackled within a project period. Problem analysis and prioritisation are therefore important steps to take before selecting HR/HS bundles.

Problem analysis

The initial situation analysis lays the foundation of problem analysis.

During the problem analysis, an AR team asks questions of their collected data, such as:

- What are the areas that are in need of improvement or change? Are these problems specific to different cadres, gender or other criteria?
- What appears to be the root causes of these problems?
- What is the larger picture in which these problems and their causes seem to exist?
- Are there links between the problems?

There are various techniques that can be used to undertake problem analysis. Two such techniques are problem trees (see Appendix 11) and mind mapping (see Appendix 12). These are used to develop a comprehensive list of problems, their root causes and relationships between seemingly different problems.

Problem prioritisation

Having identified the problems affecting workforce performance in a health district, it is now possible to rank them in order of priority. At first, it is useful to assume there are no resource constraints as this frees the AR team to focus on the problem itself, rather than its potential to be solved. Problems can be ranked in a list, with the greatest priority at the top and lower priorities at the bottom of the list. The ranking can be revised a number of times until the AR team are satisfied with the ranking. One way to do prioritisation is to use a priority matrix (see Appendix 13).

Problem statements

A problem statement is a concise description of the problem(s) that need to be addressed by a DHMT. A problem statement (see Figure 2 below) should include:

- Description of the current problem
- Vision of what workforce performance would look like if the problem was solved
- Possible method(s) to solve the problem

The 5 'W's – Who, What, Where, when and Why – can help focus the development of a problem statement.

1. **Who** - Who does the problem affect? Staff, Patients, DHMT or other?
2. **What** - What is the impact of this problem? What will happen when it is fixed? What will happen if the problem is not solved?
3. **When** - When does the problem occur? When does the problem need to be solved?
4. **Where** - Where is the problem occurring? Does it only occur in certain facilities or people?
5. **Why** - Why is it important for us to solve this problem? What impact would a solution have on staff, patients or regional and national stakeholders?

We want all the nurses in the district to be trained on proper disposal of needles. The number of incidents where nursing staff have been injured as a result of improper disposal of needles and other sharps has risen significantly. This appears to be due to the lack of knowledge on proper disposal of needles. If we ignore this problem, the safety of staff will be compromised and risk of contracting diseases such as Hepatitis and HIV will increase.

Figure 2: Example of a problem statement

The problems that are deemed to be highest priority should be tackled first. By the end of an AR project, some problems in the problem matrix may have not been developed into problem statements. When problem statements have been developed, it is time to choose specific HR/HS strategies to address them.

Creating HR/HS bundles

There are a wide range of strategies that can be used to improve workforce performance, depending on the particular problem(s) to be addressed. The challenge is to identify strategies that are feasible to implement and likely to be effective in the short term within each unique local situation. Selected strategies should complement each other.

Since the concept of HR/HS strategy bundling is relatively new, an example may be helpful. Take a problem of high maternal mortality in an imaginary health district. The relevant workforce problems identified could include shortage of skilled birth attendants (SBAs); weak skills base; and poor work attendance all leading to poor quality and productivity. Some possible HR strategies to address these problems are financial or other incentives to attract more SBAs to work in the district; in-service training to improve skills; and absence monitoring. Some possible HS

strategies could include repair and maintenance of poor equipment. Poor equipment can also contribute to poor quality of service. By implementing such strategies, a DHMT expects certain changes – such as more, better skilled SBAs available for and turning up to work and working with functional equipment to provide a more effective service. An expected result would be more births attended by SBAs and, eventually, a likely reduction in deaths.

A small sample of HR/HS strategies is set out in Appendix 14 to support the selection process. However, before making a start to identify solutions, it is imperative to be very clear on the nature of problems to be addressed. This is why detailed problem statements are critical. For example, be as specific as possible on the cadres of staff and type of facilities or departments that need improvement. Keep referring to the problem statement and the in-depth problem analysis throughout strategy selection to ensure that the final selection is appropriate to the root cause of the problem at hand. By doing so, the selected bundles are more likely to be effective.

When creating a bundle of strategies, consider the following aspects of workforce performance

- Staff availability – what are the required cadres and specialists available in the district?
- Staff competencies – what skills does the available staff require to do their job?
- Staff direction – what tasks need to be performed to achieve the expected results?
- Rewards and sanctions – how can good performance be rewarded and what sanctions could be put in place to curb poor performance?
- The health system within which staff work – what system wide issues may be encouraging good performance or demotivating staff?

Having selected the HR/HS bundle, the AR team is now in a position to plan their implementation. Participating districts will likely have existing plans and targets, so first consider how these may be modified to address the prioritised problems. The plan can be as simple as a table noting the issues set out in bullet points below. It is not necessarily a complex document.

- Identify the particular strategy you want to use (see some suggestions in Appendix 14)
- Identify the activities needed to implement the strategy
- Develop targets based on expected improvements in performance when compared to the situation analysis. The targets should be time-bound
- Identify linkages to other strategies in a bundle

The strategies should be chosen based on strict criteria. These criteria should relate to the project objectives. For instance, on the PERFORM project, the criteria for selecting strategies were:

- Should be focused on improving workforce performance in a district
- Should have a measurable and observable effect on workforce performance within the project period
- Should be able to be implemented within resources available to the DHMT

PERFORM EXPERIENCE

The project needed to identify key health workforce problems in selected districts.

As an AR project, DHMTs would identify their own problems. The issue for the project was how to facilitate DHMTs to prioritise their problems.

Our choice was to ask DHMTs to draw up a list and then prioritise the problems. The order of priority was determined by certain criteria (able to implement within their budget, quickly see results). After prioritisation, DHMTs selected their top three problems and developed problem trees. When the causes of the problems had been identified, they were presented with a menu of HR/HS strategies which DHMTs could choose from and modify. After HR/HS bundles were created, these were inserted into routine district health plans, for implementation.

The consequences of our choice were that peer review was encouraged through discussion and feedback, unpacking the complexity of the planned interventions. For those countries that only chose strategies from the list, there was limited focus on a small number of strategies. However, at least one country created innovative strategies by thinking out of the box in terms of strategies and implementation.

Before closing this chapter, there are three practical issues to remember when creating HR/HS bundles that aim to improve workforce performance. First, strategies should always be developed within local budgets, integrated into local planning cycles and take account of authority constraints. Facilitators in the AR team should focus on what is feasible for DHMTs to undertake within a limited period of time. They should also ensure that the selected strategies are compatible with the regional and national HR priorities and strategies. Second, DHMTs will already have HR/HS strategies in place. These could also be included in a bundle or tweaked to be more effective. Strategies that are already in the routine plan will be funded so are more likely to be implemented. Do consider whether any new strategies may have negative unintended consequences on strategies already in place. Last, communication is essential with frontline staff, local, national and international stakeholders to gain their engagement with the approach.

Documenting Action, Encouraging Reflection

The DHMTs in an AR team implement the HR/HS bundles. Researchers facilitate this process and usually take greater responsibility for documenting the action and capturing reflective learning experienced by the DHMTs. For AR conducted at one site, documentation can be simple. However, when a number of DHMTs participate, documentation can get more complex because each DHMT will have different HR/HS problems and therefore different bundles of strategies to implement.

The purpose of using AR to improve workforce performance is to solve immediate problems and to learn, through reflection, what sort of HR/HS strategies work in a local situation. One way to record learning processes is through a learning history (see Appendix 15).

The goal of a learning history is to capture what a group does when engaging in an AR project in a way that allows that learning to be shared with other groups and organisations. It provides a structure for those involved in implementation of the HR/HS bundles to write about the process of change and allows space for them, and others, to reflect on those changes, within the same document.

A learning history should be in a format that is practical for the AR team to use. Figure 3 below provides an illustration of the layout of an actual learning history page. It has two columns, one making observations of how change is taking place, the other being commentary on those observations.

