Lady Health Worker Programme

External Evaluation of the National Programme for Family Planning and Primary Health Care

Systems Review

Oxford Policy Management
August 2009

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Reports from this evaluation

1. Summary of Results
2. Management Review
3. Systems Review
4. Financial and Economic Analysis
5. Quantitative Survey Report
6. Punjab Survey Report
7. Sindh Survey Report
8. NWFP Survey Report
9. Balochistan Survey Report
10. AJK/FANA Survey Report
11. Lady Health Worker Study on Socio-Economic Benefits and Experiences

Cover photo: Baby in a rural village, served by a Lady Health Worker

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Executive summary

Introduction

The review of management and systems is one of the areas covered by the 4th Evaluation of the National Programme for Family Planning and Primary Health Care (Lady Health Worker Programme).[1] This fourth external evaluation of the LHWP, by Oxford Policy Management (OPM), began in December 2007 with the objective of evaluating the period covered by the PC-1,[2] from July 2003 to June 2008.[3]

The terms of reference for the evaluation were as follows:

- to provide the Ministry of Health and other stakeholders with accurate, credible and usable information on the LHWP performance;
- to examine changes in the Programme's performance since the 3rd Evaluation;
- to explore the determinants of performance;
- to identify socio-economic benefits to stakeholders and communities; and
- to provide findings and policy options enabling the Programme to further strengthen its performance.

To fulfil these objectives the key outputs of the evaluation are:

- Final Summary Report;
- Quantitative Survey Report;
- Provincial Survey Reports for Punjab, Sindh, NWFP, Balochistan and AJK/FANA;
- Management Review and Systems Review (this report);
- Finance and Economic Analysis; and
- Lady Health Worker Study of Socio-Economic Benefits and Experience.

The evaluation tools included: a nationwide sample quantitative survey (based on the questionnaires of the 3rd Evaluation to ensure comparability of results); a qualitative study to supplement the quantitative survey; financial analysis; stakeholder interviews and meetings, and document reviews.

The Systems Review and the Management Review are presented here as two companion volumes. This report, Volume 1, covers the Systems Review and Volume 2 is the Management Review.

The Management and Systems Reviews

The Management and Systems Review is presented as two reports.

The system review report provides findings on the performance of selected core systems using the targets in the Strategic Plan and the PC-1. These systems include: selection of LHWs, training, logistics, salaries and payments, performance management, transportation, and MIS; and

[1] The Programme is officially called the National Programme for Family Planning and Primary Health Care (NP FP&PHC). It is commonly referred to as the 'Lady Health Worker Programme', and is hereafter referred to as the 'LHWP' or the 'Programme' in this report.

[2] This is the core planning document of the Programme.

[3] The most recent independent evaluation of the LHW P was commissioned by the Ministry of Health in 1999 and was implemented by Oxford Policy Management. This was the third independent LHW Programme evaluation. The key conclusion of this evaluation was that the LHWP had managed to buck the international and national trend of low-performing Community Health Worker Programmes and was, in fact, providing a service that had an impact on key health indicators.

The Management Review report evaluates seven key areas of management that were identified by the Programme managers as important to successful Programme implementation:[4]

- Do the management controls of the Programme support the implementation of the Strategic Plan and the PC-1?
- How has innovation and quality improvement been managed?
- How well has the Programme been implemented across different levels of government?
- What integrating mechanisms exist between the LHWP and other Public Health Programmes?
- Has expansion led to greater coverage in remote areas and for poorer families?
- What have been the benefits and tensions of expansion from 37,000 LHWs to 90,000 LHWs? and
- Has the Programme managed to deal effectively with non-performing LHWs?

The Systems Review was undertaken in 2008 by Oxford Policy Management in order to assess the performance of key systems important to the operation of the LHWP. The systems review covers June 2003–June 2008, the period covered by latest PC-1 and the Strategic Plan (2003–11). The Strategic Plan describes the strategic directions for the Programme, and provides the framework for the PC-1.

The Programme's management and control of systems is important in ensuring the provision of services to high standards. They should help harness the energy and attention of staff in the efficient pursuit of the organisation's goals. Talented hardworking people can produce results in spite of poor systems, but good systems provide incentives for all staff to do a better job, and maximise their capacity to spend their time on the things that matter most by their not being distracted or impeded by unnecessary administrative concerns.

The Programme's systems being reviewed are: recruitment, training and development of LHWs; payment of LHW stipends; logistics; performance monitoring; transportation and management information. These criteria were selected on the basis of: being integral to the purpose of the LHWP as described in the Introduction; being implemented throughout the organisation; and the evaluators being able to provide an indication of the level of performance, either from measure by the quantitative survey, from the Programme's information databases, or from key informant interviews. The report provides a description of each system, measures of performance, and findings.

The systems description includes:

- a statement of purpose;
- a list of key performance indicators as outlined in the Strategic Plan and the PC-1;
- a brief overview of its operation;
- a description of how the system is monitored, the results from the 3rd Evaluation[5] and what management information is available; and
- a summary of the planned systems developments.

The assessment of systems performance uses:

- results on systems performance, which include the degree of systems development and performance indicators;

[4] The evaluation team's main concern was to provide useful feedback to the management of the Programme on issues that they considered a priority. These questions were agreed with the Programme management in March 2008.

[5] This evaluation, the 4th Evaluation, has adopted a methodology that allows for comparison of results with the 3rd Evaluation.

- reported causes of non-performance as identified by Programme Managers and stakeholders; and
- overall findings.

Findings by system

Selection and recruitment system

- **Compliance with selection criteria** The Programme has a core organisational competence in the selection of LHWs. Against many odds, it has managed to maintain compliance with selection criteria – the major exception being Sindh, with 11 percent non-residency. It is important that the Programme regains control over its selection process in Sindh, as it affects the reputation of the Programme and could have detrimental long-term effects on performance;
- **Insufficient budget for 100,000 fully-funded LHWs** The budget forecast (FYs 2003/04–2007/08 was based on funding for 100,000 LHWs and 4,000 LHSs. However, by the end of this period the Programme had only received 87 percent of their allocated funds. Each year, the budget allocation and releases were less than the Programme requested;
- **Catchment areas** There appears to be a problem with providing a catchment area with a population of 1,000 people for LHWs to register. The average number of people registered has fallen from 980 in 2000 to 919 in 2008. This could be due to saturation of coverage in areas where the Programme is already established: 9 percent have 700, or fewer, registered clients;
- **Ratio of LHS to LHW** The target ratio of supervisors to LHWs was 1:25. The ratio in 2008 was 1:23, down from 1:27 in 2000. There was delayed recruitment of LHSs. Delayed recruitment resulted in lower levels of supervision at the time that newly recruited LHWs started working; and
- **Community acceptance** The selection system is recruiting LHWs who are acceptable to their communities. The results from the Community Survey were very positive, with over 90 percent of respondents saying that there had been improvements in health due to the LHWs' work; that LHWs had generally improved people's lives in the community, and that women were usually respected after becoming LHWs.

Training system

- **Professional knowledge and skills** The LHWP has continued to invest in the professional knowledge and skills of the LHW. The knowledge score of the LHW and her supervisor has increased since 2000. The average score in the Knowledge Test for LHWs was 74 percent and, for LHSs, 78 percent. Knowledge scores were higher in NWFP and AJK/FANA for both LHWs and LHSs;
- **Programme target** The Programme target was for 90 percent of LHWs to score over 80 percent in the Knowledge Test. There are now 31 percent of LHWs who scored over 80 percent in the Knowledge Test, compared with 16 percent in 2000. Another Programme target was that all LHWs have a knowledge score of over 71 percent. Two thirds of LHWs achieved this target;
- **Low levels of knowledge** However, 11 percent of LHWs scored less than 60 percent in the Knowledge Test, and LHWs in Balochistan had considerably less knowledge, with an average score of only 64 percent. The Programme needs to address this issue, as lack of knowledge is a risk for LHW clients. The fault cannot be with the training system, *per se*. It is important that the Balochistan PPIU take responsibility for improving the level of LHW knowledge in their province;

- **Contributing factors** Duration of service and level of education contribute to the level of LHW knowledge. Knowledge is also at a higher level amongst those LHWs who received training at their last monthly meeting at the health facility, and for those who attended the food and nutrition training in the past year. However, a significant improvement is gained through attending Counselling Card refresher training. Knowledge scores of LHWs who have the counselling card manuals have considerably higher knowledge scores;
- **Refresher training** This can make a significant difference to knowledge and performance, depending on the topics and the training materials. Counselling Card refresher training is improving knowledge and the Revised MIS tools refresher training significantly improves performance;
- **Trainer training** Essentially, the system has remained unchanged during this PC-1. It continued to deliver core training of LHWs and LHSs using the trainer training model;
- **Training system** The training provided for the expansion of the Programme between 2003 and 2008 was managed in a similar manner to previous expansions. The system increased its throughput with a substantial programme of refresher training;
- **Quality of training** The quality of training will become more important as the Programme expands into difficult areas. It has to improve in order to substitute for the years' of experience and education of LHWs. The Programme needs motivated trainers who are prepared to improve the quality of their training. The solution will need to have both incentives and sanctions;
- **Cost of training** Training expenditure is low, at just 3.76 percent of the total expenditure. Additional budget to increase the quality of training might well be justified;
- **Curriculum development** While the core system of delivery through trainer training remains, there has been conservative curriculum development reflected in the core curriculum and the refresher training modules;
- **Keeping the Programme focus on the role of the LHW and scope of services** The Programme mitigates the risk of enthusiastic stakeholders driving change by employing an incremental approach where the change is clearly tied to the role of the LHW and the services she provides (refer to Management Review);
- **Unapproved training programmes** LHWs have attended unapproved training programmes, causing a risk to quality control and to the perception of the role of the LHW, both by the community and herself;
- **Contracting out the management of the Basic Health Units** This has to lead to cases of trainers not being made available by the contractor for the trainer training for the facility staff. There have also been examples of where facility staff members were no longer permitted to train LHWs. Some of these issues have been resolved in some districts but the experience does show up the risks of disintegrating the LHWP from the core health service provision;
- **Contributing role of development partners** Amongst development partners, the Programme's training system appears to have the strongest relationship with UNICEF and UNFPA, both working in areas of maternal, child health, and family planning. In addition to supporting pilots and refresher trainings, these partners also sponsor two long-term consultants to the Programme, who have been influential in the development and maintenance of the integrity of the training system; and
- **Risk to the training system** There is some anxiety that the training and the inspection system are very reliant on the dedication of these two long-term consultants, and that the Programme has not succeeded (and with frequent transfers of staff, is unlikely to succeed) in developing their successors. The view of the evaluation team is that the main risk is not to the training system, *per se*, as the system is not complex. Rather, the risk is in losing the long-term advisors, who act to protect the integrity of the system. This risk could be mitigated by stronger

Programme leadership; the functioning of the oversight and management committees, who would support the Programme's values and strategic directions; and by retaining senior managers on the merit of their performance.[6]

Logistics management system

- **The supply system for medicines is performing poorly** The Programme did not succeed in achieving its performance targets. There is a significant number of LHWs who have been without various medicines for over two months. In addition, there is a shortage of non-drug items. The regular supply of drugs and contraceptives is important for the performance of the LHW. The main cause of lack of supply is management of procurement and the level of funding;
- **Logistics expertise** The management of logistics requires expertise and management attention. Core elements of the system are the responsibility of the Ministry of Health (procurement and quality control, and budget approval). The Programme is primarily responsible for estimating demand and for distribution. While there are some dedicated logistics officers, expertise in logistics is reportedly low in all functions. The planned review and re-engineering of the logistics system did not take place;
- **Delays caused by the procurement process** This places stress on the logistics system. Higher priority and attention need to be given to the timetable for procurement, or for holding a higher level of supplies in the system to prevent stock-outs;
- **Insufficient procurement** There were insufficient funds spent for each LHW to have her full supply. This is true, even though there were fewer LHWs working than planned. Drugs and contraceptives were planned to be 24 percent of the budget. Actual expenditure resulted in their being only 18 percent. The PC-1 specifies the monthly requirement of the LHW for drugs and medicines. No item was procured to the quantity forecast per LHW in the PC-1;
- **Distribution** The Programme does expend a great deal of effort in managing the transportation of logistics, both from the PPIUs to the DPIUs and from the DPIUs to the facilities;
- **Training** The logistics manual and the accompanying training are positive initiatives. However, training probably only has a shelf life of one year due to turnover of management and logistics staff;
- **Warehousing** Around 15 percent of districts reported not having their own designated storage space. These districts place their stores wherever they can find a space, including in corridors and offices, hostels and wards. Of districts that did have storage facilities, only one fifth met the criterion of a minimum storage space of five square metres per LHW. Access to suitable storage space has become an increasing problem with the need to store larger quantities of medicines as a result of an increased number of working LHWs in the district; and
- **Logistics monitoring** Four out of five districts reported having their logistics system monitored in the past year. This is commendable, but monitoring has to lead to action by Programme management.

Stipends/salaries and payments system

- **Delays in payments** The payment of salaries is the main Programme expense. The efficiency of the system was monitored in the Flow of Funds study. However, while the Programme reports that there have been increases in efficiency in recent years, at the time of the evaluation, there was a shortage of funds being released and, once again, there were delays in payments;

[6] This is explored further in the Management Review, August 2009.

- **External constraints** The flow and level of funds available to make payments can be beyond the control or responsibility of the Programme. The Programme has implemented a number of initiatives to reduce delays in payments (e.g. payments into the bank accounts of LHWs; the hiring of Accounts Supervisors to process the payments, rather than relying on deputed AGPR staff; the agreed annual Cash/Work Plan);
- **Project allowance** While budgeted for, this was not paid due to audit objections. A performance bonus system proposed by the Programme was rejected. In the view of the evaluation team, this would have been hard to implement fairly;
- **Training allowances are often delayed** This occurs due to the processing procedures and, in particular, could potentially result in demotivating trainers, who are important for developing the knowledge and skills of the LHWs; and
- **Remuneration review** The Programme did not review the remuneration and allowances packages of LHWs and LHSs as planned.

Performance monitoring system

- **Service delivery has improved overall** Of the ten measures that make up the Performance Score for delivering preventive and promotive services, the LHWs are delivering more services on almost every measure. Even the low-performers (the bottom quarter) are providing a higher level of services than previously. However, these low-performers are still not managing to deliver at the same level as the second-to-lowest quartile of LHWs were managing to deliver at the time of the 3rd Evaluation. Despite improved training and supervision, there is a group of LHWs who are not working;
- **Performance management** There is a performance system in place for LHWs that is being utilised. However, there is still a large number of LHWs providing a very low level of services. The system needs to be managed to ensure improved performance levels, and to implement sanctions for those LHWs who fail to perform;
- **Supervision is available** The Programme has managed to provide a supervision ratio of 1:23 (LHS:LHWs), which is below the target of 1:25. Less than one tenth of supervisors now have responsibility for more than 30 LHWs. The Programme target of 75 percent of LHWs receiving a supervision meeting in the previous month has been exceeded, with a result of 80 percent;
- **Health Committees** High-performing LHWs tend to have functioning Women's Health Committees; as this is a part of their job, again, it is not surprising. However, there could be a reinforcement that occurs where, as the community becomes more engaged, they act to increase the accountability of the LHW;
- **Duration of service** The LHW improves her performance the longer she is engaged by the Programme;
- **Management and monitoring** practices are being shown to improve LHW performance, including:
    - consistent priorities for service delivery (adopted by the district, the LHS and the LHW) result in higher performance;
    - district management support where the EDO-H fulfils a leadership role, and there is managing and monitoring by the DPIU;
    - provincial monitoring by the Field Programme Officers (FPOs);
    - LHSs who provide monthly supervision (where they visit the LHWs and their households – with and without the LHWs – and use their checklist) have higher-performing LHWs;
    - The LHS is expected to report on non-performing LHWs at the monthly meeting;
    - functioning health facilities where an individual person has responsibility for the Programme and attends meetings at the DPIU; and
    - high-performing LHWs also have functioning Women's Health Committees; and

- **Seven days a week** Almost half of the LHWs reported working seven days in the week prior to the survey. This is not in accordance with Programme policy. Field visits by the evaluation team to LHWs confirmed this was common practice, and that it was being reinforced with monitoring by the LHSs. The LHWs in Sindh and NWFP reported this practice as a reason for their looking for another job. Our analysis shows that LHWs who work six days a week provide a higher level of services than those who work seven days. In the judgement of the evaluation team, backed-up with discussion with LHWs in the field, we think that LHWs should have one day off a week, except in the case of emergencies.