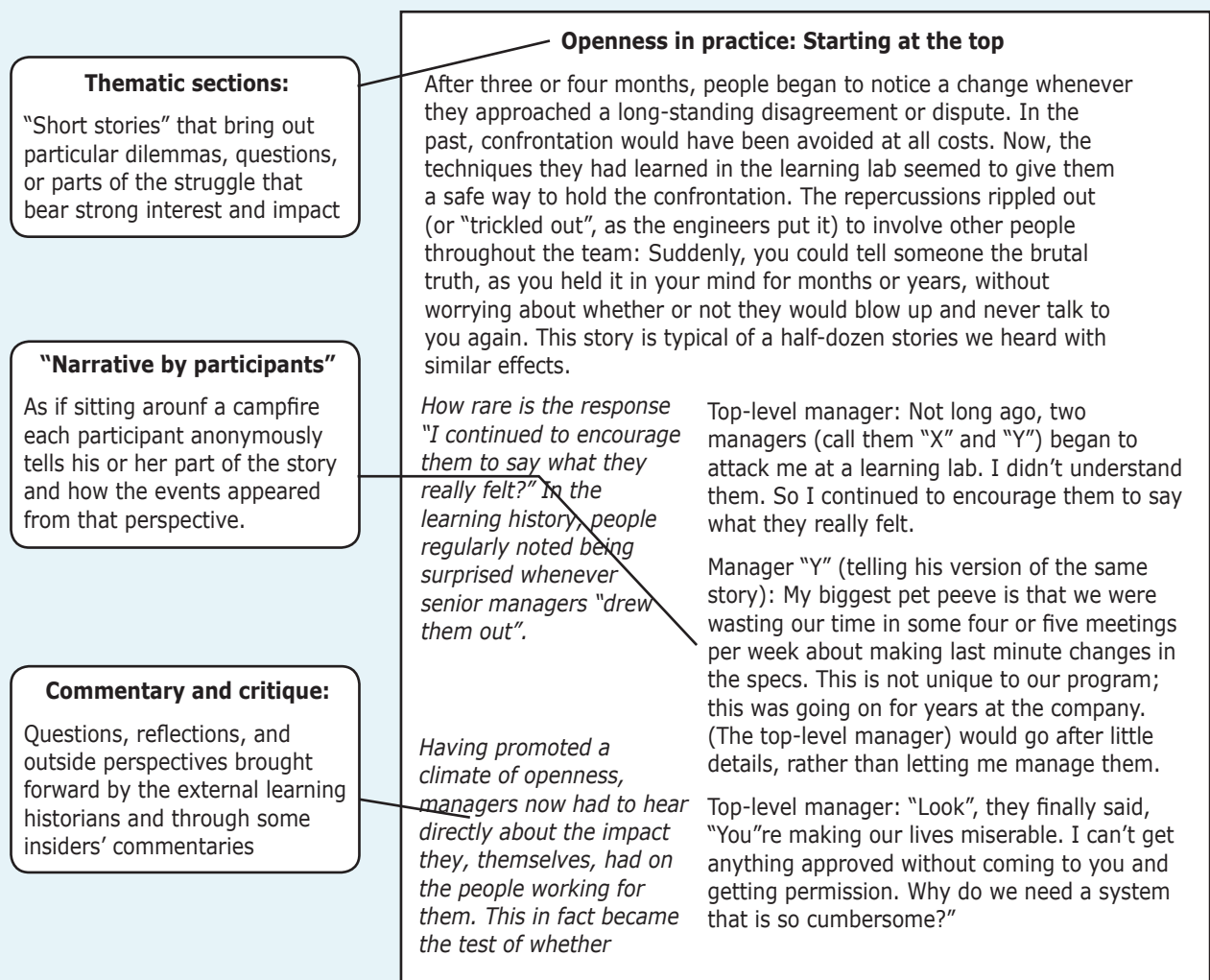


Figure 3: Example of a Learning History (Roth and Kleiner 1995)

The content of a learning history can come from multiple sources - notes from reflective interviews, notes on observations of DHMT meetings, Health Management Information System. These sources can help create a rich learning history that can later be condensed into a coherent written document. Be aware however, that keeping a learning history takes significant time. Usually one person is appointed with particular responsibility within an AR team to maintain it, although all members of an AR team can write within it.

An alternative documentation method is to keep a diary. There is little published guidance on the use of diaries in AR. The PERFORM project made use of diaries, the experience of which is discussed in the box below. Additional information on the use of diaries is available on request from the University of Leeds – refer to contact details at the end of this handbook.

PERFORM EXPERIENCE

The project needed to record the activities and particularly the reflective learning across 9 DHMTs in three countries.

The options we considered were a learning history and diaries. While most AR in HICs tends to use learning histories, they are usually maintained by academic researchers in an AR team. There were no resident academic researchers within the DHMTs for the duration of the project hence local DHMTs member would be responsible for keeping it. Diaries were thought to be simpler and less resource heavy to maintain.

Our choice was to use diaries because they were seen as simpler, faster and easier to maintain by the DHMTs. Guidance was given to DHMTs (see Appendix 16) on what to record in a diary. The 9 teams developed their own diary, some paper based, some electronic. The formats evolved overtime, as did the ways in which the DHMTs maintained and used the diaries in their everyday work.

The consequences of our choice were that mainly qualitative data was collected. One country team in the project sought to improve the quality of the data captured by introducing a visit report, filled in when the academic researchers in the team visited the participating DHMTs each month.

The chosen documentation method should be able to monitor the range of strategies in the HR/HS bundles as well as changes in health workforce performance and health service delivery.

Some strategies may be dropped - this is not a failure. Rather it is important to understand why it was dropped. When a team reflects on why something changed, the DHMT are in fact learning to develop appropriate strategies to improve workforce performance within their own unique district. Alternatively, new strategies may be added if, for example, a DHMT identifies part of the overall problem that has not yet been addressed.

Before closing this chapter, there are two practical issues to remember when documenting action and encouraging reflection in AR. First, use a documentation method that works most effectively given available resources (time, money, planning expertise, and willingness). This could be a learning history, or a diary or another format. Learning histories and diaries can be rich documents for research but if DHMTs have no time or willingness to use them, they are useless. Second, when recording activities and reflection spirals, aim for a mix of quantitative and qualitative data because such a mix will help the AR team to comprehensively assess the change that took place.

Understanding the Final Situation

The numbers of AR spirals that may be conducted in an AR project are potentially limitless. Practically, there will be a project end. It is important to understand how the unique local situation of a DHMT has changed over the course of the AR spirals and to measure change in workforce performance. To do this, a final situation analysis can create an endline to enable comparison with the initial situation analysis. By comparing initial and final situations, changes can be identified and measured. Just as with an initial situation analysis, aim to make best use of routinely collected data to simplify the collection process and minimize disruption to the daily work of a DHMT.

In principal, the final situation analysis should mirror the initial situation analysis (see Chapter 3). Use the same approach to both data collection and analysis and add further information as required, based on the AR approach and learning during the project.

The initial and final situation analyses are then compared to measure and understand change in workforce performance. There are at least three possible comparisons: before and after in the same district; between districts in one country (if more than one district participated in the project); between countries (if more than one country participated in the project). The purpose of conducting comparisons should be clearly set out in the project objectives and the task of doing so clearly allocated to members of an AR team (see Appendix 1).

An additional option is to include an external group as observers in the final situation analysis to gain an additional, external, view of change. This could be conducted by presenting results to a variety of stakeholders in a district or national workshop, or by inviting a group to observe the process of conducting a final situation analysis.

PERFORM EXPERIENCE

The project needed to measure change in the ability of management to improve workforce performance. AR was used as the strengthening mechanism.

The option we considered initially was a before-and-after analysis by comparing an initial and final situation analysis. However, this was considered too resource heavy so an alternative was to evaluate the HR/HS bundles. This was done in some districts at the start and end point of their implementation and in others only at the end point.

Our choice was to evaluate the HR/HS bundles as this was practical and feasible given available project resources and time.

The consequence of our choice was that we did not have an objective measure of both the impact of the AR spirals and HR/HS bundles implementation in all districts. At times, there was sufficient data in the initial situation analysis to compare to the final situation but this was not available in all districts. In retrospect, we should have convinced all co-researchers on the purpose of the initial and final situation analysis in the project – was it to act as an objective measure of AR as a management strengthening intervention or an approach to evaluate the HR/HS bundles.

Before closing this chapter, there are three practical issues to remember when seeking to understand the final situation. First, while it is advocated here to mirror the initial situation analysis, methods need to be appropriate to the resources available. Teams change; researchers with different skills sets leave and arrive; documentary information may not be available due to changes in personnel, organisational changes or disastrous events. Tools used in the initial situation analysis will inevitably need to be adapted somewhat to fit the new situation. In other words, some flexibility is still required. Second, the HR/HS bundles will keep changing during the course of AR spirals and the baseline data collected during the initial situation analysis may not be relevant to the final bundle. When this happens, we suggest a meta-comparison such as comparing type of issue/problem addressed (easy-v-complex), planned versus actual results and ensure that the justification for changes in the HR/HS bundles is clear and convincing. Finally, additional data may need to be collected to gain a useful picture of the final situation and to enable change to be measured.

Conclusion

An action research approach values collaboration and learning through reflection to build better district health management teams. Action research can strengthen district health management because it makes ongoing change processes more explicit. The observation and reflection stages help management teams to adapt their activities and plan more effective interventions. These adaptations are analysed to feedback into a positive spiral of performance improvement over time.

Action research can be successfully implemented in local health districts. This manual suggests one way to do so. The key stages in an action research project have been set out in the preceding pages. We have also detailed experiences on the PERFORM action research project that took place in 9 health districts across 3 African countries. We shared what worked and what did not and the consequences of different choices taken.

Before closing, we urge future action research teams to remember the following:

- ✓ Take time in design, especially to reveal the principles you are following – this ultimately gives a team freedom to manage action research in a way that suits the local context
- ✓ Make use of some kind of baseline and end line – so that you can measure change
- ✓ Never forget where you are trying to get to – action research is conducted for a purpose, so keep this purpose at the forefront of all project work.

Further Reading on Action Research

For interested readers, some further readily available references on action research are set out below:

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- Bradbury-Huang, H. (2012). "Value of action research in new healthcare: The importance of advancing action research through relational networks." *Action Research* **10**(4): 332-335.
- Braithwaite, J., J. I. Westbrook, A. R. Foxwell, R. Boyce, T. Devinney, M. Budge, K. Murphy, M.-A. Ryall, J. Beutel, R. Vanderheide, E. Renton, J. Travaglia, J. Stone, A. Barnard, D. Greenfield, A. Corbett, P. Nugus and R. Clay-Williams (2007). "An action research protocol to strengthen system-wide inter-professional learning and practice LP0775514." *Bmc Health Services Research* **7**.
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- Haddad, S., D. Narayana and K. S. Mohindra (2011). "Reducing inequalities in health and access to health care in a rural Indian community: an India-Canada collaborative action research project." *Bmc International Health and Human Rights* **11**.
- Jarvensivu, T., K. Nykanen and R. Rajala (2012). *A Holistic Model of Innovation Network Management: Action Research in Elderly Health Care*.
- Kemple, M. (2002). "Action research in health care." *Journal of Advanced Nursing* **38**(1): 105-105.
- Munn-Giddings C, Winter R. *A Handbook for Action Research in Health and Social Care* London, Routledge
- Stern T, Townsend A, Rauch F, Shuster A *Action Research, Innovation and Change* London, Routledge

Appendix 1:

OVERVIEW OF ROLES AND RESPONSIBILITIES ON THE FOUR YEAR PERFORM PROJECT

Year	Phase	Tasks	Partner Responsible	Supported by	Advisors
1	Methodology Development	Consortium Workshop 1	LSTM	All	
		Study protocol	UNIVLEEDS	All	
		Manual	UNIVLEEDS	All	
		HR/HS bundles	LSTM	All	
		Inter-country comparison	STPH	All	
		Country ethical approval	CRT		UNIVLEEDS
		Capacity building workshop	LSTM	IDS, UNIVLEEDS	
		International ethical approval	LSTM	UNIVLEEDS	
2	Implementation	Initial situation analysis	CRTs	DHMTs	EPs
		National Workshop 1	CRTs	DHMTs	EPs
		Consortium Workshop 2	SPHG	All	
		National Workshop 2	CRTs	DHMTs	EPs
		Action research process		DHMT	CRT
		Plan HR/HS bundles	DHMT	CRT	EPs
		Implement HR/HS bundles	DHMT	CRT	EPs
		Observe	DHMT	CRT	EPs
		Reflect	DHMT	CRT	EPs
		Regular national review meetings	CRT	DHMTs	
		Consortium Workshop 3		All	
		Final situation analysis	CRT	DHMTs	EPs
4	Comparison & Results sharing	Inter-district analysis	CRTs	DHMTs	EPs
		National Workshop 3	CRTs	DHMTs	EPs
		Inter-country analysis	STPH	CRTs	EPs
		Global Workshop 4		All	
		Coordination	LSTM	All	

Key:

CRT: Country Research Team

DHMT: District Health Management Team

EP: European Partner

IDST: Institute of Development Studies Tanzania

LSTM: Liverpool School of Tropical Medicine

MUSPH: Makerere University School of Public Health,

SPHG: School of Public Health Ghana

STPH: Swiss Tropical and Public Health Institute,

UNIVLEEDS: University of Leeds

All: All consortium partners.

Appendix 2:

SAMPLE REQUEST LETTER FOR INFORMATION, SAMPLE PROJECT INFORMATION SHEET

REQUEST LETTER

Dear [insert name of recipient],

I am writing on behalf of the [insert project name] team to request for [insert name(s) of documents required]. The objective of [insert project name] is to [insert project objective]. The project is funded by [insert funder].

As part of the project, researchers at [insert name of partner institution] are collecting information on [insert topic] in your area. The document(s) you provide will be used by the project team to [insert how the requested information will support research objectives]. I would appreciate it if the information can be provided to me as [electronic/paper copies - delete as appropriate]. Please read the attached information sheet which contains more information on the project.

If you have any questions regarding the project in general or regarding this request for information, please contact [insert name and contact details for the research project leader in the local area and country].

Yours sincerely,

[insert signature]

[insert name of project leader]

[insert job title & name of institution]

PROJECT INFORMATION SHEET USED BY THE PERFORM PROJECT

You are being invited to take part in the PERFORM research study. You do not have to take part but before you decide, it is important for you to understand why the study is being done and what it will involve. Please take your time to review the following information and discuss it with your colleagues, friends or family before you make your decision. If you have any questions or words you do not clearly understand, please feel free to ask the study team or staff for further explanation. Thank you for reading this.

Purpose of the Study

Health systems in sub Saharan Africa are increasingly decentralising authority to lower levels, and in particular to districts, for planning and management. The purpose of the study is to identify ways of strengthening decentralized district management teams in order to improve workforce performance. This research project will enhance understanding of how, and under what conditions, a management strengthening intervention can improve workforce performance at the district level. The project uses Action Research methodology as the intervention for strengthening management at district level and for improving the performance of the health workforce.

Why have I been chosen?

You have been invited to contribute to this study because you are considered to be a stakeholder in the health system. Your input is critical in achieving the objectives of this research study.

Do I have to take part?

Your decision to contribute to this study is voluntary. You may refuse to participate or you may withdraw at any time. Your decision not to contribute or to withdraw will have no negative effects.

What are the possible risks or disadvantages of taking part?

By contributing to this study, you are not expected to be put at any risk. In particular we have taken many steps to make sure that no-one outside the study team will know what you share with us. Every effort has been made to minimize this risk in the case of the PERFORM study, in view of the strict confidentiality measures described below.

What are the possible benefits of taking part?

The direct benefit to you from contributing to this study is limited. When the research is completed, it will help the researchers to understand what works or does not to strengthen district management and improve the performance of the health workforce. This knowledge should result in benefits to the society at large since it contributes towards a better performing health system.

Payments for Participation

You will not be paid for your contribution. Transport costs will be reimbursed, if applicable.

Will my taking part in this study be kept confidential?

Information gathered in this research study may be published or presented in public forums; however, your name or other identifying information will not be used or revealed.

What will happen to the results of the PERFORM project?

The results will be included in a research report, and may subsequently be published as research papers in academic journals and presented at conferences. The results of the study may also be used for additional or subsequent research.

Who is organizing and funding the PERFORM project?

The PERFORM project is funded by the European Commission Seventh Framework programme (FP7 Theme Health, 2010.3.4-1; grant agreement number 266334). Further details are available at the project website: <http://performconsortium.com/>. The project is being undertaken by six institutions. They are:

1. Liverpool School of Tropical Medicine, United Kingdom.
2. School of Public Health, University of Ghana.
3. Institute of Development Studies, University of Dar Es Salaam, Tanzania.
4. School of Public Health, Makerere University, Uganda.
5. Swiss Centre for International Health, Swiss Tropical and Public Health Institute, Switzerland.
6. Nuffield Centre for International Health and Development, University of Leeds, United Kingdom.
7. In [insert name of country], the research is being conducted by a research team from the [insert name of department/unit] at the University of [insert name of Institution] under the direction of:

[insert name of Principal investigator(s)]

[insert job title]

[insert address]

[telephone]

[Email]

Which Ethics Committee has reviewed this study?

Research projects may submit the research design to an ethics committee for approval. The ethics committee that has granted approval for this study is:

[Insert Name of the committee after approval is granted]

[Insert Address]

[Insert Telephone number]

[Insert Email address]

Questions and further information

You are free to ask any questions that you may have about the PERFORM project and your rights as a research participant. If any questions come up during or after the study, please contact the research team/staff on:

[insert telephone number]

[insert email]

Thank you for taking time to read this information!

Appendix 3: Interviews:

DEALING WITH DIFFICULT SITUATIONS, SAMPLE REQUEST LETTER, SAMPLE CONSENT FORM

DEALING WITH DIFFICULT SITUATIONS IN AN INTERVIEW

Signs of impatience, annoyance, and boredom from the interviewee

These are cues that the interviewer needs to be more attentive and engaging, or that it is time to wrap up the interview. It may also be appropriate to take a break, which may actually result in the participant providing additional information. Even though the recorder may be turned off during the break, you can take brief notes that you expand later.

What if the interview is interrupted?

It sometimes happens that the interviewee interrupts the interview to attend to another matter. For example, a health care provider might be called to take an important telephone call, or a mother may need to tend to her child. Be patient and understanding if the interviewee needs to stop the interview temporarily to attend to personal responsibilities. When an interruption occurs, stop the tape recorder and note the time in your field notes. While you wait for the interviewee to return, review your notes, consider what other questions you would like to ask, and note observations. When the interviewee returns, resume recording and again write down the time. You may want to prompt the interviewee to resume the discussion by recapitulating the last point and then asking a question about it. If repeated interruptions make it difficult to keep the discussion going, you might ask if there would be a more convenient time or place where you could talk more privately. Offer to reschedule the interview if necessary.

What if the interviewee does not complete the interview?

Sometimes interviewees elect not to complete an interview. If this happens and you would still like to use the interview data collected up to that point, ask them if they are willing to let you do so. Assure them that confidentiality will still be maintained. If they agree, manage the data as you would for any other interview. If they do not agree, destroy the tape, interview guide, and any notes you have made related to the interviews and participants in question.

What if the interviewee knows little about the research topic?

Some interviewees may turn out to have little knowledge about the research topic. If you discover this to be the case during the interview, do not be afraid to bring it to a close. Otherwise, there is the risk that participants will fabricate responses in order to please you or to avoid appearing ignorant.

What if the recording equipment fails?

If the recording equipment fails, the notes you will have taken during the interview and later expanded will serve as backup documentation. Check for equipment failure immediately following the interview, and ensure that you expand notes within 24 hours if a failure has occurred.

REQUEST LETTER

Dear [insert name of recipient],

I am writing on behalf of the [insert project name] team to ask for your help because we would like to interview you. The [insert project name] is an intervention research study on [insert project objectives]. The project is funded by [insert funder].

As part of the [insert project name] project, researchers at [insert institution name] are speaking to key stakeholders to find out what their views are regarding [insert topic]. The information you provide will be used by project team to identify key problem areas in the district and select appropriate interventions to solve these problems. Please read the attached information sheet which contains more information on the project. We kindly ask you to read this information in order to decide whether you would agree to be interviewed.

We would be very grateful if you were able to spare some time to talk with us. The interview should last no longer than 30 minutes and will take at a time and place convenient for you. If you have any questions regarding the project in general or regarding your interview, please contact [insert name and contact details for project manager].