Transportation system

- **Fleet management** Vehicles are an essential resource in providing supervision and inspection of this dispersed community-based service in Pakistan. However, the incentives for misuse are high, and they do require more controls and more authority to implement controls than some of the other systems. The fleet is also aging, and the amount budgeted for repairs and maintenance has not been released. In addition, the process for condemnation of the vehicles is reportedly cumbersome and has not resulted in any vehicles being condemned. It is also important that the most appropriate vehicles are purchased according to terrain. Vehicles are the main capital asset of the Programme, and there is no specialist capability in fleet management within the Programme;
- **Providing mobility** Mobility is important for the supervision and inspection of LHWs. The Programme has been plagued by insufficient drivers for vehicles; insufficient POL; and vehicles not being available, as they are used for other purposes (e.g. Polio days), or are non-operational. The alternative to a vehicle is the payment to LHSs of a travel allowance. However, these allowances have been subject to delays. These problems call for management attention, and yet there is no designated manager at the FPIU or the PPIU responsible for transportation; and
- **The cost of doing the job** It is unacceptable that LHSs should bear the cost of their transportation in order to carry out their work. The LHS should be 100 percent confident that she will receive her full POL or fixed travel allowance, and reimbursement for any vehicle repairs.

Management Information System (MIS)

- **Lack of demand** There was a lack of demand for high-quality management information. The Planning Commission requests performance feedback, but only on a few key indicators. While the Annual Report produced by the Programme for the Ministry of Health reports on some of the targets of the PC-1, it does not provide a full report of its implementation. There is little evidence of demand for reporting on many of the key performance indicators (KPIs) determined in the strategic plan or on the implementation strategies of the PC-1;
- **Accuracy, timeliness and relevance of information** A substantial amount of information is collected by the Programme's internal MIS, requiring considerable effort by the LHWs and their supervisors. The main information that is actually used is reporting against budget and reporting the number of working LHWs. It is surprising that a key cost-driver such as the number of LHWs recruited in a year has to be calculated indirectly;
- **Compliance with monthly reporting** There is a high level of compliance with LHWs and their supervisors on filling in the monthly reports. LHSs are being used to complete the health facility's monthly report. This does not necessarily mean that the facility management are not interested in the LHW's service provision. However, there is a risk that this could indicate a lack of engagement;

- **Over-reliance on the MIS** Due to the lack of development of the mini-surveys and the absence of a mid-term external evaluation, the Programme had to rely on their MIS for information. The mini-surveys and evaluations were to be important sources of performance information and MIS validation. The MIS is reliant on inputs from over 95,000 people, many health facilities, and over 130 districts. While it can provide ongoing management information, and this is used by some of the active districts and provinces, it does need to be supported by additional high-quality monitoring and evaluation information; and
- **Reducing the amount of information collected by the LHW** as proposed by the Strategic Plan was not explored.

Conclusion

- The performance required of the LHWP systems is relatively well specified in the Strategic Plan and the PC-1. Overall, the systems of the LHWP have coped with the large expansion of the Programme from 40,000 LHWs in 2000 to almost 90,000 LHWs in 2008. The systems have operated to: recruit LHWs and LHSs (although there was a failure to recruit drivers); provide training, including continuing training at the health facility and refresher training courses; improve the level of supplies to LHWs (although there are still problems); improve the payment of salaries (although, again, there are still unacceptable delays); and increase the level of supervision of LHWs.
- The core design of the systems appears robust, and has been sustained over the 15 years of the life of the Programme. Poor systems performance occurs most often when there is a shortage of inputs, or non-compliance with the systems standards. For example, there was insufficient procurement of supplies for the LHWs (logistics system); non-compliance with residency criteria in Sindh (selection and recruitment system); and lack of funds for salary payments was evidenced at the time of the Quantitative Survey.
- These problems are management and governance problems, not systems problems.
- Three particular areas of non-performance in systems need to be highlighted:
    - The system for dealing with non-performance of LHWs requires improvement so that, where there is evidence of non-performance and a non-willingness to work, the LHW can be terminated efficiently;
    - The process for condemnation of vehicles is not operating;
    - The procurement process conducted by the MoH and the FPIU has experienced problems resulting in long delays in purchasing.

- Systems also need to undergo continuous improvement (not necessarily be radically changed), and planned systems developments were generally not implemented. This cannot be attributed to lack of funding, as many of the developments did not require additional funds; neither can this be due to the tensions of rapid expansion, as most of the expansion of the Programme had occurred by 2003.
- Our conclusion is that there is a lack of management attention focused on systems improvements: attention is absorbed by operational concerns. It is also difficult to build up the necessary experience to deal with systems development when there are frequent changes in senior management in the Programme and in the Ministry of Health (see also Management Review). There is also a lack of accountability to the Ministry of Health for developments budgeted for and approved in the Strategic Plan and PC-1.

Table of contents

Annexes

List of tables and figures

Abbreviation

ADB	Asian Development Bank
ADC	Assistant District Coordinator
ADG	Assistant District General
AGPR	Accountant General Pakistan Revenues
AIDS	Acquired Immune Deficiency Syndrome
AJK	Azad Jammu and Kashmir
APC	Assistant Provincial Coordinator
BCG	Bacillus Calmette-Guerin
BHU	Basic Health Unit
CBO	Community Based Organization
CIDA	Canadian International Development Agency
CPR	Contraceptive Prevalence Rate
CSD	Child Survival Development
DAO	District Accounts Office
DC	District Coordinator
DDG	Deputy Director General
DFID	Department for International Development (UK)
DG	Director General
DHO	District Health Officer
DoH	Department of Health
DPC	Deputy Provincial Coordinator
DPIU	District Programme Implementation Unit
DPT	Diphtheria, Peruses, Tetanus
DTO	District Treasury Office
EDO-H	Executive District Officer of Health
EPI	Expanded Programme of Immunisation
FANA	Federally Administered Northern Areas
FATA	Federally Administered Tribal Areas
FLCF	First Level Care Facility
FP	Family Planning
FPIU	Federal Programme Implementation Unit
FPO	Field Programme Officer
FTA	Fixed Travel Allowance
FTO	Federal Treasury Office
FY	Financial Year

GoP	Government of Pakistan
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
ICT	Islamabad Capital Territory
IMR	Infant Mortality Rate
KPI	Key Performance Indicators
LHS	Lady Health Supervisor
LHW	Lady Health Worker
LHWP	Lady Health Worker Programme
LMIS	Logistic Management Information system
MCH	Maternal and Child Health
MIS	Management Information System
MMR	Maternal Motility rate
MNCH	Maternal and Neonatal Health
MNT	Maternal Neonatal Tetanus
MoF	Ministry of Finance
MoH	Ministry of Health
NCHD	National Commission for Human Development
NGO	Non-Governmental Organisation
NIDs	National Immunisation Days
NIPS	National Institute of Population Studies
NP	National Programme
NPFP&PHC	National Programme of Family Planning and Primary Health Care
NWFP	North Western Frontier Province
OBSI	Optimal Birth Spacing Interval
OPM	Oxford Policy Management
PC	Provincial Coordinator
PC-1	Planning Commission 1
PDSP	Public Sector Development Programme
PHC	Primary Health Care
PLA	Personal Ledger Accounts
POL	Petrol, Oil and Lubrication
PPIU	Provincial Programme Implementation Unit
PSDP	Public Sector Development Programme
PSU	Primary Sampling Unit
RHC	Rural Health Centre
RHP	Reproductive Health Project

RPIU	Regional Programme Implementation Unit
Rs.	Rupees (Pakistani)
SCF-UK	Save the Children Fund- United Kingdom
SCF-US	Save the Children Fund- United States
SNIDs	Sub-National Immunization Days
SoEs	Statements of Expenditure
TAMA	Technical Assistance Management Agency
TB-DOTS	Tuberculosis-Direct Observation Treatment Short-courses
TCI	Technical Committee of Innovations
TOT	Training of Trainers
TSIS	Training System Information System
TT	Tenuous Toxiod
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization
WHP	Women's Health Project

1 Introduction

1.1 Background

Since its inception in 1993, the Programme has been an important national public health sector investment. The LHWP provides services nationwide to the rural poor through the collaborative efforts of the Federal Ministry of Health, the Provincial Departments of Health and the District Health Offices. At all levels, the purpose and functions of the Programme are integrated into the planning of public health care delivery. Managers in the public health service across the country have the responsibility for service delivery according to standards, and using processes and systems that are consistent nationwide.

The Programme's management and control of systems is important in ensuring the provision of services to high standards. They should help harness the energy and attention of staff in the efficient pursuit of the organisation's goals. Talented hardworking people can produce results in spite of poor systems, but good systems provide incentives for all staff to do a better job, and maximise their capacity to spend their time on the things that matter most by their not being distracted or impeded by unnecessary administrative concerns. Their success depends on the quality and level of inputs, and on the people who operate them complying both with the intention of the systems' rules and with the rules themselves.

Ensuring high performance requires information on how well the systems are working, and this feedback information must be utilized by systems managers and decision-makers to improve the systems' functioning.

This review of systems performance is June 2003–June 2008, the period covered by the latest PC-1 (government approved plan with budget). This PC-1 was the successor to the previous Revised PC-1, which had been in place from 1995 to 2002. It includes the Strategic Plan 2003–11, as an annex. This plan describes the strategic directions for the Programme and provides the framework for the PC-1.

Achievement of the goals set out in the PC-1 was based on the assumptions that:

- the Programme[7] remains accountable to the Federal Ministry of Health;
- the Programme receives the level of funds and flow of funds consistent with the stated coverage and quality goals; and
- the LHWs and LHSs receive optimum support from the provincial and district health authorities, and from functioning health facilities, for training, supervision, the supply of medicines, and so on.

1.2 Programme performance

The systems under review are those critical to Programme performance and are mainly under the control of the Programme. They are important in supporting:

- the LHW in delivering her services;
- the strategic directions, both the key objectives and priority areas for development.

1.2.1 Systems supporting the LHW

Because the most important component of the LHWP is the Lady Health Worker herself, many of the systems are designed to contribute to her ability and motivation to provide a high quality service.

[7] PC-1, LHWP: 61.

To do this she needs to be:

- selected on merit (**recruitment system**);
- provided with professional knowledge and skills (**training system and performance management**);
- supplied with the medicines and non-drug supplies that enable her to deliver services in her community to a high standard (**logistics system**);
- adequately paid (**salaries system**);[8] and
- supervised, monitored and managed (**performance management**).

The **management information system** (MIS) provides information that is important for assessing and encouraging good performance by individual LHWs, and for supporting decision-making and ensuring control across the Programme as a whole.

1.2.2 Systems important in supporting Strategic Plan directions

The Strategic Plan outlines two key objectives for the Programme. One was to improve the quality of the services; the other, to expand coverage. The following actions were listed as means to achieving these objectives (the systems that are important for delivering this activity are listed in bold):

- Enforcement of recruitment standards through a continuous cycle of third-party audits (**recruitment system**);
- Additions to and improvements in the Programme's training systems, aimed at reinforcing the knowledge acquisition and retention through implementation of refresher training and testing systems (**training system**);
- Additional training in skills (not merely knowledge) to support health behaviour changes through further development of the curriculum **(training system**);
- Improvements in medicines and family planning supplies to the LHW through a review and re-engineering of procurement and distribution systems **(logistics system**);
- Improvements in the quality of LHW supervision through the increased mobility of supervisors (**transportation of LHS**) and the refinement of supervisors' training (**training system**) and job descriptions;
- Reaffirming the focus on community mobilisation through LHW skills training (**training system**) and performance supervision (**performance management**);
- In addition to the key objectives, the Strategic Plan outlines four priority areas with KPIs that would either 'develop the Programme beyond its current capacity and services or strengthen services which are critical to its success' (Table 1.1). The Programme's systems either support the achievement of goals or provide measures for the indicators.

[8] Salaries and payment of allowances are important as a fair exchange for service provided. They also provide incentives for some LHWs and also a measure of control, as they can be withheld for non-performance or if selection criteria are not being met.

Table 1.1 Priority areas identified in the Strategic Plan (2003-11), their KPIs, and the relevant system

Priority area	KPI	Relevant system
Expansion of coverage to underserved and poor areas	100,000 LHWs by 2005	MIS
	All LHWs fulfil selection criteria	Recruitment
	All registered households regularly visited by the LHW	Performance monitoring
Quality improvement in services provided by LHWs	90% of LHWs score over 80% in the Knowledge Test	Performance monitoring
	No medicines/contraceptives have been out of stock for more than two months for 90% of the LHWs	Logistics
	90% of the LHWs have been paid a full salary in the last month	Payment
	All LHWs have supervisors	Performance monitoring
	75% of LHWs receive a supervisory visit once a month	Performance monitoring
	All LHS have full-time access to a vehicle	Transportation
Expanding the scope and mix of services provided by LHWs	Percent of LHWs providing 'new' services	MIS
	Percent of LHWs providing services of priority to other national programmes.	MIS
	Percent of LHWs households covered by EPI, TB DOTS and FP services	MIS
Improving performance monitoring and evaluation for evidence-based Programme design and management	FPIUs, PPIUs and DPIUs are provided with regular performance reports	MIS, Financial
	Performance reports are regularly used in supervisory meetings and performance reviews	MIS, Financial
	Programme management and strategic directions linked to monitoring and evaluation evidence	MIS, Financial, Strategic Planning

1.2.3 Professional integrity and reputation

The performance of systems is important, not only as a means of achieving particular objectives, but also because they are designed to protect and promote the professional integrity and reputation of the Programme. The LHWP touches the lives of millions of the most vulnerable citizens of Pakistan in an area of fundamental importance to them: the health of women and their families. For the Programme to continue to be effective, it is essential that the LHWs be seen by their clients as professional, trustworthy and sincerely dedicated to the interests of those they serve. It is not only a matter of having these systems and capable people in place, but also of ensuring that compliance with the systems and controls associated with them is regarded as a core professional responsibility throughout the Programme.

Systems and processes that protect the core professional values and reputation must operate with a high level of integrity (e.g. recruitment, logistics management, and the application of sanctions for non-performance). The main risk to the integrity of the Programme is that LHWP staff will be seen to let their personal interests override their professional responsibilities to their clients. This occurs when, say:

- LHW appointments are made on the basis of patronage rather than merit;
- LHWs fail to carry out their duties, or neglect their professional development and are not sanctioned; and
- the training and development system, the supervision system, or the monitoring is compromised by poor attitude or inappropriate behaviour by the trainers or the supervisors, putting at risk the ethos of patient care.

1.2.4 Self-motivation

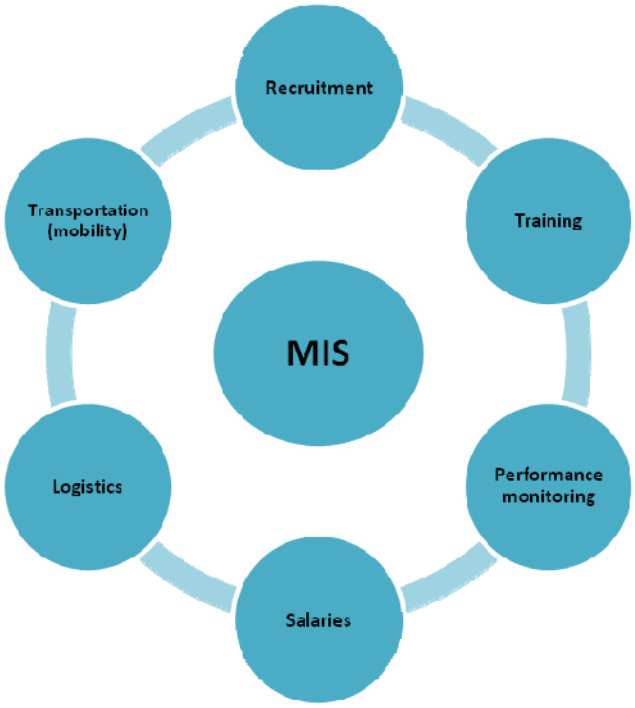
The systems are also important because they must reinforce the organisational socialisation of the LHW. The nature of LHW work means that an LHW needs to have a high degree of self-motivation, more than is reportedly found in the core public service. The LHW works from home (defined as her 'health house'), carrying out her duties in the community without day-to-day supervision. This self-motivation must be evidenced at the time of recruitment. It must be enhanced by her receiving the supplies she needs to do the job, and by her being paid. The opportunity exists for the Programme to reinforce this motivation and instil core values of client care in the implementation of its systems.

2 Systems under review

The Programme's systems being reviewed are: recruitment, training and development of LHWs; payment of LHW stipends; logistics; performance monitoring; transportation and management information.

They were selected on the basis of: being integral to the purpose of the LHWP, as described in the Introduction; being implemented throughout the organisation; and the evaluators being able to provide an indication of the level of performance, either from measure by the Quantitative Survey, from the Programme's information databases or from key informant interviews.

Figure 2.1 Systems included in the Systems Review



2.1 System description

For each system, there is:

- a statement of purpose;
- a list of KPIs, as outlined in the Strategic Plan and the PC-1;
- a brief overview of its operation;
- a description of how the system is monitored, the results from the 3rd Evaluation,[9] and what management information is available; and
- a summary of the planned systems developments intended for the period of the Strategic Plan (2003–11).

[9] This evaluation, the 4th Evaluation, has adopted a methodology that allows for comparison of results with the 3rd Evaluation.

2.2 System performance

This description is then followed by:

- results on systems performance, which include the systems development and measures against the performance indicators;
- reported causes of non-performance as identified by Programme Managers and stakeholders; and
- overall findings.