Yours sincerely,

[insert signature]

[insert name of local project manager]

[insert job title & name of institution]

CONSENT FORM

Interviewee

I have read the project information sheet. I have had the opportunity to discuss this research study with a member of the research 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 contribution to 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 entitled [insert project name] Please tick box. ☐

I consent for this interview to be recorded. Please tick box. ☐

Printed Name: _____

Signature: _____

Date: _____

Interviewer

I, the undersigned, have fully explained the relevant details of the [insert project name] project to the interviewee named above and believe that the interviewee has understood and has willingly given their consent.

Printed Name: _____

Date: _____

Signature: _____

Role in the Study: _____

Appendix 4:

FOCUS GROUPS: DEALING WITH DIFFICULT SITUATIONS, SAMPLE INVITATION LETTER, SAMPLE CONSENT FORM

DEALING WITH DIFFICULT SITUATIONS IN A FOCUS GROUP

What do I do if someone is dominating the conversation?

Focus groups, ideally, allow researchers to collect the opinions and ideas of a variety of people. If someone is doing a lot of the talking, however, this may prevent others from contributing their thoughts, and limits the usefulness of the focus group. It is important to notice when this is happening and do what you can to try to make sure that other people have the opportunity to say things, even if they seem reluctant at first or insist that what is being said by others reflects what they would have said. It is important to have people say things in their own words as much as possible. If someone is dominating the conversation, you might want to respectfully acknowledge their contribution, and thank them, saying something like, "I really appreciate your comments." Then make direct eye contact with other people and ask something like, "I'm very interested in hearing how other people are feeling about this issue" or "It's very interesting to get a variety of perspectives, and I would like to hear from other people as well."

What do I do if women and men are participating at different levels, i.e., men are speaking up more than women or vice versa?

This situation is very similar to the one highlighted above, in which a few people are dominating the conversation to the exclusion of others. So, you may be able to apply many of the same strategies. Often, if there is inequality in how much men or women are participating, it is the women who speak up less and the men who speak more, though it is possible for the opposite to occur, as well. It is vitally important that both men's and women's voices be heard, and there are two sets of strategies for trying to deal with this situation. One set of strategies focuses on encouraging men to participate less and the other focuses on encouraging women to participate more. If men are dominating the conversation, respectfully thank a man who has just spoken, then suggest that it would be great to hear from some of the women present, as well. If women seem to be participating less, try to make a lot of eye contact with women, and even ask individual women direct questions.

What do I do if no one responds to a question?

In this kind of situation, it is helpful to try to understand why people are not responding.

- a. *Did you ask a question that was difficult for the participants to understand? If you think this might be the case, you might try asking the question in a different way. The more familiar you are with the research objectives of a particular focus group, the more successful you will be in rephrasing or rewording a question in an appropriate way that ensures that salient issues are explored and the research integrity of the group discussion is maintained.*
- b. *Do you think you might have asked a politically sensitive question (i.e., something that people are afraid to answer honestly because it might make other people angry)?*
If you think this might be the problem, you might move to a different question or topic that is less sensitive, and try coming back to the topic later, or use probes, during a different line of questioning, that might get at aspects of the sensitive topic but more subtly. Here, again, it might be helpful simply to rephrase the question or ask a slightly different question. Either approach may make it possible to pose a less controversial question to the group
- c. *Are people tired of talking about the topic and/or do they have no more to say about a topic?*
Ask, do you have more to share? [pause] If not, we can move on to our next question." This communicates to participants that this is their opportunity to contribute any additional thoughts and allows you to move on to the next topic more naturally and politely. If you, as the facilitator, think you haven't gotten all of the information you want on that topic, rather than trying to force things, just be aware that there may be an opportunity to elicit salient information in probing that occurs with respect to other questions. In other words, there may be important linkages and connections to explore throughout the focus group that emerge through subsequent discussion.
- d. *Are people feeling uncomfortable about talking?*
This typically occurs at the beginning of a focus group and is less likely to occur when focus groups start with an icebreaker or the facilitator is able to set a comfortable tone and put people at ease in the beginning. If,

however, this continues to be an issue during the focus group, you may need to back up and do a little work to make people feel more comfortable. Talk about easier topics, things that you think participants may be more familiar with or comfortable talking about, or, perhaps, things that you know are particularly interesting to them. This may help the participants begin to feel more comfortable talking in a group setting. If no one responds to a question, and you aren't sure exactly what the problem is, it's okay sometimes to just wait it out. Be quiet for a moment and allow people time to think. Often, someone will speak up, either to answer the question or to ask a question that allows you to have a better understanding of the silence.

What do I do if the group begins to talk about topics that are not relevant to the research?

Sometimes the conversation will start to stray away from the topics of the focus group. When this happens, you might take advantage of a pause and say, "Thank you for that interesting idea. Perhaps we can discuss it in a separate session. For the purposes of exploring further the specific topics that are the focus of this discussion, with your consent, I would like to move on to another item." Another strategy is to orient the group to the time you have remaining for your discussion. You do not want the duration of the focus group to extend beyond the amount of time you communicated to participants. You may want to mention this when discussion strays from the intended focus, and then refocus the discussion accordingly or use this as an opportunity to indicate that you want to be sure that you hear from others.

What do I do if people are having side conversations (i.e., conversations among themselves)?

If people are having conversations among themselves, it can disrupt the focus group by making the other participants feel uncomfortable, making it hard for people to hear what others are saying, and making it hard for the facilitator to focus on what is being said. One of the best ways to handle this situation is to address it before the focus group begins, when you tell the participants about focus group ground rules. Stress that it is very important not to have side conversations because it interferes with individual's full participation in the group discussion and also poses challenges for recording the discussion. If side conversations do occur during a focus group, do not stop the conversation abruptly. You might respectfully remind people of the ground rules and ask that people finish their conversations and re-join the larger group discussion taking place. This kind of disruption may also signal that it is time to take a break, and you may want to suggest no more than a five minute break (so that people can use the restroom – make sure people know where to go – or to stretch). It will be important to make sure people know at one time the focus group will continue and be proactive about bringing people back together so that the focus group can re-convene.

What happens if a person skips ahead, providing information relevant to, or even completely answering, a question that I haven't gotten to yet?

At times group participants may skip topics or move ahead of where you are in the focus group guide. You will want to use probes to get detailed information from them on the topic at-hand, and then gently return the person to the topic of interest, falling back on the focus group guide. You do not want to interrupt them; rather, let them finish their thought and remain an interested listener. If they have already answered a question on the focus group guide you will still want to ask the question when you get to it, acknowledging that relevant information may have already been shared, but you want to make sure that the group has an opportunity to explore the issue more fully, if need be. You will want to make sure that all of the topics in the focus group guide are discussed as completely as possible during the discussion.

What do I do if I ask a question and the group says that they do not feel comfortable answering it?

At the beginning of the focus group make it clear that they may decline to answer a question(s) or choose to stop the recorder at any time. If this happens, say "thank you" and that you acknowledge and appreciate their honesty. Then, ask them if it would be okay to move on to the next question in the interviewing guide.

What do I do if people begin to leave?

It is very important to try and keep people as fully engaged in the discussion as possible and for the entire focus group. You can try to mitigate this problem in advance by letting people know how long the focus group will take and emphasize that it is important for individuals to stay for the entire discussion. You may also ask the group at the beginning of the meeting if anyone has to leave early so that you can change the order of the questions to ask the most important questions before the first people leave.

INVITATION LETTER

Dear [insert name of recipient],

I am writing on behalf of the [insert project name] research team to invite you to participate in a focus group meeting. The [insert project name] project aims to [insert project objectives]. The project is funded [insert funder].

As part of the [insert project name] project, researchers are speaking to key stakeholders to find out what their views are regarding [insert topic]. The information you provide will be used by the research team to [insert use]. Please read the enclosed information sheet which contains more information on the project. We kindly ask you to read this information in order to decide whether you would agree to participate in the focus group. We would be very grateful if you were able to spare some time to take part in this focus group discussion. It should last no longer than [insert time allowed]. If you agree to participate, please let a member of the research team know and we will contact you in order to arrange a convenient time and place for the meeting.

If you have any questions regarding the project in general or regarding your contribution, please contact [insert name and contact details for the local project director].

Yours sincerely,

[insert signature]

[insert name of local director]

[insert job title & name of institution]

CONSENT FORM

Participating group member:

I have read the project information sheet. I have had the opportunity to discuss this research study with a member of the research 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 understand that personal information about participants and any issues discussed during the session should not be disclosed to non-participants in the focus group. I understand that information regarding my personal identity will be kept confidential, but that confidentiality is not guaranteed. I freely agree to participate in this research study.

I consent to participate in the study [insert project name] Please tick box

☐

I consent for this focus group discussion to be recorded. Please tick box

☐

Participant Printed Name: _____

Participant Signature: _____ Date: _____

Focus Group Facilitator

I the undersigned, have fully explained the relevant details of the [insert project name] 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: _____

Appendix 5:

HOW TO CONDUCT A SIMPLE QUANTITATIVE SURVEY & ANALYSIS

Quantitative research generates numerical data or data that can be converted into numbers. In quantitative research, the aim is to determine whether there is a relationship between one thing (an independent variable) and another (a dependent or outcome variable) in a population and if so, what that relationship might be.

Surveys

A survey is a method of collecting a volume of information from a selected sample of a population of interest. In a survey research, a sample chosen by the research team answers a standardized questionnaire. The unit of analysis is simple - individuals, organisations or both. There are two main types of surveys: written surveys or interview surveys. Written surveys may be conducted electronically or on paper, through the post. Respondents answer predetermined questions using predetermined options. Be aware that survey information can be superficial and self-administered surveys tend to have low return.

It is advisable to pilot the survey on a small group before real data collection begins. The purpose of pre-testing is to check respondents' understanding of the instructions, questions and covering letter and refine the procedures for administering the questionnaire. The real survey should be changed in response to problems encountered during the pilot.

When choosing a sample, bear in mind the target population for the research. For instance, if workforce performance is the topic of a survey, then the participating sample should be a mixture of different staff cadres, gender, grade and seniority. The sample size should be able to represent the wider population. In the PERFORM project, the sample size was set at 10% of the health workforce in each district or a minimum sample size of 30 people (whichever was greater). All potential participants should receive a project information sheet (see Appendix 2) and informed consent should be sought (see Appendix 3 and 4 for sample consent forms).

Quantitative data can be analysed using descriptive statistics in Microsoft Excel, SPSS or other software (availability permitting). Responses are entered into (say) Microsoft Excel using a template. When analysing, it is useful to report on the following as a minimum:

- Information about the number of people who responded to the survey broken down by characteristic (e.g. gender, seniority etc.)
- Some of the answers to questions will be descriptive (e.g. very dissatisfied to very satisfied), allowing a 'measure of central tendency' to be identified (variable with the highest frequency). These can also be ranked and presented in pictorial form such as a pie chart.

This simple analysis can then be interpreted from the point of view of the research project objectives, using additional information such as qualitative research results, research team prior knowledge or research information that is publically available.

An example of a simple survey used on the PERFORM project is set out on the next page.

Instructions

On this page you will find statements about your present job.

- Read each statement carefully.
- Decide how much you are satisfied with each aspect of your job described by the statement.

Keeping the statement in mind:

- If you feel that your job gives you much less than you expected, place a tick (✓) in the box under 'very dissatisfied'.
- If you feel that your job gives you less than you expected, place a tick (✓) in the box under 'dissatisfied'.
- If you cannot make up your mind whether or not the job gives you what you expected, place a tick (✓) in the box under 'unsure'.
- If you feel that your job gives you what you expected, place a tick (✓) in the box under 'satisfied'.
- If you feel that your job gives you more than you expected, place a tick (✓) in the box under 'very satisfied'.

Remember, keep the statement in mind when deciding how much you are satisfied with each aspect of your job described.

Do this for ALL statements. Please answer every item.

Be honest in your response. Please give a true picture of your feelings about your present job.

Statements	Response				
	Very dissatisfied	Dissatisfied	Unsure	Satisfied	Very Satisfied
1. My salary is fair compared to other staff with the same level of responsibility					
2. My benefits (e.g. accommodation, transport) are fair compared to other staff at my level.					
3. My job description is accurate and up to date					
4. My supervisor and I have agreed on the priorities of my job					
5. I get clear feedback from my supervisor about how well I am performing in my job					
6. My annual performance appraisal is based on the priorities in my workplan					
7. My supervisor seeks my input when faced with a challenge or problem					
8. The organisation acknowledges and values my Work					
9. The organisation provides me with the essential training to do my job.					
10. The organisation works (as much as possible) to provide me with opportunities for career growth.					

Demographic details

- What is your gender? Male ☐ Female ☐
- What is your profession? Doctor ☐ Nurse/Midwife ☐ Other health worker ☐
- What district do you work in?

Thank You for taking the time to fill this questionnaire!

Appendix 6:

HOW TO CONDUCT A SIMPLE FRAMEWORK ANALYSIS

Framework analysis can be used to analyse responses from interviews and focus groups. Responses can be audio recorded and the record comprehensively transcribed or, the interviewer can take notes and write up a summary of the interview or focus group. Writing up notes is best carried out within 24 hours in order to trigger memory but with the passage of time, this opportunity is lost.

Framework analysis involves examining the meaning of people's words or actions and trying to make explicit the knowledge that is in them. Sometimes this knowledge is clear and overt, but sometimes it is tacit. Framework analysis is used as a quick way to analyse a volume of text data. The following steps are involved:

1. **Familiarization:** refers to the process during which the researcher becomes familiar with the content of transcripts or summary notes and gains an overview of the collected data (Ritchie and Spencer 1994). When doing this, being to make comments that will form codes, or categories, as you go along. The first reading through is aimed at developing the coding categories or classification system. Then a second reading is done to actually start the formal coding in a systematic way. Several readings may be necessary. Where possible, two people should independently code the transcripts and notes and then afterwards, the two people should sit together and agree on a common coding approach for the data.
2. **Creating a framework:** The framework should be able to answer the research question(s) and objectives. Devising and refining a framework is not an automatic or mechanical process, but involves both logical and intuitive thinking. It involves making judgments about meaning, about the relevance and importance of issues, and about implicit connections between ideas (Srivastava and Thomson 2009). Some themes that may be present in a framework could include a chronology of events, changes to the wider external context or changes in service delivery and health outcomes.
3. **Indexing.** This means identifying sections of the data that correspond to a particular theme and slotting this information into the framework.
4. **Charting.** The specific pieces of data that were indexed in the previous stage are now arranged in charts of the themes. This means that the data is lifted from its original textual context and placed in charts that consist of the headings and subheadings that were drawn during the thematic framework, or from a priori research inquiries or in the manner that is perceived to be the best way to report the research (Ritchie & Spencer, 1994). The important point to remember here is that although the pieces of data are lifted from their context, the data is still clearly identified as to which respondent it came from.
5. **Mapping and interpretation.** This involves the analysis of the key characteristics as laid out in the charts. This analysis should be able to answer the research question and objectives. Analysis will be disaggregated by main dimensions of interest. For example, this could include the different health worker types and gender.

Appendix 7:

NON-PARTICIPANT OBSERVATION

Any observations of management practices of the DHMTs should only be conducted with the agreement of the DHMT members and with full knowledge and consent of each DHMT member.

Observation involves looking and listening carefully without any participation or intervention in daily activities by the observer. The researcher-observer makes notes of what they observe. These notes will later be written-up and coded in the same way as responses from interviews and focus groups (see Appendix 6). People's behaviour tends to change when they are being observed – hence the researcher strives to be as unobtrusive as possible. Examples of situations that could be observed include DHMT internal meetings, meetings between DHMT members and frontline staff and/or the community.

Depending on the research question and objectives, the researcher(s) may note down their perceptions of:

- How the DHMT interact with each other
- How decisions are made among the DHMT
- How DHMT members interact with frontline staff
- How DHMT members interact with the community
- Seniority and gender differentials.

An observation checklist can be made, the items of which are dependent on the research objectives. However, some basic planning is always helpful:

- Before

Always seek prior permission from the appropriate person(s) well in advance of planned observation. Plan on which day(s) the observation will take place and how long it will last and decide exactly what you are trying to find out and choose suitable headings for your notes.

- During

On the day of the planned observation, make sure you have your checklist and your note taking materials (paper or electronic) paper, pen and a clear idea of what you plan to observe. Look and listen carefully and make your notes as the observation is happening or as soon as possible after. You don't want to forget what has happened.

- After

Look over your field notes and reflect on what you have written. Include anything you might have forgotten to write down. Write about how the observation went including any problems you faced in carrying out the observation. Then analyse as per interviews and focus group responses.

Appendix 8:

TIME-MOTION STUDIES

This involves a researcher observing a DHMT over a specified period of time and recording both their activities and the location where the activities took place. The purpose of a time-motion study is to provide evidence of how and where DHMTs spend their working time. This allows an overview of the working time and place of DHMTs and allows comparisons between different DHMTs of their workplace activities.

If comparison between different DHMTs is sought, each participating DHMT would be required to draw up a list of at least ten work related activities which they undertake routinely as part of their job and which are observable by another person. Examples of such activities could include:

- Attending meetings
- Visiting health facilities
- Staff supervision/mentoring
- Attending staff training.

Activities are then observed and analysed in the same way as non-participant observation (see Appendix 7)

Appendix 9:

INDIVIDUAL OR GROUP SELF-ASSESSMENT

Self-assessment is routinely used to assess the competency of public health managers and groups. It allows a DHMT to identify areas of their individual and/or group behaviour and practices that require improvement or change. Staff answer predetermined questions by choosing from a number of predetermined responses.

Two self-assessment tools are possible - one for individuals and the other for groups. As with surveys, it is advisable to pilot any self-assessment tools. Self-assessments could be repeated at regular intervals to gauge change in behaviour and practices. Any self-assessment should be first discussed with the DHMT to understand whether it is likely to achieve intended purpose and potential benefits for the team. If the DHMT feel that it would be a worthwhile exercise, agree a convenient date, time and place to carry out an assessment. The self-assessment should be carried out at one point in time only.

A simple way to analyse the results from a self-assessment, is to code responses. For example, if the responses to questions were set as rarely/sometimes/all the time, the answers could be assigned a value as follows:

Rarely = 1

Sometimes = 2

All the time = 3

By doing this, a total and average score can be calculated for each question posed. Based on these totals, the DHMT can then identify areas of strength in their practice and knowledge as well as those areas where they may wish to improve or strengthen.

Alternatively, the responses may have been restricted to either 'no' or 'yes'. Where it is 'yes', a rating from 0-10 can also be included. Again, a value for all responses to each question can be calculated for all the responses where a rating is provided. This value can be averaged by dividing the total by the number of respondents. The average can help DHMT members identify those areas in which they feel they excel, compared to those that they consider to be weaknesses.

The self-assessments used on the PERFORM project are given on the next pages as examples.

INDIVIDUAL SELF ASSESSMENT USED FOR DISTRICT MANAGERS USED ON THE PERFORM PROJECT

Introduction

The purpose of this self-assessment is to help you discover your areas of strength and weakness as a district health manager. You will be asked to reflect on specific tasks, duties which you undertake as well as behaviours which you demonstrate at work. By assessing your level of knowledge or skill for each indicator described, you will be able to prioritise your career development to focus on those areas that are most important to you and where the need for learning and training may be greatest.