2.2.1 Baseline for systems performance

The Quantitative Survey for the 3rd Evaluation (2000) and the Finance and Economic Analysis (2002) provide a baseline for measuring the progress of the management and internal control systems. The earlier survey provided information on the performance of the:

- **Recruitment system**: in particular, the adherence to selection criteria;
- **Training and development system**: the knowledge of LHWs and LHSs, completion of core training, provision of refresher training;
- **Logistics system**: the level of supplies held by the LHWs, expired stock, and months that particular items had been out of stock;
- **Salaries and payments system**: the delays in payment, and the amount of payment;
- **Performance monitoring**: the frequency of LHS supervision visits; and
- **MIS**: while the previous Quantitative Survey did not directly assess the accuracy of the MIS, it did find that there were discrepancies in the LHW database, in respect of the number of working LHWs and in the central stock records.

2.2.2 Systems review process

The process for the systems review has been as follows:

- Information was gathered at the beginning of the evaluation period from interviews with a number of Programme managers, ex-Programme managers and FPOs on any significant system's developments since 2001, and whether systems were consistent throughout the country;
- The Quantitative Survey instruments that were used in the 3rd Evaluation were modified where necessary to take into account systems developments;
- Current systems performance was assessed using the results of the Quantitative Survey, the LHWP databases, the Finance and Economic study, and key informant interviews;[10]
- The performance assessment was presented to the Programme's managers and feedback received to provide an understanding of possible causes of systems failure;
- Findings were provided on systems performance for each of the systems; and
- The findings from the statistical modelling undertaken for the Survey Report were incorporated to identify which systems under the organisation's control, if strengthened or if performance improved, would contribute to increased outputs.

[10] The Quantitative Survey was conducted between July and November 2008. It was designed to ensure that the results from this evaluation could be compared with the results of the 3rd Evaluation.

3 Stakeholder interviews

In early 2008, the researchers met with the FPOs in two provinces; managers from the Programme, ex-managers, and other stakeholders who had been associated with the Programme for over five years. The interviewers asked about systems developments and how the systems currently operating were perceived.

Essentially, there was little reported change to the core design of the systems. Changes tended to be with regard to increased levels of activity (e.g. recruitment of LHWs and LHSs, mandatory refresher training for all LHWs, increased resources e.g. vehicles purchased, increased supplies, and release of funds leading to more timely payment of salaries). The overall perception of those working for the Programme was that performance should have improved because systems had improved. For those external to the Programme, a common concern was that the PC-1 and the Strategic Plan had not been fully implemented and that this, along with a high turnover of the national coordinator position and other management positions, would have had a detrimental effect on Programme performance at the community level.

The monthly meeting of the FPOs at the PPIU

The monthly meeting at the PPIU is chaired by the Provincial Coordinator and the Deputy Provincial Coordinator, with the remainder of the management team in attendance. The meeting agenda is the same each month, and each FPO presents information (in standard format) on the status of various systems in the districts that they monitor. They identify the main issues that are inhibiting Programme performance, discuss how to resolve these issues, and provide an update on the resolution of issues identified in previous months. In addition, they report on various performance indicators, which include: LHW reporting compliance (from the District Monthly Report – DMR), FLCF reporting compliance (from DMR), CPR (DMR), MMR (DMR), IMR (DMR), EPI (JKK), tetanus toxoid coverage (DMR), SBA (DMR), and an average of district performance.

The systems review team attended a monthly meeting in two provinces. Specific issues were: a District Nazim having, for the previous two months, refused to approve 24 drivers who had been recruited, which had resulted in vehicles not being able to be used for supervision; delays in Injectable Contraceptive training, due to LHWs being used on Polio days; trainers unavailable for LHW core training, as they were being used on a donor initiative; training in one district conducted without the knowledge or approval of the PPIU; field travelling allowances for LHSs without access to vehicles being delayed by nine months as PPIU does not have a budget, as the policy was that all LHSs should have access to vehicles after June 2007; delays in monthly Statements of Expenditure (SoEs) being submitted by the districts; logistics stock-outs of paracetamol syrup and antiseptic lotion, as the product that had been supplied had been declared substandard; some districts having problems with insufficient warehousing (due to Programme expansion); stationery unavailable for newly selected LHWs.

The FPOs were positive that: the **recruitment** process was more streamlined, with spot verification by the FPOs working to ensure adherence to criteria; **training** quality had improved, due to FPO monitoring, with regular training and training given in accordance with the agenda, attendance by participants, and claims for training payments submitted on time; **refresher training** was reported to be very successful in terms of trainings being held regularly, and quality of training being good. Refresher training was seen as improving skills and the quality of services provided by LHWs; **LHS supervision** has improved with: access to vehicles by FPOs and by LHSs; improved ratio of LHS to LHWs, and use of the supervisory checklist. The FPOs commented on their role in increasing the supervision of the LHS; encouraging the use of the HMIS; providing on-the-job training and support, and facilitating the DPIU in resolving problems; there were regular supplies from the PPIU to the DPIU and, from there, out to the health facility (with the exception of LHW stationery). The major improvement in one province has been the allocation of two pick-ups at the district level to distribute supplies; **Payment of salaries** was on time.

3.1 Systems and reported risks

Key systems risks that could lead to subversion of the Programme goals that were identified from these meetings and interviews were:

- insufficient management attention provided to the LHWP at the district and health facility level resulting in delays (**All systems**);
- inability by the Programme to bring consequences to bear for non-performance (**Performance monitoring**) and selection criteria being overridden (**Selection system**) due to political pressures;
- informal payments demanded, by those with authority, for release of funds (**Salary and Payments system**);
- informal payments given, or benefits provided, from suppliers of goods, resulting in acceptance of sub-standard goods (**Logistics system**); and
- vehicles being utilised improperly outside the Programme (**Transportation system**).

The Systems Review does not quantify these risks or identify individual cases of where incidences have occurred. The Systems Review provides an overall assessment of each system, with measures on indicators obtained primarily from the nationwide Quantitative Survey. Where the system is not performing, the Programme will need to undertake further investigation to identify causes and to mitigate risks.

4 Selection and recruitment system

'With LHWs recruitment there is political involvement. The politicians try to deviate from the selection criteria but the Programme doesn't let them. They have no commitment to the Programme and they don't know the aspects of the Programme. Even after a lot of discussion with them there is delay.' (District Coordinator)

4.1 Purpose

To allocate posts for LHWs and LHSs to applicants who meet the selection criteria and who, after completing the training programme, will be capable of successfully fulfilling the position.

4.2 Performance measures

- To have 100,000 LHW positions filled by 2005;[11]
- Each LHW position would have a catchment area with a minimum of 700 people; [12]
- To recruit sufficient LHSs to ensure a ratio of 1 LHS supervising 25 LHWs;[13] and
- For all LHWs and LHSs to meet the selection criteria in respect of:
  - education: minimum of 8 years', preferably matriculated;
  - age: between 20 and 50 years;[14]
  - residency: permanent resident of the area for which she is recruited; and
  - acceptable to her community.

4.3 In operation

4.3.1 Description

Recruitment targets During the period of this PC-1, the Programme planned to achieve the target of 100,000 working LHWs with 4,000 LHSs, giving a ratio of 1:25.

Attrition of LHWs in the PC-1 is assumed to be in the order of 5,000 LHWs leaving the Programme each year. To reach and maintain the target of 100,000 working LHWs, the Programme would be recruiting 50,000 LHWs. Attrition of LHSs is not covered in the PC-1, probably because the actual number of supervisors is so much fewer than planned. Assuming attrition at a similar rate to that of LHWs (5,000, per annum), then the number of replacement LHSs would be 200 per year. The Programme would, then, be recruiting almost 4,000 LHSs throughout the period of the PC-1.

[11] The PC-1, LHWP (p. 22), described two phases for implementation. Phase 1 was to be completed by June 2005, when there would be 100,000 fully-trained LHWs (87,600 funded under the PC-1 and 10,200 by ADB-funded projects). The target was obviously vulnerable to funding availability.

[12] The standard in the PC-1, LHWP, is that one LHW will be selected to serve a catchment area with a population of 1,000 residents. In difficult areas, the registration might be lower (e.g. 700) and, in densely populated areas, it might be 1,200.

[13] PC-1, LHWP: 36.

[14] PC-1, LHWP: 29. The LHW can be recruited at between 18 and 20 years of age only if she is married.

Table 4.1 Planned recruitment of LHWs and LHSs, 2003–08, including replacement for attrition

Year	Planned new positions for LHWs	Planned replacement of an average of 5,000 LHWs p.a.	Planned new positions for LHSs	Estimated replacement on average of LHSs p.a.
2003/04	15,000	5,000	1,793	200
2004/05	7,800	5,000	512	200
2005/06	2,200	5,000	288	200
2006/07	0	5,000	200	200
2007/08	0	5,000	200	200
Totals	**25,000**	**25,000**	**2,993**	**1,000**

Source: PC-1 (2003–08), LHWP, MoH.

Table 4.2 Selection criteria and process for recruitment of LHWs and LHSs

Position	Selection committee	Selection criteria	Selection process
LHW	• Health Facility: • Medical officer-in-charge (Chairman); • Women Medical Officer; • Lady Health Visitor (LHV)/Female Medical Technician (FMT); • Male Health Technician (MHT)/Dispenser; • Member nominated by the local community, preferably the locally elected Union Council/Nazim/ Councillor[15]	• Female, preferably married; • Permanent resident of the area for which she is recruited; • Minimum of 8 years' schooling, preferably matriculated; • Should be between 20 and 50 years old (18–20 years old only if she is married); • Preference given to women with previous experience in community development; • Willing to carry out the services from her home, which would be designated a 'health house'.	• Advertisement followed by short listing; • Interview/selection by the selection committee according to criteria; • Verification of documents and residential status by the LHWP (FPO/PPIU); • Appointment letter is issued on order from the Office of the EDO-H/DHO/DOH based on the recommendation of the Selection Committee of the health facility.
LHS	• The District head of the health department EDO-H/DHO (Chairman); • District Coordinator (Secretary); • Representative from the relevant PPIU; • Representative of the community, preferably the Elected Union Council Nazim/Councillor, etc.	• Female; aged 22–45 years; • Local resident of the area; • Education in order of preference: o LHV/Graduate; o LHW intermediate, with one year's experience as an LHW; o Intermediate; o Preferably one year's relevant experience.	• Advertisement in the newspapers, followed by short listing; • Interview/selection by the selection committee according to criteria; • Verification of documents and residential status by the selection committee; • Appointment letter is issued on order from the Office of the Executive District Officer Health (EDO-H)/DHO/after approval by the relevant PPIU.

Source: LHWP, MoH.

The recruitment system is well documented, with internal controls to ensure that selection criteria are met (summarised in Table 4.2).

Planning The District Programme Implementation Unit (DPIU) develops an annual 'micro plan', which is submitted to the PPIU, proposing the number of posts to be filled within their allocated positions. They have to ensure that each LHW post has a catchment area of a

[15] The involvement of the community and the health facility in the selection process was designed to increase the probability that the LHW will receive ongoing support from both these parties.

minimum of 700 people, and that she will be attached to a functioning health facility with trainers available (both male and female).

4.3.2 Monitoring and management information

Monitoring

3rd Evaluation results showed that the selection criteria had been met for the vast majority of LHWs. There were a few LHWs who were under 20-years-old and unmarried, 4 percent who were non-resident, and around 2 percent who admitted to not having had sufficient education.

The successful adherence to the criteria was attributed to the 'clean-up' operation organised by the Federal Programme Implementation Unit (FPIU) in 1997. This resulted in a large number of terminations of LHWs that did not meet the selection criteria, and sent a clear signal that the Programme had the authority and motivation to ensure adherence to the criteria. To tighten internal controls, the responsibility for the verification of documents and residential status was shifted from the DPIU to the PPIU. This has been the process since the fourth phase of recruitment of LHWs, conducted in 2000.

Monitoring The Strategic Plan emphasises the enforcement of recruitment standards through a continuous cycle of third-party audits.[16] The external evaluations on Programme performance, planned for 2005 and 2008, would be one source of information on compliance with recruitment standards.

Management information

Catchment area The Programme Status Pro forma (PSP), which is entered into the Management Information System (MIS), provides information on what population coverage the Programme is achieving. This information can be used by managers to indicate whether there is a problem with insufficient registrations, on average, by LHWs, within districts and at the provincial level.

Numbers of LHWs recruited in a year The main indicator requested from the MIS is the number of LHWs working.[17] The MIS records the number of LHWs working each month, the number in training, and a cumulative total of those who have left and those who have been terminated. It does not keep a direct record of the number of LHWs recruited each year. The main source of direct recruitment data is held at the district level, where it is used for micro-planning.

Selection against allocated posts The reporting on the progress of the selection process and any management issues arising occurs through the:

- verification exercise conducted by the Field Programme Officer (FPO) and district managers;
- FPO monthly feedback to the district, a report being submitted to the PPIU (copied to the FPIU);
- monthly reporting by LHSs at their monthly meeting at the DPIU;
- direct, often verbal, contact between the managers of the DPIUs and the PPIUs.

4.4 Planned systems development, 2003–08

The Programme did not consider the selection process, *per se*, to be an issue in achieving the targets in the recruitment of LHWs. The core selection system, including the criteria, was

[16] Strategic Plan, LHWP: 8.

[17] This indicator is used to assess whether the target of 100,000 working LHWs has been achieved. It appears to be the only key indicator that is monitored, both formally and informally, outside the Programme. The emphasis on just one key indicator can lead to perverse incentives, which are discussed in the section on the allocation process.

to remain unchanged. The challenge that the Programme faced was in expanding the coverage to underserved and poor rural areas.

4.5 System performance

4.5.1 Performance indicators

Ultimately, the target of 100,000 LHWs was almost achieved The Programme has recorded almost 71,000 working LHWs in mid 2003 (Table 4.3).[18] This number continued to fall in 2004, followed by a steady increase over the subsequent four years.

By June 2005, when 100,000 LHWs were to have been recruited, there were 83,280 LHWs on record. It was not until June 2008 that the Programme could record around 90,000 LHWs, including fewer than 1,000 in their first three months' training (Table 4.3).

Table 4.3 LHWs working and in training, FY 2003/04–2007/08 (including those funded by the RHP and WHP)

June	2003	2004	2005	2006	2007	2008
Working at end of FY, including RHP and WHP	70,738	69,690	78,595	85,620	87,119	89,125
LHWs in training	4,300	3,208	4,685	1,293	2,047	949
Total of LHWS working and in training	**75,038**	**72,898**	**83,280**	**86,913**	**89,166**	**90,074**

Note: The record is taken from the month of June, the end of the financial year. It includes those funded under RHP and WHP.

Source: PSP database January 2009, LHWP, MoH.

Insufficient funding to achieve target recruitment A simple explanation for the Programme being unable to reach the target number of LHWs is insufficient funding (Table 4.4). The funding required increases as a function of each working LHW. The LHWP's fixed costs are low. The budget forecast (FYs 2003/04–2007/08) was based on funding for 100,000 LHWs and 4,000 LHSs. However, by the end of this period the Programme had only received 87 percent of their allocated funds. Each year the budget allocation and releases were less than the Programme requested. In addition to releases that were lower than the request, the LHW stipend had doubled. Salary increases had been budgeted for, but this was on the extraordinary orders of the Prime Minister and the President. Salary increases were awarded and, in June 2007, the Programme received additional funds.[19]

Table 4.4 Comparison of budget and expenditure for the LHWP (Rs. million)

	2003/04	2004/05	2005/06	2006/07	2007/08	Total
PC-1 request	4,493.591	3,913.643	4,080.083	4,403.134	4,643.050	21,533.500
PSDP provision (budget allocation)	2,600.000	3,430.780	3,880.000	4,962.343	4,892.000	19,765.120
Funds released	2,434.012	3,088.288	3,880.000	4,962.342	4,634.870	18,999.510
Total expenditure	**2,427.017**	**2,951.117**	**3,862.182**	**4,945.734**	**4,632.628**	**18,818.680**
Expenditure/budget allocation (%)	93	86	100	100	95	95
Expenditure / release (%)	100	96	100	100	100	99
Expenditure/PC-1 request (%)	54	75	95	112	100	87

Source: LHWP, MoH.

[18] 4,000 fewer than the number recorded in the PC-1.

[19] See the Finance and Economic Analysis Report, Oxford Policy Management, August 2009.

Catchment area of the LHW The survey found that 9 percent of LHWs had registered fewer than 700 people, which is the minimum number for a catchment area (Table 4.5). The majority of LHWs have between 700 and 1,100 people registered, with an average of 919. This is significantly fewer than the average of 980 from the previous evaluation. The average number of households registered has also fallen from 145 to 131. The problem of low registration of households and people is particularly acute in Balochistan, where the average number of households registered is 86, and there are 64 percent of LHWs with fewer than 700 people registered.

Table 4.5 Number of persons registered with an LHW

Number of persons registered with the LHWs	Percentage
Fewer than 700	9
701–1,000	55
1,001–1,100	24
1,101–1,200	6
More than 1,201	6
Total	**100**

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Reduction in the ratio of LHS/LHW In June 2003, there were approximately 71,000 LHWs and 2,007 LHSs, giving a ratio of 1:35 (Table 4.6).[20] Recruitment of LHSs was not keeping pace with the rapid recruitment of LHWs that had occurred between 2001 and 2003. By 2005, the ratio of 1:25 had been achieved by many of the provinces/areas. The Punjab had succeeded in reducing the ratio from 1:43 to 1:28.

Table 4.6 Ratio of LHS to LHWs by province/area, June 2002–June 2008

June	Punjab	Sindh	NWFP	Balochistan	AJK	FANA	FATA	ICT
2002	40	30	34	40	31	29	53	33
2003	43	29	36	25	29	29	38	35
2004	39	29	35	**22**	30	29	35	35
2005	28	**25**	27	**25**	**24**	**25**	28	**25**
2006	28	26	27	**23**	**24**	**24**	32	**21**
2007	27	**24**	**20**	**22**	26	**25**	28	**22**
2008	26	**23**	**25**	**23**	**22**	**21**	27	26

Notes: Bold indicates ratio of 1:25, or lower, has been met.

Source: PSP database January 2009, LHWP, MoH.

The Quantitative Survey results, from the first quarter of the FY 2008/09, found the ratio of LHS to LHWs had dropped to 1:23, reduced from 1:27 in the previous evaluation (Table 4.7). However, 10 percent of LHSs are still supervising over 30 LHWs.

[20] PSP database, FPIU, January 2009.

Table 4.7 Number of LHWs assigned for supervision

Number of LHWs/LHSs	Percentage
Up to 20	40
21–25	32
26–30	18
More than 30	10

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Selection criteria are being complied with Age and education criteria are being met. The average age at which an LHW is recruited is 25 years old. Overall, LHWs had significantly higher educational qualifications than in 2000. Only 1 percent had fewer than eight years' education, mainly employed in urban areas.

In most of the provinces, the Programme has done well in adhering to LHW selection criteria. On average, only 3 percent of the LHWs did not meet residency criteria. Essentially, in NWFP and the Punjab all LHWs are meeting the criteria. Unfortunately, in Sindh 11 percent of the LHWs were found to be not residing in the village they were serving. This violates a core selection criteria of the Programme.

The LHW is to be acceptable to the community The results from the Community Survey were very positive, with over 90 percent of respondents saying that there had been improvements in health due to the LHWs' work; that LHWs had generally improved people's lives in the community, and that women were usually respected after becoming LHWs. In the previous evaluation, households that had a child with diarrhoea who had not consulted the LHW often said it was because she was not available or was unhelpful. This response has now reduced considerably, which could also be an indication of the improved integration of the LHW with her community.

4.6 Reported causes of non-performance

- Insufficient funds released to enable recruitment and funding of the targeted number of LHWs;
- Difficulty in gaining approval from the Planning Commission/Ministry of Finance (MoF) to recruit for attrition;
- Government ban on public service recruitment in 2003/04, and also since January 2008;
- Patronage and political interference overriding due process (e.g. delays in recruitment caused by difficulty in achieving sign-off by the District Nazim on suitable applicants; political pressure leading to appointments of non-resident LHWs, or leading to the Programme not being given authority to conduct 'clean-out' operations);
- Lack of applicants, due to cultural constraints and/or insufficient women who meet the selection criteria.

4.7 Findings

1. **Compliance with selection criteria** The Programme has a core organisational competence in the selection of LHWs. Against many odds, it has managed to maintain compliance with selection criteria, the major exception being Sindh with 11 percent non-residency. It is important that the Programme regains control over its selection process in Sindh, as it affects the reputation of the Programme and could have detrimental long-term effects on performance;

2. **Insufficient budget for 100,000 fully-funded LHWS** The budget forecast (FYs 2003/04–2007/08) was based on funding for 100,000 LHWs and 4,000 LHSs. However, by the end of this period the Programme had only received 87 percent of allocated funds. Each year the budget allocation and releases were less than the Programme requested;
3. **Catchment areas** There appears to be a problem with providing a catchment area with a population of 1,000 people for LHWs to register. The average number of people registered has fallen from 980 in 2000 to 919 in 2008. This could be due to saturation of coverage in areas where the Programme is already established: 9 percent have 700, or fewer, people registered;
4. **Ratio of LHS to LHWs** The target ratio of LHSs to LHWs was 1:25. The ratio in 2008 was 1:23, down from 1:27 in 2000. There was delayed recruitment of LHSs. Delayed recruitment results in lower levels of supervision at the time that newly recruited LHWs started working;
5. **Community acceptance** The selection system is recruiting LHWs who are acceptable to their communities. The results from the Community Survey were very positive, with over 90 percent of respondents saying that there had been improvements in health due to the LHWs' work; that LHWs had generally improved people's lives in the community, and that women were usually respected after becoming LHWs.

5 Training system

5.1 Purpose

- To ensure the LHWs and the LHSs are taught the basic necessary skills and knowledge to provide a high quality service;
- To allow for the implementation of new strategies and advances in primary health care, where appropriate, through LHWs;
- To induct and socialise LHWs and LHSs in the values and objectives of the role;[21] and
- To facilitate integration and collaboration between the health facility and the LHWP by using health facility staff as trainers.

5.2 Performance measures

- For 90 percent of working LHWs to score over 80 percent in the Knowledge Test;[22]
- For all working LHWs with over one year's experience to have:[23]
  - completed their initial three months' training and one year's task-based training;
  - attended 15 days' refresher training per year from 2004;
  - continuous training at their monthly meeting at the health facility;
  - received performance feedback on their work from a supervisor; and
  - been given additional training on common problems related to maternal health ('training on safe motherhood');
- For all working LHSs with over one year's experience to have completed their initial three months' training and nine months' task based training;[24]
- To have a sufficient number of trainers available to train recruited LHWs at the facility level, to train LHSs at the district level, and to provide annual refresher training to LHWs.[25] This was estimated to be 9,000 trainers;
- For there to be no transfers of district or health facility staff for the 15 months' core training for LHWs;[26]
- To keep the core curriculum up to date, reflecting any policy changes in priorities on LHW service provision (e.g. EPI, TB Dots, training on safe motherhood).[27]

5.3 In operation

5.3.1 Description

High-quality functioning of the training system is critical to the success of the LHWP. The training of tens of thousands of LHWs over the past 15 years has made provision of training, along with the selection of LHWs, a core organisational competency of the LHWP. By the

[21] The initial three-month training period is reportedly the time when new recruits, on the understanding that this is a serious job, take the decision on whether or not to leave.

[22] The Knowledge Test constructed for the 3rd Evaluation is based on the LHWs core curriculum. The performance standard comes from the Strategic Plan: 21.

[23] PC-1, LHWP: 29–31.

[24] PC-1, LHWP : 37–8

[25] PC-1, LHWP: 31–2.

[26] The Programme is required to train an adequate number of health facility staff in all districts so that, if transfers occur at facility level while LHWs are in training, there will be other staff available to continue the training programme.

[27] Strategic plan, LHWP: 20.

nature of their work, it will never be possible to monitor LHWs as closely as a factory worker, or even a teacher in a school. It is important for professionalism and for the safety of clients that an LHW is competent. This competence is built from her knowledge and skills gained from:

- initial training, (including the task based training);
- ongoing feedback from LHS visits;
- continuous training provided at monthly meetings;
- refresher training courses; and
- the skills developed through experience in the field.

The training system is integral to the performance of the LHWP. It lays the basis for performance of LHWs and their supervisors and their socialisation into the culture of the programme. All staff members have some responsibility for the success of this system.

Development of LHW competence through training The Strategic Plan gave high priority to 'additions to and improvements in the Programme's training systems aimed at reinforcing knowledge acquisition and retention through implementation of refresher training and testing systems'. Training was to be used to support: health behaviour changes and community mobilisation, improved supervision by LHSs, and training in safe motherhood.[28]

Responsibilities/decision-making The MoH and the FPIU are responsible for curriculum development, overall organisation and coordination of training delivery, and the training of master trainers. All training of LHWs must be approved by the FPIU. This policy is designed to protect the quality of service provision, the integrity of the monitoring and supervision system, and the understanding of the role and services to be provided by the LHW.

The PPIU is responsible for the organisation and monitoring of training for the province, and training of district master trainers. The Provincial training coordinators meet with the Federal training coordinators annually to plan the training for year ahead. The DPIU is responsible for the training of facility trainers, and the training of LHWs and LHSs.

Organisational structure While there are training coordinators at the FPIU (including a consultant funded by UNICEF at the FPIU) and the Provincial Implementation Units (PIUs), staff throughout the organisation are involved in training or in monitoring training.

Budget and flow of funds Costs are kept to a minimum by using the district health staff to deliver the training to the LHSs (at the district) and the LHW (at the health facility). The training budget is based on the estimated number of LHWs to be recruited and working LHWs. In the PC-1, it is included under the following headings:

- Printing (training and other materials);
- Training (10,000 LHWs: 3 months' stipend); and
- Workshop (material and training costs). Costs are kept to a minimum by using the district health staff to deliver the training to the LHSs (at the district) and the LHW (at the health facility).

Incentives to trainers During the 15 months' core training of LHWs, the health staff who are trainers are paid a training allowance equivalent to 20 percent of their salary. After the core training is complete this allowance stops, but these trainers are paid 200 Rs. per day when they provide refresher training.

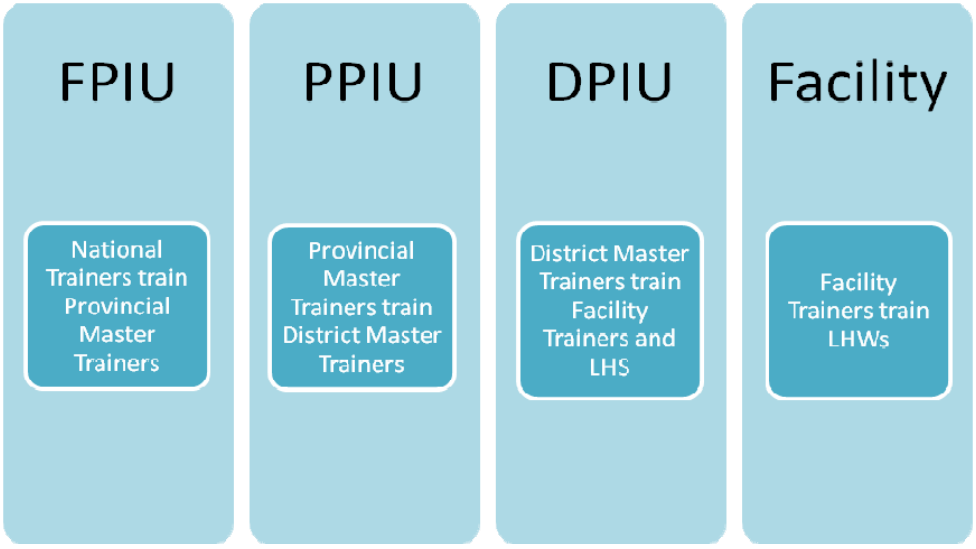
[28] Strategic Plan and PC-1.

Training delivery is organised through a trainer training system (Figure 5.1).[29] This provides the necessary exponential increase in trainers required at the health facility level to train LHWs.[30]

More important than cost efficiency is the potential of using health facility staff to establish the LHW as an important resource in aiding the health facility with their stated goals of improving primary health care in their community.

Transfers of staff at the facility and district level mean there is a need to replenish the pool of available trainers. This is particularly important now that the Programme has introduced 15' days refresher training for LHWs each year.

Figure 5.1 Trainer training approach



Training plans Each DPIU produces a training plan for the training of trainers and LHSs, and for LHW refresher training. This plan is approved by the PPIU after the annual planning meeting of Provincial Training Coordinators at the FPIU. The DPIU has to ensure there are sufficient trainers available before commencing the training of LHWs. The EDO-H/District Officer of Health (DOH) should ensure that at least two members, of whom one should be female, are present at the facility before the initiation of training. A female trainer is considered to be important for teaching reproductive health to LHWs.

Training quality The Medical Officer-in-Charge is responsible for reporting any problems or concerns they have regarding LHW training to the DPIU. There should also be a quarterly district meeting of all facility trainers. The Provincial and Federal Training Coordinators monitor training sessions on the basis of the DPIU training plans, using a standard checklist. FPOs also report on training issues at the provincial monthly FPO meetings, which are attended by training coordinators. Training is on the agenda of the quarterly provincial meetings with District Coordinators (DCs).

[29] The exception is in some of the districts included in the Punjab PRSP programme where, due to facility staff not being made available for training since 2006, some LHSs were providing refresher training.

[30] Training of LHWs occurs in batches of 10. LHSs can be trained individually or in groups.

5.3.2 Provision of training

Training for LHW The LHW receives core training over a 15-month period which is then reinforced and extended through continuing training at her health facility and through refresher trainings:

- **Core training** LHWs are provided training from the facility (FLCF) where they were recruited. LHSs receive training at the district from the DPIU. New recruits, both LHWs and LHSs, are provided with 'integrated' classroom training before beginning work in the field using the LHWP curriculum and training manuals. Integrated training for the LHW lasts for three months and takes place five days a week at the FLCF. The LHW then begins 'task-based' training, when she has three weeks' work in her community, followed by one week's classroom training each month for 12 months. The training is job-specific, focused on carrying out instructions and procedures related to LHW work;
- **Ongoing training** All LHWs attend a monthly educational session at their health facility; and
- **Refresher training** The PC-1 specifies 15 days' refresher training annually.

Training for LHSs Prior to 2004, LHS core training was provided in three phases: two months spent in the classroom; four months spent training two weeks at the DPIU and two weeks working in the field; and six months spent training one week at the DPIU and three weeks working in the field. The current arrangement is three months' classroom training followed by nine months' spent training one week per month at the DPIU and three weeks in the field. The LHS also attends refresher training and, in some cases, are trained as trainers.

Trainer training Master trainers is trained for nine days, followed by three days of assessment. There are between five and seven Provincial Master Trainers assigned for each province. Provincial Master Trainers train the district-level Master Trainers who, in turn, train the facility-level trainers.

5.3.3 Monitoring and management information

Monitoring

3rd Evaluation results In 2000, there appeared to be no shortage of trainers to teach the core curriculum both to LHWs and LHSs. All LHWs had received their basic training, and 95 percent had received at least some additional training. Only one quarter had received training at their last monthly continued education session, although two thirds reported having received ongoing training at some stage. Training had been provided primarily by the medical doctor in charge, the Lady Health Visitor and the dispenser. The LHSs had also received their basic training, mainly from medical doctors (male and female) and Lady Health Visitors. Supervision levels were high, with 96 percent of LHWs having had a supervision meeting with their LHS in the two months prior to the survey.

The LHWs were tested on their core curriculum and were found to have a reasonably good level of general clinical knowledge, but there were weaknesses in their knowledge of vaccination schedules, correct dosage of medicines, ability to read and interpret growth cards, and their knowledge of treatments in terms of presented case studies.

Monitoring The monitoring of the training system is conducted internally through the Programme's monitoring unit and externally through evaluations.

Management Information

Training session information sheet (TSISs*)* A record of trainers and participants is produced for each training session. Hard copies are sent to the PPIU, which enters the data electronically and sends it to the FPIU, where it is entered into the Programme database.

Trainer's database The PC-1 required the Programme to maintain a database of the various levels to which trainers had been trained for use by the training coordinators at federal and provincial levels when producing training plans for the following year.

5.4 Planned systems development, 2003–08

In the Strategic Plan, it was proposed that there be:

- a focus on quality control of training;
- strengthening of refresher training, and introduction of testing systems to ensure that all LHWs reach the same levels of knowledge as possessed by the best-performing current LHWs;
- additional skills training to support health behaviour changes through development of the curriculum for client needs-based support and supporting supervision systems;
- a review of the role that other organisations (the Education Department, NGOs, and so on) might play in supporting training systems, particularly with regard to providing an accelerated education course in regions where few eligible women meet the educational standards.

5.5 Systems performance

5.5.1 Performance indicators

Knowledge score improved The Programme target was for 90 percent of LHWs to score over 80 percent in the Knowledge Test. In the 4th Evaluation, 31 percent of LHWs scored over 80 percent in the Knowledge Test, compared with 16 percent in 2000 (Table 5.1). The average score of 74 percent was up five points from the 3rd Evaluation. The core knowledge of LHSs has also improved, with 44 percent scoring over 80 percent in the Knowledge Test, compared with 27 percent in 2000.

However, around 11 percent of LHWs scored below 60 percent. LHWs in Balochistan had significantly lower levels of knowledge, at 64 percent on average.[31] The fault cannot be with the training system, *per se*. It is important that the Balochistan PPIU take responsibility for improving the level of LHW knowledge in their province.

Another Programme target for improved knowledge was that all LHWs have a knowledge score of over 70 percent. This was considered a minimum acceptable standard. Two thirds of LHWs achieved this target.