The self-assessment should take you about 20 minutes to complete. It is divided into the following behaviours of a manager:

- Leadership
- Delegating tasks
- Involving others in decision making
- Motivating staff
- Evaluating staff
- Organizing continuing education for yourself and others.

Please follow the steps outlined below:

- Read each statement.
- For each statement, think about how well you are able to perform the task or skill.
- Choose the response that is closest to your stage of development as follows:
 - 'R' = Rarely. I rarely demonstrate this ability/skill in my own work
 - 'ST' = Sometimes. I apply this behaviour/knowledge sometimes, or in situations that are of low complexity or challenge.
 - 'AT' = All the time. I use this behaviour/knowledge all the time in a full range of typical challenges.

All responses are confidential and will not be shared with anyone. Thank you for taking the time to complete this self-assessment.

Questions	Response*		
	R	ST	AT
LEADERSHIP			
<i>In assessing your ability to provide the necessary leadership that will ensure a well-coordinated team, do you:</i>			
a. Provide a strong example or role model that will encourage staff to develop similar traits?			
b. Make decisions without unnecessary delay and readily accept responsibility for them?			
c. Interpret personnel policies consistently and without bias?			
d. Establish standards for behaviour so that all staff know what is expected from them?			
e. Encourage frank discussions when conflicts arise and provide fair arbitration to resolve disputes?			
f. Ensure that each member of the staff understands clearly what is expected of him or her and the importance of what they do?			

Questions	Response*		
	R	ST	AT
DELEGATING TASKS			
<i>To determine whether you are undertaking tasks that could be delegated, do you:</i>			
a. Periodically list your daily activities to consider whether your direct involvement is required?			
b. Review responsibilities that seem to require your direct involvement and decide how your staff could support you?			
c. Analyse the tasks you intend to delegate to determine the minimum qualifications needed to perform them?			
<i>In considering to whom tasks should be delegated, do you:</i>			
a. Appraise the abilities of staff currently available to you and match abilities to tasks?			
b. Ensure that current assignments are challenging enough and draw fully upon the individual's abilities?			
c. Give staff the opportunity, whenever possible, to assume more demanding tasks on a trial basis to better judge their potential?			
<i>When delegating, do you:</i>			
a. Provide staff with the appropriate resources and authority to carry out the task efficiently?			
b. Describe carefully what is expected and explain the limits of authority?			
c. Ensure that other relevant staff are aware of the assignment and will respect the authority of the responsible individual?			
d. Avoid interfering with the person's performance unless required?			
e. Accept that some mistakes will be made and use them as a learning experience?			
INVOLVING OTHERS IN DECISION MAKING			
<i>When making decisions do you :</i>			
a. Consider whether you need advice from your staff concerning a particular issue?			
b. Consider whether the decision is truly open for staff influence or has already been made by yourself and others?			
MOTIVATING STAFF			
<i>In motivating staff, do you:</i>			
a. Consider your staff as individuals, attempt to understand their needs and concerns and respond appropriately?			
b. Ensure that each person understands and accepts his or her role in reaching objectives and sees them as their own objectives?			
c. Encourage open communication and ensure that staff feel they can approach you easily?			
d. Adapt your approach to personnel matters according to the situation as well as to the individual, using discipline, praise, guidance, etc. as appropriate?			
e. Recognize individual abilities and assist staff to realize their full potential?			
f. When considering changes in staffing patterns and assignments do you ask for the views of the individuals that will be affected?			

Questions	Response*		
	R	ST	AT
EVALUATING STAFF			
<i>In planning for personnel appraisals do you:</i>			
a. Schedule them at least once every 12 months?			
b. Ensure that each job description clearly describes the tasks the individual is expected to undertake?			
c. Explain to staff what measures will be used to evaluate their performance?			
d. Leave aside any personal prejudices and evaluate each individual fairly and honestly on job performance?			
e. Provide an opportunity for the employee to make written comment on the evaluation?			
ORGANIZING CONTINUING EDUCATION FOR YOURSELF AND OTHERS			
<i>Setting an example for others: in planning continuing education, do you:</i>			
a. Recognize that there are gaps in your own knowledge?			
b. Set targets for your professional development?			
c. Take advantage of continuing education opportunities and encourage others to do so?			
d. Believe that you can always improve?			
<i>Teaching: When assessing training needs do you:</i>			
a. Review which groups in your organisation might benefit from increased training that you might be able to provide?			
b. Discuss training needs with staff?			
c. Make yourself available to staff and take advantage of opportunities to develop your own skill as a teacher?			
d. Encourage training institutions to use facilities in your district as a place for practical training and involve yourself and staff in their learning activities?			
<i>Involving staff in continuing education: do you:</i>			
a. Make regular announcements of what educational resources are available for all groups of professional and support staff?			
b. Invite specialists from a variety of fields to present courses and workshops at the health centre?			
c. Include training costs in your budget, in order to allow time off work and to cover a portion of the expenses?			
d. Encourage staff to take on more complex tasks and provide on-the-job training?			
e. Provide opportunities or promotion by recruiting from within the district whenever possible?			

GROUP SELF-ASSESSMENT USED FOR DISTRICT MANAGERS USED ON THE PERFORM PROJECT

Introduction

The purpose of this self-assessment is to help you discover your areas of strength and weakness as a district health management team. You will be asked to reflect on specific tasks, duties which you undertake as well as behaviours which you demonstrate as a group. The questions seek information on the extent to which you (as a group) engage in these practices as a matter of routine, no matter what challenges you may face. By assessing how often and how well you practice each indicator described, you will be able to prioritise your group development to focus on those areas that are most important to you and where the need for learning, training and change may be greatest.

The self-assessment should take you about 20 minutes to complete. It is divided into the following key areas of work for managers:

- A. Scanning
- B. Focusing
- C. Aligning tasks and mobilizing
- D. Inspiring

To complete the questionnaire, follow the following steps

1. Read each statement.
2. For each statement, first think about whether the DHMT performs the task or not. If the DHMT does not perform the task, select 'No'. If the DHMT performs the task, select 'yes'.
3. Next, think about how well the DHMT performs the task or skill.
4. Rate the DHMT according to the group's abilities on each statement. Rating levels range from 'Do not do at all' (0) to 'Done excellently' (10). So you would select '10' if you think you are excelling at a particular task/skill and you would select '1' if you feel you need a great deal of improvement.

All responses will be kept confidential. Thank you for taking the time to complete this self-assessment.

Scanning

Scanning is a leadership practice. It includes the ability to:

- Identify patient, staff and stakeholder needs and priorities
- Recognize trends, opportunities and risks that affect the district
- Look for best practices
- Identify staff capacities and constraints
- Know yourself, your staff and your district- values, strengths and weaknesses

Item		Response		
		No	Yes	Rating (if yes)
In the past 3 months, has the DHMT				
1.	Reviewed and discussed information from the following sources:			
	➤ Service statistics?			
	➤ Staff satisfaction surveys?			
	➤ Community-based surveys?			
	➤ Policy related issues or statements?			
	➤ Other, please specify			

Item		Response		
		No	Yes	Rating (if yes)
2.	Reviewed and discussed the strengths, weaknesses and/or needs of the DHMT members?			
3.	Exchanged ideas and/or information with external or internal partners?			
4.	Requested input and participation from all DHMT members during regular meetings?			
5.	Reviewed best practices related to DHMT goals and objectives?			

Focusing

Focusing is a leadership practice. It includes the ability to:

- Articulate the district's mission and strategy
- Identify critical challenges
- Link goals with the overall district's strategy
- Determine key priorities for action
- Create a common picture of desired results

In the past 3 months has the DHMT

1.	Collectively reviewed or developed a mission and/or vision?			
2.	Prioritised critical challenges?			
3.	Developed strategies to overcome barriers to achieving results?			
4.	Linked DHMT goals with overall organisational strategy?			
5.	Referred to their plans when faced with important decisions or new challenges?			
6.	Clarified individual roles and responsibilities of members within the team in relation to the team's work objectives?			

Aligning and mobilizing

Aligning and mobilizing are leadership practices. They include the ability to:

- Ensure congruence of values, mission, strategy, structure, systems, and daily actions
- Facilitate teamwork
- Unite key stakeholders around an inspiring vision
- Link goals with rewards and recognition
- Enlist stakeholders to commit resources

In the past 3 months has the DHMT

1.	Held meetings or discussions to internally align job responsibilities with DHMT goals?			
2.	Ensured that the delegated responsibilities within the DHMT come with the appropriate level of authority			
3.	Held meetings to align available resources (human, financial, material, or time) with DHMT goals?			
4.	Held regular meetings to review work in progress?			
5.	Conducted coordination meetings with internal or external partners with the objective of aligning expectations, interests and/or action plans?			
6.	Succeeded in accessing alternative financial resources or other forms of support to achieve DHMT goals?			
7.	Facilitated teamwork through the application of effective communication or conflict negotiation skills?			

Item		Response		
		No	Yes	Rating (if yes)
<i>Inspiring</i> Inspiring is a leadership practice. It includes the ability to: • Ensure congruence of values, mission, strategy, structure, systems and daily actions • Facilitate teamwork • Unite key stakeholders around an inspiring vision • Link goals with rewards and recognition • Enlist stakeholders to commit resources				
In the past 3 months, has the DHMT				
1.	Voluntarily taken on extra responsibilities to meet a new or exciting challenge?			
2.	Demonstrated commitment and enthusiasm in the pursuit of their goals?			
3.	Take initiative to improve their performance as a team?			
4.	Recognized individual team members for their contribution to achieving DHMT goals?			
5.	Demonstrated honesty in their interactions as reported by colleagues?			