LHS knowledge has also improved. The average score was 78 percent, and 44 percent of LHSs scored over the Programme target of 80 percent in the Knowledge Test. This compares with 27 percent in the 3rd Evaluation (Table 5.1).

However, despite higher levels of training now being provided, the survey showed that there were still gaps in LHW knowledge. LHW clinical knowledge has improved since the 3rd Evaluation, but there is still a need for further improvement. There has been a noticeable improvement in their knowledge of the EPI vaccination schedule. While many gave correct answers to basic questions, an appreciable fraction gave incorrect answers in areas that are central to their work.

[31] Quantitative Survey Report, August 2009.

Table 5.1 Comparison of LHW and LHS knowledge scores between 2000 and 2008

Distribution of score	LHWs		LHSs	
	2000 (%)	2008 (%)	2000 (%)	2008 (%)
Up to 70	49	33	28	14
71–80	35	34	45	43
81–90	16	31	27	40
Over 90	0	2	0	4
Mean score	**69**	**74**	**74**	**78**

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Training of LHWs completed All LHWs have completed their initial three months' training, and more than 95 percent have attended the task-based training that follows (one week per month for a year).

Refresher training Almost all LHWs had had some additional training, including refresher training. In 2007–08, the Programme had planned for refresher training courses in the optimal birth spacing interval (OBSI) (five days),[32] Child Health (three days), Injectable Contraceptives (three days), and Revised MIS tools (four days).

The majority of LHWs attended refresher trainings in OBSI, Child Health and Injectable Contraceptives in 2007/08. Less than half the number of LHWs attended training in the Revised MIS tools in the previous year; however, 65 percent had a manual indicating that they would have received training in the previous years. In addition, a large number of LHWs attended refresher training in Counselling Cards and around one fifth attended Food and Nutrition trainings (Table 5.2). In some cases, refresher training is substituted by the district due to printing material not being available for the planned training courses. Even so, it is apparent that many LHWs are now attending a broad range of refresher training courses. The Programme should review refresher training to ensure this is focused on areas where LHW knowledge is weak (e.g. growth monitoring, diarrhoea treatment, and pneumonia).[33]

Almost all districts reported holding refresher training courses, as planned, in: Child Health, Injectable Contraceptives, Revised MIS tools, OBSI, and Counselling Cards. In the few cases when training did not take place, it was mainly due to training material not being available.

The LHWs also reported attending a wide range of other additional training courses, including: TB DOTS, measles, training on eye diseases, breastfeeding, tetanus toxoid immunizations, iodized salt, and the dental health baseline health survey. There was some variation between provinces.

[32] OBSI and Injectable Contraceptives are, in part, refresher trainings in family planning knowledge and skills. It is possible that LHWs who reported having been on a family planning training course had attended either OBSI or Injectable contraceptives, or both.

[33] Quantitative Survey Report, August 2009: 62.

Table 5.2 Percentage of LHWs attending refresher training in 2007/08, by province/region

	Punjab	Sindh	NWFP	Balochistan	AJK/FANA	Overall
Child Health	83	85	88	59	38	81
Injectable Contraceptives	71	57	55	35	68	63
Revised MIS tools	44	51	49	17	50	45
OBSI/Family Planning	70	71	76	69	69	71
Counselling Cards	70	82	77	72	37	73
Food and Nutrition	18	15	26	17	2	18

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Additional training of LHWs by LHSs Structured feedback for development purposes can be provided by the supervisor discussing the results of her assessment using the supervisory checklist. Almost 80 percent of LHWs reported their supervisor using the supervisory checklist during supervision meetings. Almost one third of LHSs reported that at least one LHW had scored less than 60 percent in the previous year (which is considered unacceptable by the Programme), and that they had discussed this with the LHW. In addition, the supervisor might follow up with additional training (either on the job or through the training system), or discuss the case with the DC or Assistant District Coordinator (ADC). This is more likely when the performance was less than 60 percent for three consecutive months (refer also to the Performance Management System).

Training of LHSs completed Almost all LHSs have received their initial training, and more than 76 percent had received all the expected training (initial and task-based); 80 percent of LHSs have received some additional training during the course of their employment.

Sufficient number of trainers The training system has produced sufficient trainers to ensure that, essentially, all LHWs and LHSs have completed their initial training. At the district level, 50 percent of the EDO-Hs, almost 75 percent of the DCs, and over 80 percent of the ADCs are master trainers. Most districts in the previous year held refresher training courses in Child Health, Injectable Contraceptives, revision of MIS tools, and OBSI, which indicates an availability of trainers.

LHWs have completed their training, but not all of them will have had a female trainer. Almost 20 percent of LHWs reported not having been trained by a women doctor, a Lady Health Visitor or a female medical technician. The highest proportion of LHWs in this position were from Sindh (Table 5.3). AJK/FANA also appears to have greater difficulty in providing female trainers. While it is not common practice, in some instances districts have used LHSs to conduct initial training.

Table 5.3 LHW training that was provided by at least one female trainer

	Punjab	Sindh	NWFP	Balochi-stan	AJK/FANA	Overall
At least one female trainer (%)	90	55	96	92	80	81
Not trained either by an LHV, a female doctor or a female medical technician (%)	10	46	4	8	20	19
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Database of trainers The PC-1 also required the maintenance of a database of staff trained to various levels. The PSP database records how many district and facility trainers are

available. This information is updated monthly and enables the Programme to judge how many trainers need training in order to meet recruitment plans and refresher training.

There have to be two trainers present before training can be conducted at a health facility, and one of these must be female. The central PSP database provides information on the availability of trainers, but not on their gender (Table 5.4). However, this information is presented at quarterly review meetings at the federal and provincial levels. In 2003, the Programme was operating in 3,880 facilities and had a ratio of three trainers per facility. In 2008, there were 4,721 health facilities with LHWs, so the ratio had fallen to 2.6 trainers per facility. The analysis by province/area indicates that Sindh could not possibly have had sufficient trainers at this time, and neither could FANA if they were planning to conduct refresher training.

Table 5.4 Number of facility trainers per facility, by province, June 2008

June 2008	Punjab	Sindh	NWFP	Balochi-stan	AJK	FANA	FATA	ICT
Number of facility trainers	5,962	1,482	2,027	396	254	114	215	50
Number of facilities	2,628	846	743	200	126	94	65	19
Average number of facility trainers/facility	2.3	1.8	2.7	2.0	2.0	1.2	3.3	2.6

Source: PSP database January 2009, LHWP, MoH.

Was the Programme able to provide 9,000 trainers? There is no record of how many trainers were trained under this PC-1. There is a trainer training budget estimated in the PC-1 (of Rs. 145.260 million). The PSP database records a net increase of 482 District Master Trainers from 475 in 2003 to 957 in 2008. The number of Facility Master Trainers increased by 463 from 10,037 to 10,500 during the same period. The database does not tell us how many trainers were recruited, lost through attrition, or trained (Table 5.4).[34]

Overall training budget The Programme had a budget of Rs. 735 million for all capacity development for the period June 2003–June 2008. Of this, Rs. 711 million had been spent by June 2008. The training budget is only 3.76 percent of Programme expenditure. It is the main area receiving support from development partners, particularly with regard to pilot training and printing.

Table 5.5 Comparison of number of trainers available, by level and province, June 2003 and June 2008

Province/ Area	District Master Trainer			Facility Master Trainer		
	2003	2008	Increase/ decrease	2003	2008	Increase/ decrease
Punjab	183	479	296	5,419	5,962	543
Sindh	89	146	57	1,505	1,482	-23
NWFP	93	145	52	2,107	2,027	-80
Balochistan	53	113	60	423	396	-27
AJK	28	27	-1	212	254	42
FANA	4	17	13	107	114	7
FATA	18	26	8	198	215	17
ICT	7	4	-3	66	50	-16
Total	**475**	**957**	**482**	**10,037**	**10,500**	**463**

Source: PSP database January 2009, LHWP, MoH.

[34] The PC-1 indicated that, by 2003, there were 8,000 trainers who had been trained by the Programme. The numbers here suggest there were significantly more, with 14,518 at the district and facility level.

Transfers of trainers during training The Programme does not record this information.

Core curriculum kept up to date The Programme developed their core curriculum during this period, using a consultative and iterative process (Table A.1).

System development

Strengthening of refresher training and introducing testing systems to increase the knowledge of the LHW In the previous year, a wide range of refresher trainings was provided to LHWs. Specifically, MIS refresher training appears to be an important determinant of LHW performance levels, perhaps because it focuses the LHWs on the services that they should be delivering and motivates them to deliver, as they perceive their performance is being monitored.

Additional skills training The Programme has provided additional skills training (Annex A), through curriculum development, refresher trainings, and increased supervision (see performance monitoring system: pp. 7 and 8).

Quality control of training Qualitative evidence suggests that maintaining quality is a difficult task as, unless trainers are intrinsically motivated or committed to providing improved primary health care, they do not perceive there to be strong incentives for training. Training quality will become more important as the Programme expands into more difficult areas.

Accelerated education courses While a decision was taken in 2007, through the Technical Committee on Innovation (TCI), that courses would be conducted in partnership with the Allama Iqbal Open University, there were no accelerated education courses held during the course of this PC-1.

Improving knowledge

Factors that contribute to improved knowledge scores include: duration of service, level of education, marital status, exposure to media, level of knowledge of the LHS, being in a district where the facilities have a specific person with responsibility for overseeing LHWP activities and who meets regularly with the DPIU. LHWs with over 10 years' service have a score of 3.6 percent higher than average, and LHWs with higher levels of education have a score of 1.7 percent higher than average.[35]

Knowledge is also higher amongst those LHWs who received training at their last monthly meeting at the health facility, and for those who attended the Food and Nutrition training in the previous year.

Counselling Card Refresher Training However, the most significant improvement is shown by LHWs who have the Counselling Cards Refresher Training manual (which they will have received when attending a training course). These LHWs have considerably higher knowledge scores (6 percent higher than average).[36]

Duration of service, being older, and having received the required training are factors that increase LHS knowledge scores.

5.6 Reported causes of non-performance

- **Shortage of suitable trainers** for expansion into health facilities without LHWs has been noted as being a problem.[37] However, this is not a reason for delay in holding training courses at health facilities once LHWs have been appointed;
- **Training materials not available** DCs stated that the main reason for delays in training was due to training material not being available. Delays in release of funds to

[35] See Quantitative Survey Report, August 2009.

[36] The Counselling Card refresher training covers core topics of the LHW curriculum; birth preparedness, nutrition during pregnancy, antenatal and postnatal care, as well as family planning. The counselling cards themselves are visual aids that the LHW then uses with her clients.

[37] In a recent draft working paper prepared by the LHWP, they noted that the reason for not initiating the Programme in 4,000 functioning health facilities was the non-availability of appropriate health staff, especially female health workers, for training LHWs.

pay for printing results in training having to be scheduled for the second half of the year;
- **Inefficiencies in other systems can lead to delays** For example, selection of LHWs, printing supplies, and training allowances;
- **Insufficient incentives for high quality training** There are few sanctions that can be applied to health facility personnel if training is not up to standard;
- **Unapproved training programmes** LHWs have attended unapproved training programmes, causing a risk to quality control and to the perception of the role of the LHW, both by the community and herself; and
- **Contracting out the management of the Basic Health Units** This has leading to cases of trainers not being made available by the contractor for the trainer training of facility staff. There have also been examples where facility staff members were no longer permitted to train LHWs. Some of these issues have been resolved in some districts, but the experience does show up the risks of detaching the LHWP from the core health service provision.

5.7 Findings

1. **Professional knowledge and skills** The LHWP has continued to invest in the professional knowledge and skills of the LHW. The knowledge score of the LHW and her supervisor has increased since 2000. The average score in the Knowledge Test for LHWs was 74 percent and, for LHSs, 78 percent. Knowledge scores were higher in NWFP and AJK/FANA for both LHWs and LHSs;
2. **Programme target** The Programme target was for 90 percent of LHWs to score over 80 percent in the Knowledge Test. There are now 31 percent of LHWs who scored over 80 percent in the Knowledge Test, compared with 16 percent in 2000. Another Programme target was that all LHWs have a knowledge score of over 71 percent. Two thirds of LHWs achieved this target;
3. **Low levels of knowledge** However, 11 percent of LHWs scored less than 60 in the Knowledge Test and LHWs in Balochistan had considerably less knowledge with an average score of only 64 percent. The Programme needs to address this issue as lack of knowledge is a risk for the LHWs clients. The fault cannot be with the training system per se. It is important that the Balochistan PPIU take responsibility for improving the level of LHW knowledge in their Province;
4. **Contributing factors** Duration of service and level of education contribute to the level of LHW knowledge. Knowledge is also higher amongst those LHWs who received training at their last monthly meeting at the health facility, and for those who attended the Food and Nutrition training course in the previous year. However, a significant improvement is gained through attending Counselling Card refresher training. LHWs that have the Counselling Card manuals have considerably higher knowledge scores;
5. **Refresher training** can make a significant difference to knowledge and performance, depending on the topics and the training materials. Counselling Card refresher training is improving the level of knowledge, and Revised MIS tools refresher training significantly improves performance;
6. **Trainer training** Essentially, the system has remained unchanged during this PC-1. It continued to deliver core training of LHWs and LHSs, using the trainer training model;
7. **Training system** The training provided for the expansion of the Programme between 2003 and 2008 was managed in a similar manner to previous expansions. The system increased its throughput with a substantial programme of refresher training;

8. **Quality of training** The quality of training will become more important as the Programme expands into difficult areas. It has to improve in order to substitute for the years of LHW experience and education. The Programme needs motivated trainers who prepared to improve the quality of their training. The solution will need to have both incentives and sanctions;
9. **Cost of training** Training expenditure is low, at just 3.76 percent of the total expenditure. Additional budget to increase the quality of training might well be justified;
10. **Curriculum development** While the core system of delivery through trainer training remains, there has been conservative curriculum development reflected in the core curriculum and the refresher training modules;
11. **Keeping the Programme focus on the role of the LHW and scope of services** The Programme mitigates the risk of enthusiastic stakeholders driving change by employing an incremental approach where the change is clearly tied to the role of the LHW and the services she provides (refer to Management Review);
12. **Unapproved training programmes** LHWs have attended unapproved training programmes, causing a risk to quality control and to the perception of the role of the LHW, both by the community and herself;
13. **Contracting out the management of the Basic Health Units** This had lead to cases of trainers not being made available by the contractor for the trainer training for the facility staff. There have also been examples of facility staff members no longer being permitted to train LHWs. Some of these issues have been resolved in some districts, but the experience does show up the risks of detaching the LHWP from the core health service provision;
14. **Contributing role of development partners** Amongst development partners, the Programme's training system appears to have the strongest relationship with UNICEF and UNFPA, both working in areas of Mother and Child Health and Family Planning. In addition to supporting pilots and refresher training courses, these partners also sponsor two long-term consultants to the Programme, who have been influential in the development and maintenance of the integrity of the training system; and
15. **Risk to the training system** There is some anxiety that the training and inspection systems are very reliant on the dedication of these two long-term consultants, and that the Programme has not succeeded (and, with frequent transfers of staff, is unlikely to succeed) in developing their successors. The view of the evaluation team is that the main risk is not to the training system *per se*, as the system is not complex. Rather, the risk is in losing the long-term advisors who act to protect the integrity of the system. This risk could be mitigated by stronger Programme leadership; the functioning of the oversight and management committees, who would support the Programme's values and strategic directions; and by retaining senior managers on the merit of their performance.[38]

[38] This is explored further in the Management Review, August 2009.

6 Logistics management system

'The LHW through her limited monthly supply of essential drugs is able to treat simple illnesses, such as diarrhoea and minor cases of upper respiratory infections, which together constitute the cause of mortality for more than 60 percent of the under five age children.'[39]

6.1 Purpose

To create an efficient ongoing supply system in order to assure the regular delivery to the LHW of essential drugs, vaccines, and family planning materials that are fit for purpose.[40]

Performance measures

- No medicines/contraceptives have been out of stock for more than two months for 90 percent of the LHWs;[41]
- Percentage of expired stock being held in either DPIU stores or LHW kits; and
- LHW basic equipment and administrative materials replaced in accordance with the standards laid down in the PC-1.

6.2 In operation

6.2.1 Description

According to the PC-1, LHWs are to be provided with a limited range of inexpensive essential drugs for common health problems. LWS supplies of contraceptives and drugs are kept in a bag (the LHW kit), and are replenished each month when she attends her monthly meeting at the health facility.

The total budget for the purchase of medicines, contraceptives, and non-drug items in the PC-1 for the period 2003–08 was Rs. 5,461.421 million.[42]

The supply system has to ensure that there is timely supply of drugs and non-equipment supplies to the LHW, or risk the quality of the service she can provide and damage to her professional reputation. The system, developed by the Programme, is described in the logistics manual.[43] A summary of the responsibilities for various organisational levels and the logistics system follows and is also illustrated in Figure 6.2.

Procurement of supplies for the Programme is through the Ministry of Health, using national competitive bidding procedures.[44] In 2004, a Public Procurement Regulatory Authority (PPRA) was established under the control of a division of Cabinet. They supported the development of the current procurement guidelines, and are responsible for auditing the paper trail of the procurement process. The Auditor General is responsible for audits of the actual stock.

[39] PC-1, LHWP: 27.

[40] Paraphrased from the PC-1, LHWP, Implementation Strategies: 24.

[41] Strategic Plan: 21.

[42] This included funding of Rs 55 million through the Women's Health Project (WHP) and Rs. 183 million through the Reproductive Health Project (RHP), totalling 4 percent of the budget.

[43] The Logistics Management Manual 2005 covers: forecasting, procurement, warehousing, inventory management, LMIS, distribution, quality assurance, monitoring protocols and requirements, and allocation of responsibilities. This manual was developed with the support of UNFPA and published in 2005. By 2006, 250 people had been trained at the provincial and district levels in basic logistics management. A draft manual has been developed for facility staff, but has not, as yet, been distributed.

[44] Contraceptives are purchased through UNFPA. Some equipment might be supplied by donor agencies.

The forecast for each year's requirements of supplies is undertaken by the districts and submitted to the PPIUs/RPIUs and, subsequently, to the FPIU.[45] Economies of scale are achieved through bulk purchasing annually through a tender process. Economies of scale, keeping control over supply procedures, and lack of logistics management capability are the main reasons offered for centralised procurement. Provinces and districts have limited direct procurement authority. Procurement and distribution of drugs, medicines, and other supplies is with the 'active involvement of the Provincial governments and other related departments in the government i.e. the Ministry of Health and Finance'.[46]

Procurement is a high-risk area, and internal and external controls and timetables are very important in managing this risk. The Procurement Committee is headed by the Federal Director General of Health (Figure 6.1). The membership is deliberately large, for control purposes, and has the sole function of procurement. The committee is responsible for annually procuring drugs and non-drug items (including vehicles, contraceptives, and printed materials) according to procedures.[47] The process should be initiated in February, 18 months in advance of the financial year for which the supplies are being procured. Tenders are reviewed in August/September, and supplies should start being delivered in January. All supplies, with the exception of condoms and injectable contraceptives, are to be procured from within Pakistan.

Distribution Successful bidders deliver supplies directly to the PPIU warehouses. Large quantities are supplied in three instalments, but most of the supplies are delivered bi-annually.[48] The FPIU and PPIU logistics officers are responsible for monitoring the distribution process from the PPIU to the districts. Physical distribution of supplies is undertaken by contracted transport from the PPIU to the DPIU on a quarterly basis.

All supplies to the DPIU, and from the DPIU to the health facility, and thence to the LHWs (at the monthly meeting at the health facility) are provided on a replenishment basis (instituted in 1998).

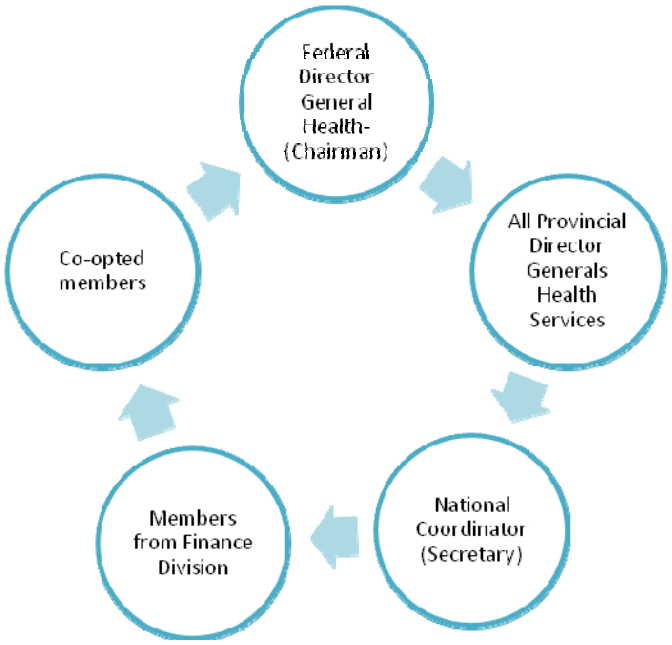
[45] Refer to logistics manual: 14.

[46] PC-1, LHWP: 41.

[47] PC-1, LHWP: 47.

[48] In 2007/08, paracetamol tablets, cotrimoxazole syrup, chloroquine tablets, vitamin B complex syrup, and ferrous fumarate and folic acid tablets were delivered in three instalments.

Figure 6.1 Membership of the Procurement Committee as described in the PC-1 (2003–08)



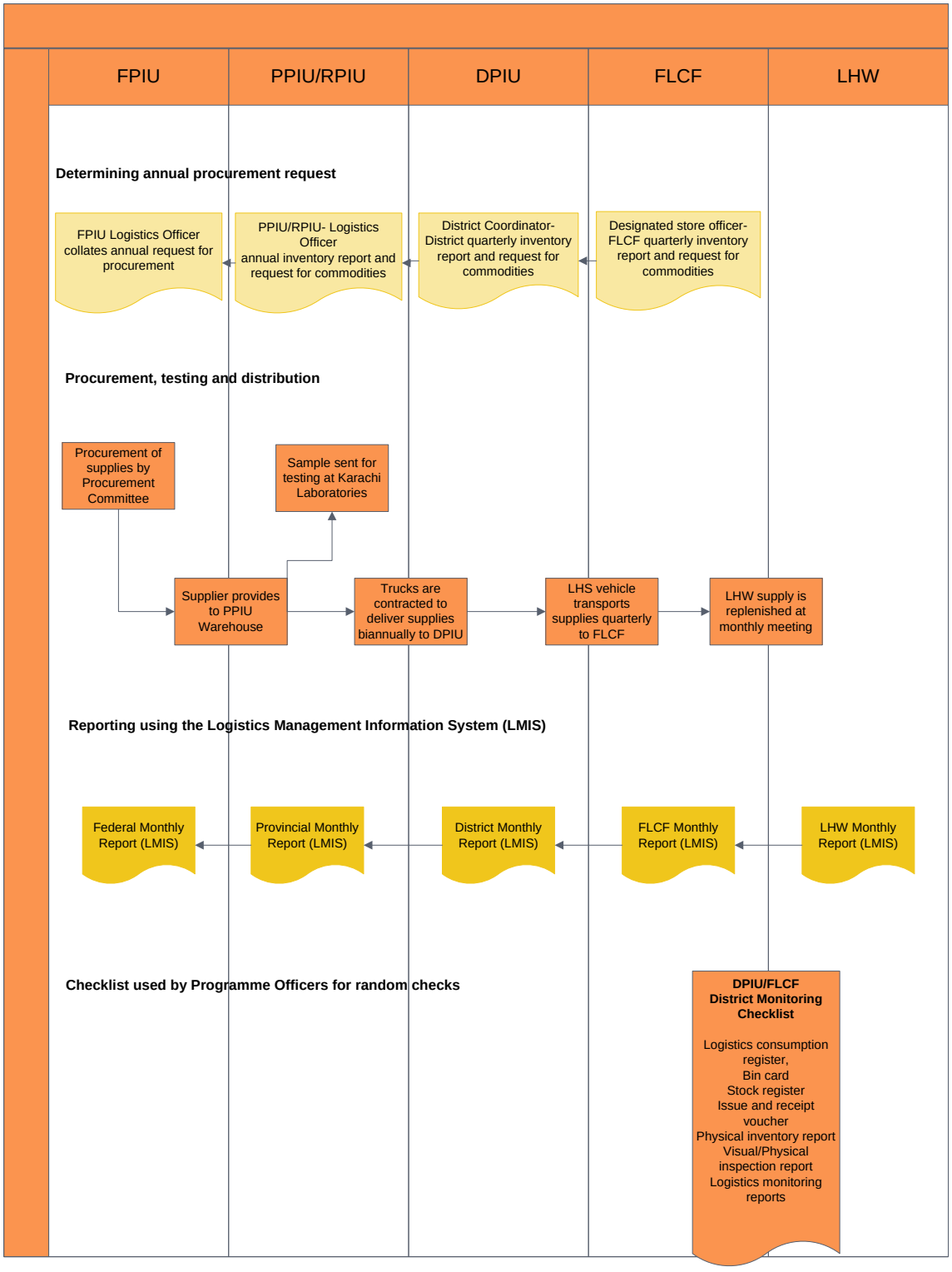
Storage, stock levels and records As the Programme procures large quantities of medicines and drugs that require proper storage conditions, the PC-1 budgets for the hiring of warehouses at the provincial/regional level. At the district level, different government buildings can be used for storage, meaning that the Programme does not have to invest in infrastructure. Stock registers are kept at the PPIU, the DPIU, the health facilities and by the LHWs. The minimum level of stock at the PPIU and DPIU is 2.5 months and the maximum level is 5.5 months. Health facilities should have a minimum reserve of one month's stock at all times (three months' stock, for contraceptives).

Procurement and distribution of contraceptives The contraceptive requirement is determined and updated on a semi-annual/annual basis according to the CPR and consumption trends for each province. Condoms (and when, approved, Injectable Contraceptives) are purchased and supplied through UNFPA, as they are not produced in Pakistan.[49] The purchase is carried out on an annual requirement basis, with six months' stock being maintained at a central warehouse in Karachi, from whence it is dispatched to the PPIU warehouses, on a replenishment basis. There should be six months' stock of contraceptives maintained at the central and provincial warehouses, and three months' stock both at the District Health Office and at the health facilities.

Quality control of medicines The Programme is reliant on the Federal Inspector of Drugs for quality control of medicines. There are pre- and post-delivery inspections, in addition to inspections of the factories of short-listed bidders. Batches of medicines and contraceptives are sampled at the manufacturer's premises, and post-delivery inspection is conducted by the provincial/regional drug inspectors prior to being cleared for delivery to the districts.

[49] The UNFPA payment and procurement process is described in the PC-1, LHWP: 48.

Figure 6.2 Outline of the responsibilities and processes of the Logistics System



The tests are conducted by the Ministry of Health's central drug laboratory and if found to be sub-standard the sample is sent to the National Laboratory in Karachi. The supplier is not paid until the medicines have passed quality control, and suppliers who have provided sub-standard supplies are barred from future tendering. All medicines are sealed and branded with the LHW logo to reduce risk of re-appropriation and to provide confidence to clients of quality.

6.2.2 Monitoring and management information

3rd Evaluation results In 2000, LHWs were seriously undersupplied with medical supplies and equipment due to shortage of funding. There were serious problems in the supply of medical items to the LHWs. Many items were out of stock, commonly for over three months. For 11 of the 16 medical items in their kits, one fifth or more of all LHWs were out of stock for three months or more. Expired stock was a less common problem, although it was significant for some items. One or more items of equipment were sometimes missing. Less than half of the LHWs had a thermometer.

Monitoring The external evaluations provide information on a number of KPIs. The monitoring of the supply system at the district and health facility levels is conducted primarily by the FPO or by the PPIU and FPIU logistics officers using standardised checklists and observation.

Management information There is a logistics management information system (LMIS) that provides a record of stock levels at the DPIU and the PPIU. Information is also supplied on stocks that are reaching expiration date. If there is a large stockpile in a province or district, it is redistributed. This is not a common occurrence.

6.3 Planned systems development, 2003-08

The logistics system needed to expand from servicing 37,000 LHWs in 2000 to servicing approximately 90,000 in 2008. The Programme planned to improve the skills of its management and logistics officers in order to improve the quality of the system, including ensuring that supplies were ordered on a replenishment basis.

Prior to 2003, there was already a problem with the quality of storage conditions at the district level, with potential to lead to deterioration in the quality of the medicines. Also, an increasing numbers of LHWs meant there would be an increase in the amount of suitable storage space required for the DPIU and an increase in the amount of supplies to some health facilities.

The Strategic Plan called for a review and re-engineering of procurement and distribution systems to improve the supply of medicines and family planning supplies. The Plan identified the need to improve procurement as one of the 10 key issues. However, this was not reflected in the PC-1.

6.4 System performance

6.4.1 Performance indicators

Out of stock

There were stock-outs on all items. The Programme standard is that no more than 10 percent of LHWs should be out of stock of an item for more than two months. This standard was not met for 11 items (Table 6.1). Expired stock was not a problem.

Table 6.1 Percentage of LHWs who have been out of stock for more than two months

Item	% of LHWs currently with item out of stock	% of LHW out of stock for more than two months
Paracetamol tablets	32	5
Paracetamol syrup	45	13
Chloroquine tablets	56	22
Chloroquine syrup	58	24
Mebendazole tablets	62	28
Piperazine syrup	50	16
Oral rehydration salts	41	11
Eye ointment	59	13
Cotrimoxazole syrup	69	21
Vitamin B complex syrup	40	5
Ferrous fumarate + folic acid tablets	34	16
Antiseptic lotion	60	14
Benzyl benzoate	53	9
Bandages (cotton)	42	10
Condoms	34	4
Injectable contraceptives	76	22
Oral contraceptive pills	22	2

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

The results from the District Survey show that almost three quarters of the districts had received their most recent delivery of supplies from the PPIU in July, August and September 2008. Delivery of medicines and contraceptives to facilities between July and October 2008 was reported by 90 percent of districts. Accounts Supervisors reported that normally the DPIU would distribute medicines and contraceptives within seven days of their receipt.

However, only one fifth of the districts reported submitting requests for replenishment of supplies. In many instances, they would already be out of stock prior to the request and there was no guarantee that this request would be filled.

Follow-up interviews were conducted with a sample of districts whose facilities were reporting stock-outs of items that were available at the provincial level and with other districts in the province. Reasons given by the management of these districts were: a shortage of POL (and, therefore, inability to send the supplies to the facilities); not using the replenishment system and, instead, dispensing stock on arrival on a per-LHW basis, resulting in shortages to particular health facilities; and lack of competence by the previous District Coordinator.

Insufficient procurement

The budget for drugs and contraceptives in the PC-1 from the government's budget was Rs. 5,223.421 million for the financial years 2003–2008. By mid-2008, this budget was underspent by Rs. 1,926.18 million.[50] Drugs and contraceptives were planned at a 24 percent share of the total budget. Actual expenditure resulted in there only being an 18 percent share. The PC-1 specifies the monthly LHW requirement for drugs and medicines. No item was procured to the quantity forecast per LHW in the PC-1 (Table 6.2).

Table 6.2 Difference between PC-1 monthly requirement for medicine, and actual procured per LHW

Name of Item	Accounting unit	Quantity procured accounting units 2003–08	Average accounting unit supplied per month per LHW (1)	Monthly need as specified in the PC-1 by accounting unit	Difference between monthly requirement in PC-1 and actual procured
Paracetamol tablets	Pack of 200 tablets, in strip/blister	64,910	0.81	1	-0.19
Paracetamol syrup	Bottle of 60ml, with carton	627,270	7.82	10	-2.18
Chloroquine tablets	Pack of 100 tablets, in strip/blister	46,626	0.58	1	-0.42
Chloroquine syrup	Bottle of 60ml, with carton	317,767	3.96	5	-1.04
Ferrous fumarate + folic acid tablets	Pack of 1,000 tablets, in strip/blister	57,026	0.71	1	-0.29
Antiseptic lotion	Bottle of 50ml, with carton	74,815	0.93	1	-0.07
Cotrimoxazole syrup	Bottle of 50ml, with carton	317,302	3.96	5	-1.04
Eye ointment	Tube of 4 gm, with carton	556,194	6.94	10	-3.06
Vitamin B complex syrup	Bottle of 120ml, with carton	464,586	5.79	7	-1.21
Benzyl benzoate lotion	Bottle of 60ml, with carton	118,524	1.48	2	-0.52
Mebendazole tablets	Pack of 100 tablets, in strip/blister	39,901	0.50	1.5	-1.00
Cotton bandage	Pack of 12, with packing	68,855	0.86	1	-0.14
Piperazine syrup	Bottle of 30ml, with carton	287,091	3.58	5	-1.42
Oral rehydration salts	Pack of 20 sachets	61,778	0.77	1	-0.23
Oral contraceptive pills	Cycle	484,378	6.04	10	-3.96

Notes: (1) The average number of LHWs recorded on the PSP data base for the financial years 2003–2008 including those funded by WHP and RHP = 80,191.

Source: LHWP, MoH.

Timeline for procurement and deliveries of supplies, FY 2007/08

- March 2007 Forecast for supplies completed
- July 2007 Request for tender published in the newspaper
- The quantities to be tendered for was based on the total requests from the PPIUs and was sufficient to supply 97,955 LHWs for twelve months, to at least the level defined as the monthly requirement in the PC-1. The exceptions were mebendazole and chloroquine tablets. Given the survey data on the dispensing patterns of LHWs, for these two items, this makes sense (Table 6.3).
- September 2007 Financial opening of tenders
    - The technical scrutiny of the tenders by the Procurement Committee took two months, and the financial opening of the tenders took place in September 2007.
- January 2008 Procurement Committee awards contracts

[50] From the Statement of Expenditure, FPIU, LHWP

  - The minutes of the Committee were not approved until December 2007, and contracts were awarded in January 2008.
- April 2008 First deliveries of supplies reach the provinces
- January is when supplies should be delivered to the PPIUs for delivery to the districts.
  - Once supplies are received, they need to be tested before delivery.
- July 2008 First deliveries of supplies reach the districts
  - Districts were still receiving deliveries in October.