Appendix 10: SWOT ANALYSIS

SWOT is an acronym that stands for:

- S- Strengths
- W- Weaknesses
- O- Opportunities
- T- Threats

The process of identifying strengths, weaknesses, opportunities and threats will allow the DHMTs develop the team in a way that builds on their strengths and opportunities while managing and eliminating their weaknesses and threats. The steps involved in a SWOT analysis are:

Step 1

Divide a large sheet of paper (such as a flip chart) into four quadrants as shown below:

Strengths	Weaknesses
Opportunities	Threats

Step 2

First, list all strengths that exist now and then all weaknesses that exist now. Be as realistic as possible. The facilitator should probe into responses for example, by asking what the DHMT does well/poorly. Is there anything that could be done better than most other DHMTs? What does the DHMT do poorly? What should the group avoid, based on previous mistakes?

Step 3

List all opportunities that might exist into the future. Opportunities can be viewed as potential future strengths. Then, list all threats that exist in the future. Threats can be viewed as potential future weaknesses. The facilitator should probe into answers by asking questions such as where could the team find or create a competitive advantage. Are there any changes which you could use to your advantage (such as changes at regional or ministry policies, changes in population profiles in the district, change in demand for certain services)? What obstacles does the DHMT face? What changes in policy may affect the group negatively? Are job roles/specifications changing?

Step 4

Review your SWOT matrix with a view to creating an action plan to address each of the four areas. In developing the action plan consider the following:

- Strengths need to be maintained or built upon
- Weaknesses need to be addressed, changed or stopped.
- Opportunities need to be prioritised, built on and optimised.
- Threats need to be avoided or minimized and managed.

Appendix 11:

PROBLEM TREE ANALYSIS

Problem tree analysis (also called Problem Analysis) helps to find solutions by mapping out, in a structured way, the anatomy of cause and effect around an issue.

Step 1

First, discuss and agree the problem or issue to be analysed. Do not worry if it seems like a broad topic because the problem tree will help break it down. The problem or issue is written in the centre of a flip chart and becomes the 'trunk' of the tree or the 'focal problem'. The wording does not need to be exact as the roots and branches will further define it. The focal problem should describe an actual issue that everyone feels passionately about.

Step 2

The group then identify the causes of the focal problem - these become the roots.

Step 3

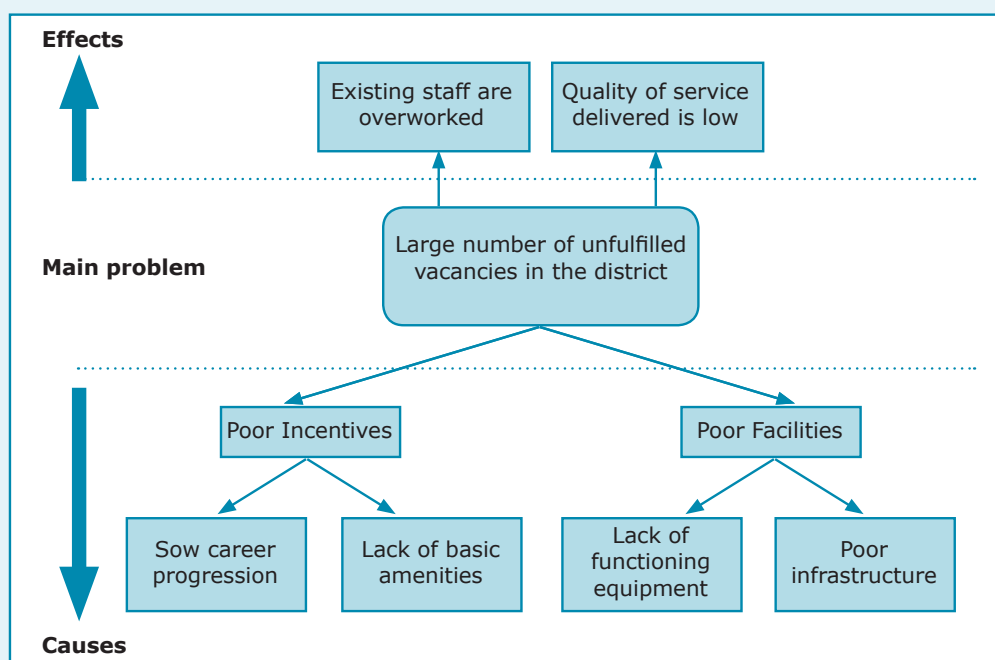
Next, identify the consequences – these become the branches. These causes and consequences can be created on post-it notes or cards, perhaps individually or in pairs, so that they can be arranged in a cause-and-effect logic.

The heart of the exercise is the discussion, debate and dialogue that is generated as factors are arranged and re-arranged. Time should be allowed for people to explain their feelings and reasoning, and record related ideas and points that come up on separate flip chart paper under titles such as solutions, concerns and decisions.

Questions to stimulate discussion might include:

- Does this represent the reality? Are the economic, political and socio-cultural dimensions to the problem considered?
- Which causes and consequences are getting better, which are getting worse and which are staying the same?
- What are the most serious consequences? Which are of most concern? What criteria are important to us in thinking about a way forward?
- Which causes are easiest / most difficult to address? What possible solutions or options might there be? Where could a policy change help address a cause or consequence, or create a solution?
- What decisions have we made, and what actions have we agreed?

An example of a problem tree is given below.



Appendix 12:

MIND MAPS

Mind maps helps to find solutions to a problem by mapping out cause and effect around an issue. It is less structured than a problem tree. Drawing a mind map is very simple.

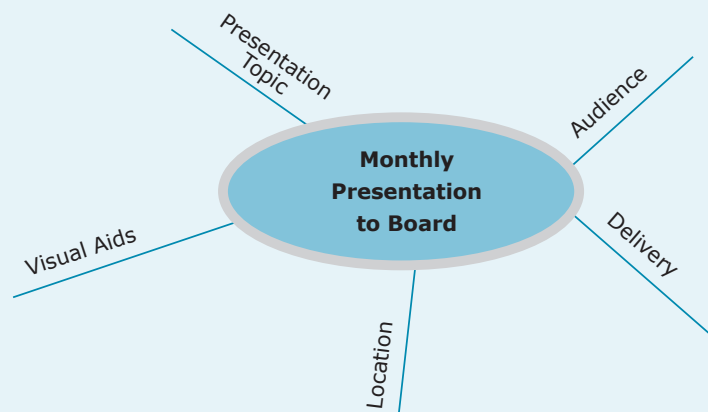
Step 1

Start in the middle of a blank page, writing or drawing the idea you intend to develop.



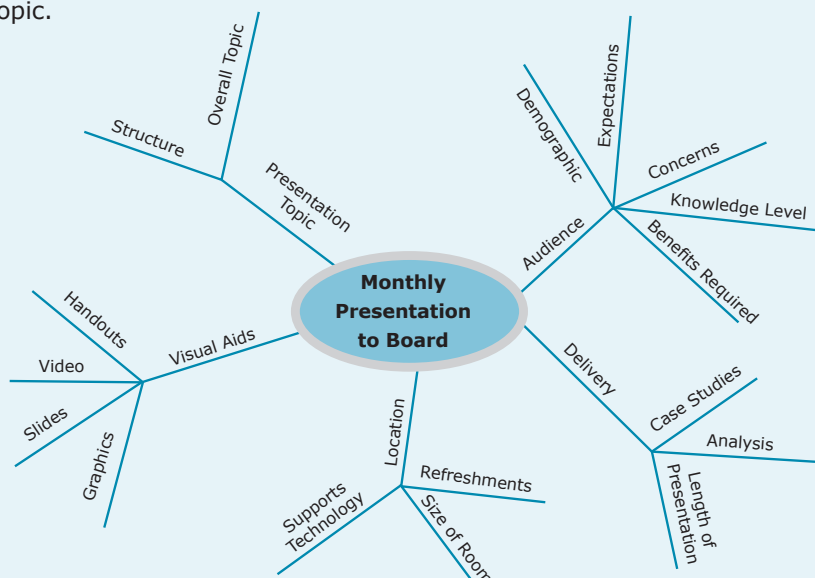
Step 2

Develop the related subtopics around this central topic, connecting each of them to the centre with a line. Use as many colours, drawings and symbols as possible. Be as visual as you can. Keep the topics labels as short as possible, keeping them to a single word or only a picture. Vary text size, colour and alignment. Vary the thickness and length of the lines. Provide as many visual cues as you can to emphasize important points.



Step 3

Repeat the process for the subtopics, generating lower-level subtopics as you see fit, connecting each of those to the corresponding subtopic.



Appendix 13:

A PRIORITY MATRIX

One way to set priorities is to use a priority matrix. The steps involved in doing this are outlined below:

Step 1

Prepare blank copies of a priority matrix (see below).

Criteria Rank from 1 to 3	Priority problem		
Time to solve the problem			
1=the most time			
3=the least time			
Cost to solve the problem			
1=the highest cost			
3=the lowest cost			
Impact of the problem on workforce performance			
1=the least impact			
3=the most impact			
Availability of resources to solve the problem			
1=the least available			
3= the most available			
Total			

These criteria are only suggestions. The action research team should agree on the criteria to be used to prioritise problems. Such criteria may include:

- Likely effects/implications of the problem
- Links with other issues
- Stakeholder priorities.