Issues that caused delay or non-supply include: unavailability of Procurement Committee members for meetings; some firms not submitting tenders according to specification; large variances in rates from previous years (e.g. the rate tendered for paracetamol syrup was 171 percent higher than the previous year); appeal by contractors (e.g. there was an appeal on the contract for weighing scales, resulting in weighing scales being not purchased). Other items for which bids were not finalised were cotton wool and cotton bandages.

Table 6.3 Comparison of procuring a bundle of medicines in accordance with the PC-1, and in accordance with the LHW dispensing rate

Name of Item	Accounting unit	Procured in 2007/08 at Rs. per unit	Monthly require-ment (PC-1)	Actual monthly dispen-sing rate by accou-ntting unit (1)	Difference between monthly require-ments in PC-1 and actual dispen-sing	Monthly cost if dispen-sing as per PC-1 (Rs.)	Monthly cost using actual dispen-sing rate (Rs.)
Paracetamol tablets	Pack of 200 tablets, in strip/blister	47.37	1	0.75	0.25	47.37	35.53
Paracetamol syrup	Bottle of 60ml, with carton	8.49	10	15.17	-5.17	84.9	128.79
Chloroquine tablets	Pack of 100 tablets, in strip/blister	56	1	0.34	0.66	84.9	19.04
Chloroquine syrup	Bottle of 60ml, with carton	7.22	5	5.63	-0.63	84.9	40.65
Ferrous fumarate + folic acid tablets	Pack of 1,000 tablets, in strip/blister	132.75	1	0.44	0.56	84.9	58.41
Cotrimoxazole syrup	Bottle of 50ml, with carton	7.99	5	5.81	-0.81	84.9	46.42
Vitamin B complex syrup	Bottle of 120ml, with carton	6.89	7	10.80	-3.8	84.9	74.41
Benzyl benzoate lotion	Bottle of 60ml, with carton	6.66	2	5.53	-3.53	84.9	36.83
Mebendazole tablets	Pack of 100 tablets, in strip/blister	42.3	1.5	0.29	1.21	84.9	12.27
Piperazine syrup	Bottle of 30ml, with carton	37.18	5	7.01	-2.01	84.9	260.63
Oral rehydration salts	Pack of 20 sachets	124.44	1	0.67	0.33	84.90	83.37
Total cost						**832.41**	**796.36**

Source: PC-1 (2003–08); and OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Low dispensing rates by LHW

The Quantitative Survey reported the amount of medicines the LHW had dispensed in the previous week if the item were in stock. Compared with 2000, the average amount dispensed by LHWs has increased substantially for many items. While the dispensing rate provides some information on the demand for LHW medicines, it is not possible, given the level of medicines procured over the five years, for this rate to have been constant. It is more likely that LHWs make a judgement on what the risk of stock-outs are and modifies her dispensing patterns accordingly.

The monthly cost of a bundle of 11 medicines in 2007/08, if purchased in accordance with the monthly requirements specified in the PC-1, would have cost Rs. 832.41 per LHW. The cost of the same bundle of 11 medicines, in accordance with the dispensing rate identified in the survey and using the 2007/08 prices paid by the LHWP, was Rs. 484.30 (Table 6.3). LHWs are not dispensing at the rate forecast in the PC-1.

Table 6.4 Percentage of LHWs with functional equipment and administrative material

Item	2008
Weighing scale	32
Thermometer	59
Torch	36
Scissors	73
Household register	97
Diary (old or new format)	96
LHW Manual (old or new version)	96
Refresher LHW manuals:	
Counselling Cards	83
Child Health	88
Inject able Contraceptives	82
Revised MIS tools	65
OBSI	80
Blank growth monitoring cards	72
ARI case management charts (all 3)	90
Diarrhoea case management chart	89
Plastic cards	72
Family planning charts	89
Eye chart	78
Maternal health chart	89
Health house board	84
Blank referral slips	76

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Replenishing the health facilities

The replenishment system is not operational: 75 percent of districts reported that they do not issue supplies based on health facility demands. Most supply the facilities on a quarterly basis, although 10 percent of districts are supplying on a monthly basis. Half the time, the LHS transports the medicines from the district to her facilities.

6.4.2 System development

Improving logistics management capability

A logistics manual was produced in 2005, and training courses were conducted with Programme management. Of the districts interviewed for the survey, almost four out of five had had their logistics system and warehouse monitored in the previous year by the PPIU or the FPIU, although only one third of these had received a report.

Access to suitable storage space

The logistics manual sets a standard of 5.5 square feet of storage per LHW at the district level: 16 percent of districts reported not having their own designated storage space. These districts place their stores wherever they can find a space, including in corridors and offices, hostels, and wards.

Of districts that did have storage facilities, only one fifth met the criteria of minimum storage space per LHW. Over one third did not even have 1 square foot per LHW available.

Access to suitable storage space has become an increasing problem with the need for larger quantities of medicines increasing as a result of a greater number of working LHWs in the district.

Reviewing and re-engineering of the logistic system

The Strategic Plan had called for a review. This did not take place.

Contracting out transportation and storage

Transportation from the PPIUs to the DPIUs is contracted out. The PC-1 budget was for Rs. 40.47 million. Actual expenditure was Rs. 147.69 million. The overspend is reportedly due, in part, to the erratic delivery of supplies (requiring more deliveries to the districts than originally planned), and increasing petrol costs.

Using private transport firms for distribution from the DPIUs for quarterly delivery to facilities was tried as an option, but the payments process proved too cumbersome and, since December 2007, LHWP policy has been for DPIU storekeepers to use LHS vehicles (preferably those of urban LHSs, or vehicles that do not currently have drivers and are therefore not currently available for use by LHSs).

6.5 Reported causes of non-performance

'In 2007 we had a lot of carry over, with supplies not being delivered by June. This year we knew we wanted all deliveries by June 2008 and knew that would clog our distribution system, so we told PPIUs to hire extra space. If they didn't do this, they had a problem.' (National Manager)

'A lack of funds can also mean that you cannot transport the supplies from the PPIU to the DPIU and on to the FLCF. In June 2008, the release was slashed and this had an ongoing effect.' (Provincial Coordinator)

'This is the duty of facility staff who are responsible for analysis for reports of LHW and after compiling these to submit to the DPIU. These people are responsible for analysis and they are not provided incentives so they are not doing their job and doing proper analysis. If they did proper analysis then the replenishment system could be adopted.' (Provincial Logistics Officer)

- Delays in procurement
  - In 2007/08, the contract for procurement was awarded in the second week of January 2008, 11 months after the forecasting was received by the LHWP (from the districts through the PPIUs/RPIUs). This led to a four months' delay in deliveries. The Procurement Committee meetings had been delayed due to changes in post of various officers in the Ministry of Health. In addition, the quoted price for some items (e.g. paracetamol) was considered too high, and it took over five months to approve a price. Reportedly, the procurement functions in the Ministry of Health fall on the shoulders of overburdened officers and there is no specific procurement department;
  - If the technical and the financial bids are not opened within a valid time, bidders have to re-validate their bid;
  - There can also be a need to re-tender (e.g. if the prices quoted by suppliers are too high, or if a supplier becomes unable to supply after having won the tender); and
  - Waiting for successful bidders to produce samples of packaging and labelling also causes delays in procurement;

- Lack of logistics management expertise
- Procurement requires dedicated and expert personnel. The long-standing Logistics Advisor (funded by external sources) left the Programme in July 2007. The Logistics Officer was also transferred, leaving no experienced staff in the Logistic Department. The salary package in Islamabad is unattractive to provincial logistics officers;
- Lack of funding
    - Lack of funding or delays in release of funds (e.g. stationery unavailable for newly selected LHWs; modules not available for training);

- Delays in supply
    - Supplier delays: even though there are penalties for late delivery, these can be difficult to apply;

- Delays in distribution from the PPIU:
    - Quality control process delays; waiting for samples of batches to be tested by the one central laboratory;
    - Stock not available because it has failed the testing procedure (e.g. in 2007, stock-outs of paracetamol syrup and antiseptic lotion were reported to be due to the products being declared sub-standard;
    - Not receiving the stock order from DPIU; and

- Delays in distribution from the DPIU:
    - Administrators delaying distribution;
    - Lack of available vehicles (or POL); and

- **Staff being involved in health campaigns** (e.g. Polio days resulting in either lack of transport, lack of manpower, or both);
- **Not applying the replenishment system**, leading to inaccurate assessment of requirements;
- **Under or over estimation of stocks required**, resulting in either over-stocking or stock-outs:
    - by the district, due to poor assessment of stock usage;
    - difficulties in the time required by the forecasting process, sometimes up to one year in advance;

- **Inflexible distribution** throughout the country, resulting in some areas being over-stocked and other areas under-stocked, even though the total stock levels seem sufficient;
- **Storage facilities** at the districts not always being suitable for warehousing supplies (e.g. Depo Provera). They might be too small, insecure, or too hot. There are reported problems with storing the larger quantities of stock required by the expanded Programme; and
- **Expired stock** Medicines with less than 85 percent shelf life are rejected at the time of post-delivery inspection at the PPIU. However, if there are delays in transportation to the district, and from the DPIU to the health facility, then there is the risk of expired medicines.

6.6 Findings

1. **The supply system for medicines is performing poorly** The Programme did not succeed in achieving its performance targets. There are a significant number of LHWs who have been without various medicines for over two months. In addition, there is a shortage of non-drug items. The regular supply of drugs and contraceptives

is important for the performance of the LHW. The main causes of lack of supply are management of procurement and the level of funding;

2. **Logistics expertise** The management of logistics requires expertise and management attention. Core elements of the system are the responsibility of the Ministry of Health (procurement and quality control, and budget approval). The Programme is primarily responsible for estimating demand and for distribution. While there are some dedicated logistics officers, expertise in logistics is reportedly low in all functions. The planned review and re-engineering of the logistics system did not take place;
3. **Delays caused by the procurement process** This places stress on the logistics system. Higher priority and attention need to be given to the timetable for procurement, or for holding a higher level of supplies in the system to prevent stock-outs;
4. **Insufficient procurement** Insufficient funds were spent for all LHWs to have a full supply. This is true, even though there were fewer LHWs working than planned. Drugs and contraceptives were planned to be 24 percent of the budget. Actual expenditure was only 18 percent. The PC-1 specifies the monthly requirement of the LHW for drugs and medicines. No item was procured to the quantity forecast per LHW in the PC-1;
5. **Distribution** The Programme expends a great deal of effort in managing distribution, both from the PPIUs to the DPIUs, and from the DPIUs to the facilities;
6. **Training** The logistics manual and the accompanying training are positive initiatives. However, training probably only has a shelf life of one year due to turnover of management and logistics staff;
7. **Warehousing** Around 15 percent of districts reported not having their own designated storage space. These districts place their stores wherever they can find a space, including in corridors and offices, hostels, and wards. Of districts that did have storage facilities, only one fifth met the criterion of a minimum storage space of five square metres per LHW. Access to suitable storage space has become an increasing problem, with the need to store larger quantities of medicines as a result of an increased number of working LHWs in the district; and
8. **Logistics monitoring** Four out of five districts reported having their logistics system monitored in the past year. This is commendable, but monitoring has to lead to action by Programme management.

7 Salaries and payments system

7.1 Purpose

To provide stipends and allowances to staff, and to reimburse appropriate expenditures as agreed by the GoP.[51]

7.2 Performance measures

- In the previous month, 90 percent of LHWs have been paid full salary;[52]
- Project allowance of 20 percent paid to members of the PPIU and the DPIU;[53]
- Health facility training teams have received their training allowance;[54] and
- Training allowances have been paid to LHWs on refresher training courses.[55]

7.3 In operation

Description

The Programme pays salaries or stipends to LHWs, LHSs, drivers, and to those staff who are employed on a contract basis rather than on deputation from the Ministry of Health, the Department of Health, or the Pakistan Audit Department/Controller General of Accounts.

For staff on deputation, the PC-1 has budgeted for a deputation allowance as compensation for the additional responsibilities required by the Programme. Other allowances are for being a trainer; for attending training (for LHWs and LHSs); and for travelling, when required, to carry out inspections and supervision. The level of the allowances is specified in the PC-1.

Stipends/salaries From the beginning of the Programme, an LHW was to be a paid a stipend for her contribution. She has a one-year contract with the LHWP, but with the expectation that she will be providing ongoing services for the life of the Programme. Under the PC-1, she was to receive Rs. 50 per day during the first three months' training, and then Rs. 1,600 per month after that, with an annual increase of Rs. 100 (to cope with inflation and to act as an incentive) rising to Rs. 2000 per month by July 2008 (See Figure 7.1).

At the time of the PC-1, an LHS was to be paid Rs. 3,300 monthly as training allowance for the first three months of her contract, and then the same amount as a fixed salary with an annual increase of Rs. 200 per month rising to Rs. 4,100 per month by July 2008. Over the same period, a driver's salary was to rise from Rs. 2,400 per month to Rs. 2,900 a month. In reality, in July 2008 the LHW stipend was Rs. 3,090, and the LHS and driver salaries were Rs. 4,800 and Rs. 3,500 per month, respectively.

[51] Annex B has a table with the positions, roles, source of funding, and employment status of personnel working for the LHWP.

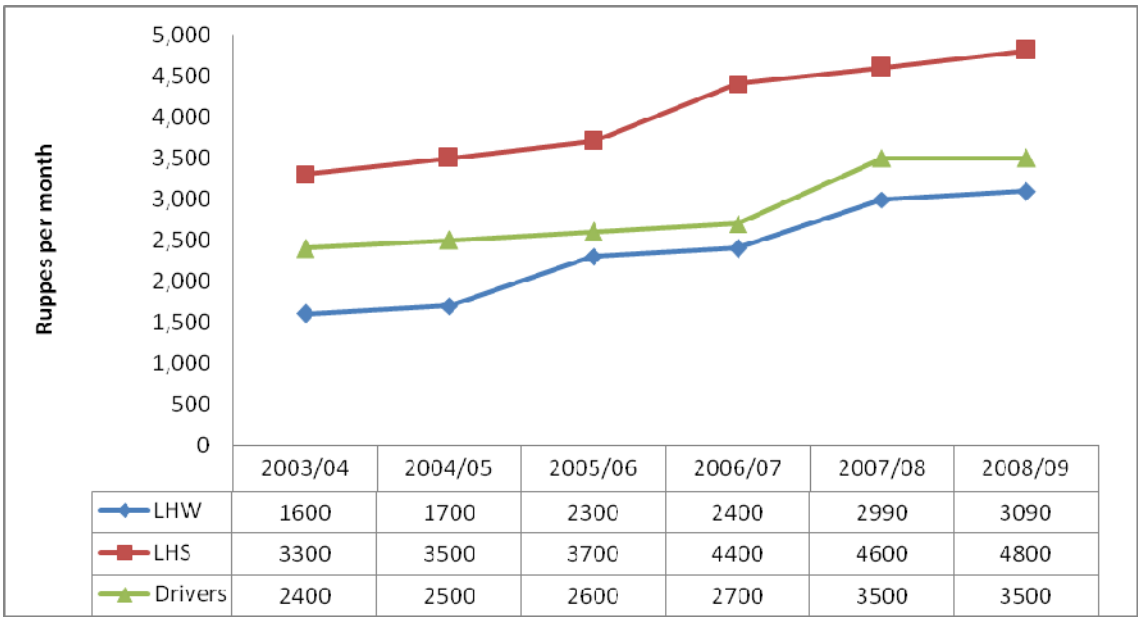
[52] Strategic Plan, LHWP: 21.

[53] As defined in the PC-1, LHWP: 42.

[54] Payment is made to the health facility training team of a training allowance of 20 percent of their current salary per month during the 15 months' core training of the LHWs, and an allowance of Rs. 200 per day is paid to those involved in refresher training (PC-1, LHWP: 32).

[55] PC-1, LHWP: 31.

Figure 7.1 Budgeted salaries for LHWs, LHSs, and drivers, FY 2003–08



	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
LHW	1600	1700	2300	2400	2990	3090
LHS	3300	3500	3700	4400	4600	4800
Drivers	2400	2500	2600	2700	3500	3500

Source: PC-1, 2003-2008, LHWP, MoH

Project allowance According to the PC-1, the five members of the DPIU are to be paid an additional 20 percent of their basic pay each month. The DPIU can also co-opt other related staff to be members of the DPIU; however, they will not be entitled to the payment of the 20 percent allowance. This allowance was stopped in 2001 due to audit objections. It was budgeted for in the PC-1 2003–08 at Rs. 1,29.071 million, but was never reinstated. A proposal by the Programme to award performance bonuses was also rejected by the Central Agencies. It is difficult to see how this could have been implemented fairly, which would have created a risk of decreasing motivation.