Step 2

Distribute the completed priority matrix to the DHMTs and explain how to use the matrix. If possible, draw a blank priority matrix on a flip chart and use this as you explain to the DHMTs. Ask the DHMTs to list the workforce problems in the three boxes under 'Priority Problems'.

Step 3

On a scale of 1-3 (with 1 providing least benefit and 3 the most benefit), rank each priority problem according to the time needed to solve the problem, cost to implement a solution, potential for solving the problem and the availability of resources. The DHMT may choose to change or include more criteria for ranking.

Step 4

Calculate the total points for each priority problem. This is done by adding the numbers in each column. The higher the score, the higher the priority of the problem based on the criteria listed.

Step 5

Check whether the priorities are acceptable to the DHMTs. Make sure they are confident that the priority problems can be resolved within the scope of the project.

Appendix 14:

Menu of HR/HS Strategies

The table below contains some human resource management strategies that could be used to improve workforce performance. A small selection of health systems strategies has also been included in the table. However, the choice of health systems strategies is potentially limitless, so the strategies included are for illustrative purposes. The strategies provided are not exhaustive, rather intended to give a sample of possible HR/HS bundles.

Performance area	Strategy	Sample activities	Expected change	Potential conflicts	Comments
Availability					
Increase staff in post	Additional recruitment	Advertise for specific vacant posts	More staff available % posts vacant by cadre and facility type	Induction Workforce planning	Which staff can DHMT recruit? Are there any gendered barriers to recruitment?
	Attraction incentives	Funding initial training with bonding	More applications for jobs/post by cadre		Check whether the main problem is attraction or retention, does this differ per groups of staff?
Improve distribution of staff between rural and urban facilities	Attraction incentives for rural areas only	Funding initial training with bonding			
	Retention incentives for rural areas	Identify financial and/or non-financial incentives that can be funded from the district budget			Are there differences in preferred incentives by staff group?
Other...					
Direction					
Improve understanding of general work and feedback on performance	Ensure staff have updated job descriptions (JD)	Develop new JDs (if none) Update JDs	Staff know what tasks to perform % staff with recently updated job descriptions		Check authority needed to change JDs Pilot the process to understand nature of work involved
Other...	Induction/ orientation of new staff Other...	Develop basic induction checklist. Brief managers in induction process. Assigning mentor to new staff	Staff know what tasks to perform and routine procedures % staff employed in past 3 months who received a basic induction		
	Staff know what tasks to perform and routine procedures				
Competencies					
Ensuring appropriate skills available to carry out the work	Merit-based recruitment	Person specification based on updated JD for selection process. Tests in selection process.			
Other...		Transparent selection processes			

Appendix 15:

KEEPING A LEARNING HISTORY

Every part of a learning history process is intended to encourage learning through reflection. The following steps help create a feedback cycle to do so.

Step 1

A planning stage outlines the range and scope of the learning history as well as the audience which is seeking to learn from the district's experience. Including the DHMTs in the planning process develops capacity within a district to plan and conduct descriptive evaluations. The best way to do this is to discuss learning histories during the 'plan' phase of each action research cycle.

Step 2

One or more persons are allocated responsibility to maintain the learning history. This person(s) are called the learning historian. The learning historian will document the process of choosing, implementing and evaluating the HR/HS bundle. DHMT and other staff contribute assessments and evaluations of learning efforts through reflective interviews or focus group discussions facilitated by the learning historian. In these interviews and focus groups, the learning historian asks staff to describe what has been accomplished and staff perspectives on those accomplishments. Interviews can be recorded by audio, or notes taken by the interviewer to contribute to the learning history.

Step 3

The learning historian(s) condenses information from these reflective interviews and/or focus group discussions and that gained from documents, observations, and so on, into a coherent story relevant to the research objectives. This activity is a form of analysis. By sharing analysis across the action research team, capacity can be built within a DHMT for making sense of, and evaluating, improvements.

Step 4

The learning history is then populated with condensed data. All content is checked with the relevant sources before they are distributed in any written material. All content remains anonymous. A learning history is meant to be read and discussed so that people learn from it. This means that usually the whole DHMT and potentially wider staff have access to the learning history and can write comments in it. The writing and checking process continues to build the capacity of the DHMT to describe improvement processes. In addition, by checking content and noting emerging themes, the DHMT has an opportunity for reflection.

A learning history is maintained over the course of all AR spirals and is deemed complete when the AR spirals cease.

Excerpts from a real life learning history can be found at:

<http://www.learninghistories.net/documents/The%20Learning%20Initiative%20at%20AutoCo.pdf>

Appendix 16: KEEPING A DIARY

The following guidance was given to DHMTs on keeping a diary in the PERFORM project.

Whenever you do some work on the PERFORM project please write in the diary and **put the date of the entry**, for example:

- meetings such as DHMT meetings which include PERFORM, have meetings with facilities about PERFORM, meetings with Country Research Team
- selecting HR/HS bundles to address your problem trees
- implementing HR/HS bundles
- monitoring (observing the effects) of the HR/HS bundles

The diary should include what you have done and some reflections on what was done or what happened (i.e. what you are thinking). The following are prompts that may help you fill the diary:

- How we chose this bundle -describe the bundled strategies
- How we implemented a bundle
- Why we implemented in this way
- How we have selected the strategies
- How we have observed the effects of the strategies
- What were the effects (and unintended effects) of the strategies
- What worked well
- What worked not so well
- What we would change next time
- Any changes in the environment that may affect the process and results

Any member of the DHMT can write in this diary. Please share the diary with the Country Research Team when they visit.

Thank you for completing the diary!

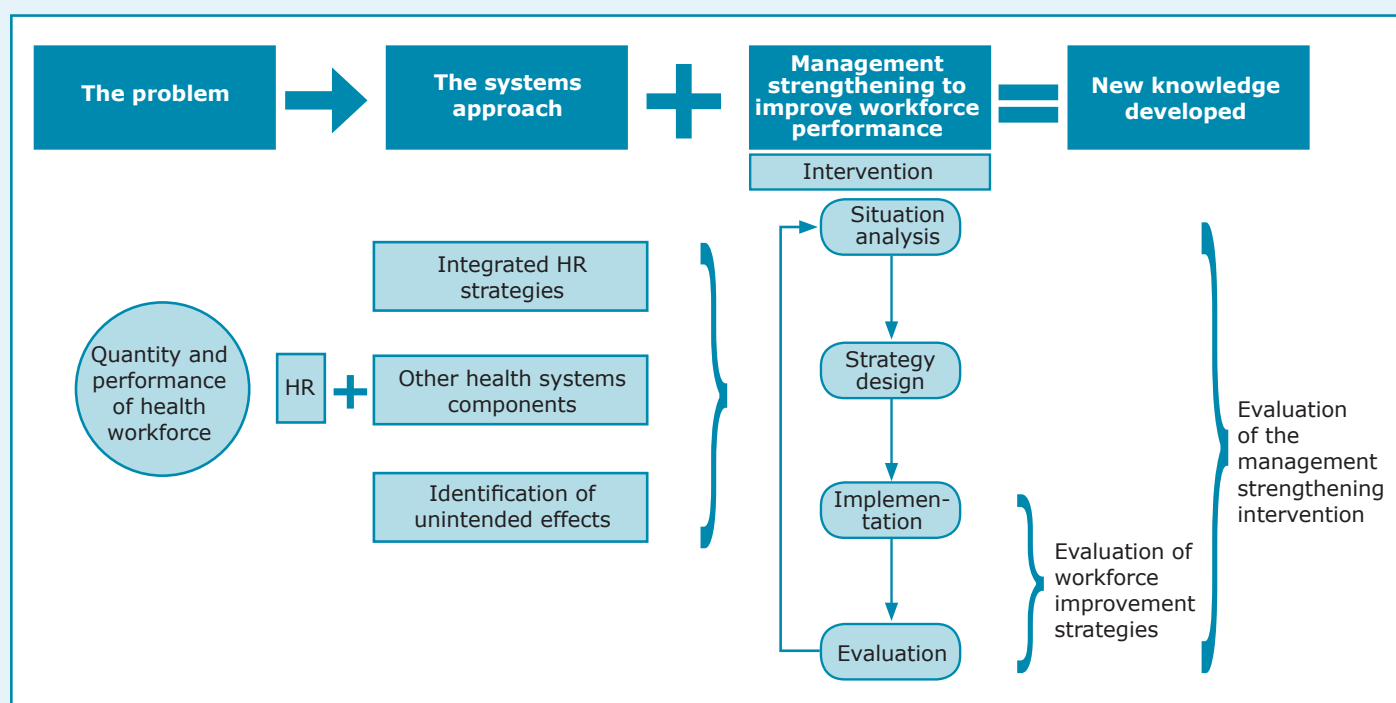
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PERFORM – Improving Health Workforce Performance

The PERFORM project - Supporting decentralised management to improve health workforce PERFORMANCE in Ghana, Uganda and Tanzania - aimed to enhance understanding of how, and under what conditions, action research could act as a management strengthening intervention to improve district workforce performance.

A wide range of human resource management strategies were available to managers but it was not clear which of those strategies would work in different local contexts. At the same time, there was a clear need for integration of human resource management practices and other health system functions. PERFORM sought to show how such integration could take place.



Six project partners carried out the work. They were:

- Liverpool School of Tropical Medicine, United Kingdom (lead)
- School of Public Health, University of Ghana
- Institute of Development Studies, University of Dar Es Salaam, Tanzania
- School of Public Health, Makerere University, Uganda
- Swiss Centre for International Health, Swiss Tropical and Public Health Institute, Switzerland
- Nuffield Centre for International Health and Development, University of Leeds, United Kingdom

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WEBSITE - <http://www.performconsortium.com/about/index.htm>

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