Training allowance A training allowance is paid to the health facility training team, of 20 percent of their basic pay per month for LHW 15 months' training. A training allowance of Rs. 50 per day is also paid to LHWs for attendance at refresher training courses. The trainers who provide the training receive Rs. 200 per day. This allowance is paid for a maximum 15 days' refresher training in one year; payment is made direct into each payee's personal bank account. The claims are prepared by the DPIU.

POL/FTA covered under the Transportation System

Payments process There is a quarterly release of funds by the MoF, on the basis of an approved Cash Plan/Work Plan. In the PC-1, the DPIUs were to have their Personal Ledger Accounts (PLAs) or to operate bank accounts in commercial banks to ensure timely and speedy payments of salaries to all staff. However, while this was the initial arrangement under which the Programme operated, in 2001 the district accounts were closed by the Ministry of Finance and the payments system re-centralised to the PPIU.

There is a Personal Ledger Account/Special Drawings Account at each PPIU, where the funds are deposited to pay the stipends/salaries of LHWs, LHSs, and the drivers. The PPIU, after verification of the monthly payrolls has been received from the DPIU, transfers funds to the commercial banks, who deposit the salaries into the relevant each payee's personal account. The monthly payrolls have to be approved at the district level by the EDO-H (or DHO in the Punjab). Salaries for contract staff, FTA for LHSs, and trainers; allowances are also paid directly into staff bank accounts through the provincial payments process.

The POL allowance, repairs and maintenance of vehicles, stationery, postage and courier services, telephone charges (in some districts), and miscellaneous expenses are disbursed by the DPIU.

Efficiency If the process is working well, funds should be released quarterly according to GoP procedures and flow through to the FPIU, the PPIU, and the DPIU. However, the Fund Flow and Expenditure Tracking Study of January 2005 found that the transfer of funds to the district level took 88 days in FY 2003/04 and 59 days in FY 2004/05.[56] Salaries for the same years took 76 days and 67 days, respectively. The reasons for the delays were analysed in this report as being:

- the sanction process at the controlling federal ministries;
- delays at AGPR and its provincial sub-offices; and
- defective methods of processing the salaries and stipends at commercial banks.

The report presented detailed findings and recommendations on how to improve the process.

7.3.2 Monitoring and management information

3rd Evaluation results The survey revealed serious problems in the performance of the salary payments system. Only one third of the LHWs had been paid in the month preceding the survey; one third had not received their salary for four months or more. In addition, almost one fifth of LHWs received less money in their salary than their entitlement, the main reason being the bank deducting a handling charge. Only half of the LHSs had received any of the POL allowance in the previous month. The 3rd Evaluation did not cover payment of training allowances or project allowances. However, despite the delays in salary payment, it was not found to be a factor that would contribute to differences in performance between LHWs. Presumably they were used to delays, and had faith that payment would ultimately come.

Monitoring Essentially, the salaries and payments system is integral to financial management but is not a part of the financial management system. Monitoring of the system is typically undertaken by a designated FPO at the federal level and by Deputy Coordinators at the PPIU.

The performance of the systems is subject to external evaluations by measuring delays in salary payments and allowances, and observing whether payments are received in full.

Management information The salary pro-forma records the LHWs who are to be paid their salary. This is consolidated, and should be available from the PPIUs and the FPIU. The Statements of Expenditure record the total allowances provided from each level of the Programme.

7.4 Planned systems development, 2003-08

The Programme planned to review, with the MoH, the remuneration and allowances package for Programme staff, including LHWs and LHSs. Pay scales were to be reviewed and deputation allowances for senior Programme staff reinstated.[57] The plan was to computerise the payroll system for LHWs, LHSs, and drivers at the district level.

[56] Fund Flow and Expenditure Tracking Study, 2005.

[57] Strategic Plan, LHWP: 20.

7.5 System performance

7.5.1 Performance indicators

Payment of stipend/salary in the past month

Only 21 percent of LHWs had received a stipend payment in the previous month. This is far short of the target of 90 percent set by the Programme. Just over 90 percent had received their stipend within the past three months (Table 7.1). There has been an improvement since the 3rd Evaluation and, reportedly, if the survey had been held in 2007 there would not have been this level of delay in payments. Whereas Punjab, Sindh and NWFP had over 90 percent of LHWs having received their salary in the past three months, in Balochistan this figure dropped to 72 percent.

LHW and LHS salaries are paid directly into bank accounts: 11 percent of LHWs and 7 percent of LHSs reported receiving less salary than expected, the most likely cause being bank charges.

The salary system should deposit the salaries of the LHWs and LHSs into their bank accounts at the same time. The main explanation that has been provided by the Programme for the difference in payment timings, shown in Table 7.1, is that an LHS receives information that her salary has been deposited in the bank when she attends the monthly meeting at the DPIU. She then informs her LHWs when she next sees them, which could be at a supervision meeting at the health house, or the monthly meeting at the health facility. This causes a delay.

In 2008, the salary payments from July 2008 were not paid by the Programme until September, and would not have been reaching bank accounts until November. The survey was conducted from July to November, during this period of delayed salary payments.

While there were more LHWs who had not been paid in the past month, compared with 2000, there were fewer LHWs who had to wait for three months for their stipend.

Table 7.1 Distribution of time since each LHW and LHS last received her salary, with a comparison to 2000

	LHWs (%)		LHS (%)	
	2000	**2008**	**2000**	**2008**
Within last month (last 31 days)	32	21	37	73
32–62 days ago	16	45	15	17
63–93 days ago	18	21	14	5
Over 94 days ago	34	10	33	5

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Unpaid project allowance

The project allowance was not paid during the course of this PC-1 despite being budgeted for and approved at Rs. 129.71 million in the PC-1. In 2002, the Project Allowance had been stopped due to audit objections and was never reinstated.

Training allowance for trainers

Around 90 percent of facilities have held refresher training courses during the past year: 70 percent of facility trainers had not received their training allowance for courses held over three months previously. The system is reportedly one of giving an annual payment, direct to bank accounts. If this is the case, it loses any immediate motivational potential.

7.5.2 System development

Remuneration and allowances review

There was no review held of the remuneration and allowance packages for LHWs and LHSs. Instead, there were *ad hoc* increases announced by both the Prime Minister and the President on the recommendation of the MoH.[58] These increases resulted in a substantial increase in stipends over the levels planned in the PC-1 (Figure 7.2). Perhaps due to the lack of any Programme policy development in the area of salaries and allowances, there was little evidence of analysis or data collection that would be useful in formulating policies. For example, the evaluation team found it difficult to obtain a complete set of the salary pro formas from the FPIU.

Computerisation of payroll system

In late 2005, there was pilot testing of the system in Chakwal. However, by June 2008 it was still not possible to query the payroll system database for information to use in analysis of the salaries of LHSs, LHWs, and drivers. Project management of computer systems is always problematic in any organisation. For the Programme, the hurdles can seem insurmountable. Lack of project management skills, electricity, computer expertise, incentives for compliance, and changes in personnel head the list. It is a significant achievement that, in late 2007, 20 districts in NWFP had generated their payroll using the system.

7.6 Reported causes of non-performance

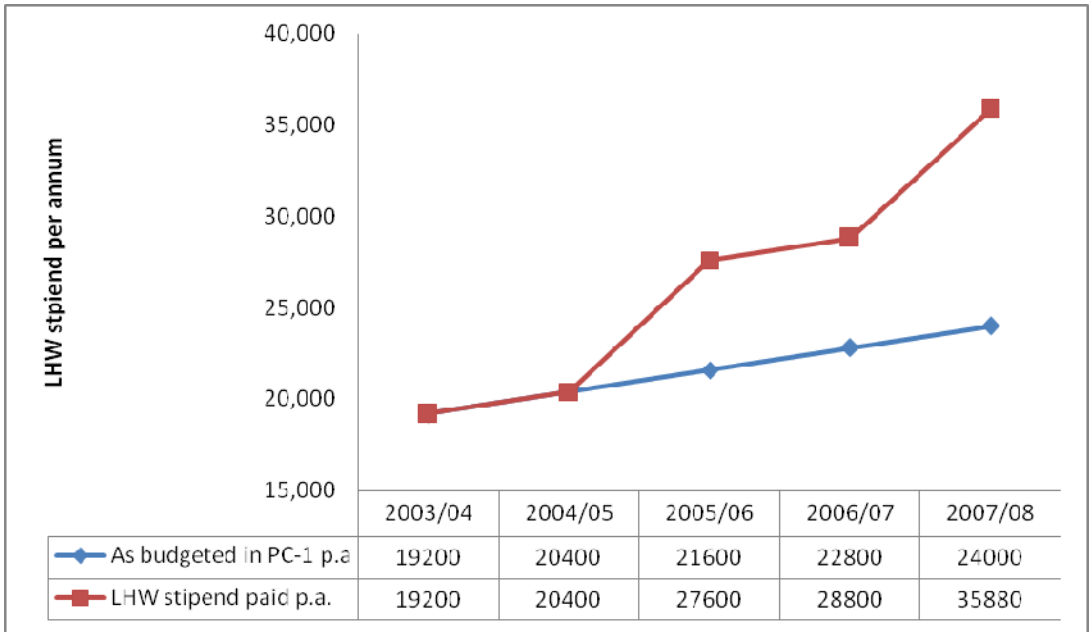
- **Delays in release of funds from the federal government** The financial crisis has meant that, rather than implementation of the Cash/Work plans, the government placed restrictions on budget releases to development projects. The budget for the quarter July–September 2008 for Sindh and ICT was not released until the last week of September 2008, with salaries for this period not reaching the LHWs' accounts until October 2008;
- **Delays caused by Programme** For example: slow processing of payroll by DPIU/ PPIU; problems with the computerized payroll system; and shortage of finance staff;
- **Delays caused by the banks** The banks are supposed to transfer funds to the payee accounts using online banking facilities and within seven days of the payment requests being made by the government. Banks are reportedly not adhering to either of these standards;
- **Missing bank account numbers** for LHWs and LHSs;
- **Bank extracting additional fees**, resulting in LHWs receiving less money than had been expected; and
- **Delays in payment claims** For example: training claims not being submitted within one month of completion of training.

[58] On 17 May 2005, the Prime Minister announced an increase of Rs. 500 for LHWs (exclusive of the Rs. 100 annual increase);

(2) On 14 April 2007, the President announced a salary increase to Rs. 2,500 for LHWs, and Rs. 4,400 for LHS, up from ;

(3) In July 2007, in accordance at the President's direction, LHWs received the 15 percent increase that was being applied to all public servants salaries. This decision was taken at the federal level, but key operational decisions are taken at the provincial and district levels. It is the right of the government to make such increases. However, because the increases do not appear to have been designed as a measure to solve a recruitment problem, to improve service delivery, or to increase coverage in poorer areas, it does serve to make a political issue of LHW stipends.

Figure 7.2 Comparison between LHW annual stipend as budgeted in the PC-1 and actual payment



Source: OPM LHWP 4th Independent Evaluation, Finance and Economic Analysis (2008).

7.7 Findings

1. **Delays in payments** The payment of salaries is the main Programme expense. The efficiency of the system was monitored in the Flow of Funds Study. However, while the Programme reports that there have been increases in efficiency in recent years, at the time of the evaluation there was a shortage of funds being released and, once again, there were delays in payments;
2. **External constraints** The flow and level of funds available to make payments can be beyond the control or responsibility of the Programme. The Programme has implemented a number of initiatives to reduce delays in payments (e.g. payments into the bank accounts of LHWs; the hiring of Accounts Supervisors to process the payments rather than relying on deputed AGPR staff; the agreed annual Cash/Work Plan;
3. **Project allowance** While budgeted for, this was not paid due to audit objections. A performance bonus system proposed by the Programme was rejected. In the view of the evaluation team, this would have been hard to implement fairly;
4. **Training allowances are often delayed** due to the processing procedures. This could potentially result in demotivating trainers, who are particularly important for developing the knowledge and skills of the LHWs; and
5. **Remuneration review** The Programme did not review the remuneration and allowances packages of LHWs and LHSs as planned.

8 Performance monitoring of LHWs

"We visited an LHW who had not had an LHS for a year and asked her what impact this had. She said that the LHS was useful to reinforce messages in the households. As she was well educated and came to visit in a vehicle, people found her credible and listened to her. The LHS had also helped the LHW review her training materials. The LHS had the experience of visiting many villages and could provide advice on how to deal with situations." (Evaluation Team)

8.1 Purpose

To provide performance information on the LHWs that can be used to trigger action aimed at improving performance or resulting in termination.[59]

8.2 Performance measures

- All LHWs have a supervisor; [60]
- 75 percent of LHWs receive a supervisory visit once a month;[61]
- All registered households are regularly visited by their LHW.[62] LHWs work six days a week, visiting between five to seven households every working day, and ensure a re-visit every two months;[63]
- The LHS gives comprehensive feedback to the LHWs on issues noticed during the visit;[64] and
- Non-performing LHWs are, after due process, terminated.

8.2.1 Description

Districts have hundreds, and sometimes thousands of LHWs. The DC and the ADC (typically a female) are the managers of the LHS, who is the direct supervisor of the LHWs and responsible for management of their performance.

Lady Health Supervisor (LHS) The LHS has two roles: one as a supportive coach; the other as an inspector, to ensure that LHWs are providing the required services. The LHS should supervise, on average, 25 LHWs in their communities. She should visit each LHW at least once a month, preferably twice, and attend the LHW monthly meeting at the health facility.

The LHS has a checklist to use for inspection that covers: the testing of an LHW's knowledge and verification of her record-keeping, which includes visits to households the LHW serves in the community. In the LHS manual, the LHS is instructed to provide feedback to the LHW at the time of monitoring: If the LHW has scored:

[59] The Strategic Plan refers to the cost of low-performing LHWs. They 'are a significant drain on Programme resources and who are unlikely to be delivering services that change health and poverty outcomes' (Strategic Plan, LHWP: 13). The 3rd Evaluation found that low-performing LHWs provided only 17 percent of their eligible clients with services.

[60] Strategic Plan, LHWP: 21.

[61] Strategic Plan, LHWP: 21.

[62] Strategic Plan, LHWP: 19.

[63] Working days are six days a week, but on the understanding that, if there is an emergency requiring referral, the LHW will respond.

[64] District Supervision and Monitoring manual: 47.

- over 80 percent, then she is to be praised;
- between 70 percent and 80 percent, it is considered good, she is praised and advised to do better;
- between 60 percent and 69 percent, it is considered fair, and the LHW is asked to concentrate more; and
- below 60 percent, then it is considered unsatisfactory and the LHW is sent to the FLCF for a refresher course and training. If, despite this, the score is not improving, then the LHS should report the case directly to her manager and through her report that she submits monthly to the LHS monthly meeting.[65] The chairman of the DPIU has the authority to terminate consistently non-performing LHWs.

Inspections by Field Programme Officers (FPOs) The DPIU is responsible for the management of the LHWP in their district. FPOs are employed by, and accountable to the PPIU or the FPIU. They provide independent inspections of services and employees.

Programme Monitoring Unit and FPOs In the PC-1, there are 49 positions for FPOs allocated throughout the country. They report to the Assistant Provincial Coordinator, who is responsible for internal monitoring and who spends eight days in the field a month. Each FPO covers two to three districts, which they inspect and provide support to during their 20 days' in the field each month. They should not spend longer than two years in the same district. The FPOs spend most of their time inspecting health houses, meeting community representatives, and providing support to health facility staff. They then report back to the DPIU before submitting a formal report to the PPIU once a month during their monthly meeting.

8.3 Planned systems development, 2003–08

The ambition reflected in the Strategic Plan was to use supervision to increase the motivation and skills of the LHWs. LHWs would be provided with supportive supervision and on-the-job training by LHSs, health facility staff, DPIU and FPOs. If LHWs, having been provided with the opportunity to improve, failed to deliver services to the Programme's standards, then they would be terminated.

The supervision and monitoring system had previously been underfunded, but there was evidence that it was working well in some areas, producing high performing LHWs. This PC-1 sought to increase the funding in line with the recommendations of the 3rd Evaluation to ensure resources were available for adequate supervision and training.[66] The ratio of LHS to LHWs was set at 1 LHS per 25 (or 20 in difficult areas). The FPOs who cover two to three districts were to be provided with vehicles.[67] In addition, the supervisory checklist, which covers service delivery and LHW knowledge, was to be updated and used more rigorously.

8.4 Systems performance

8.4.1 Performance indicators

The Performance Score In the 3rd Evaluation, a Performance Score of LHW service delivery was developed using a selection of 10 preventive and promotive services that LHWs offer. This measure has been replicated in this evaluation to enable comparisons to be made. The services in the Performance Score cover LHW activities in hygiene, health

[65] For reasons that are unclear, the monthly meeting of the LHSs became renamed the Maternal Mortality Conference. The process of verifying maternal mortality is a part of this meeting, but not the main purpose.

[66] The LHW manual was updated and refresher training of 15 days' per year was planned.

[67] UNICEF is supporting the activities of the Monitoring Unit in the FPIU.

education, vaccination promotion, family planning, pregnancy and birth, child nutrition, and growth monitoring (see Box below).

Ten services included in the performance score

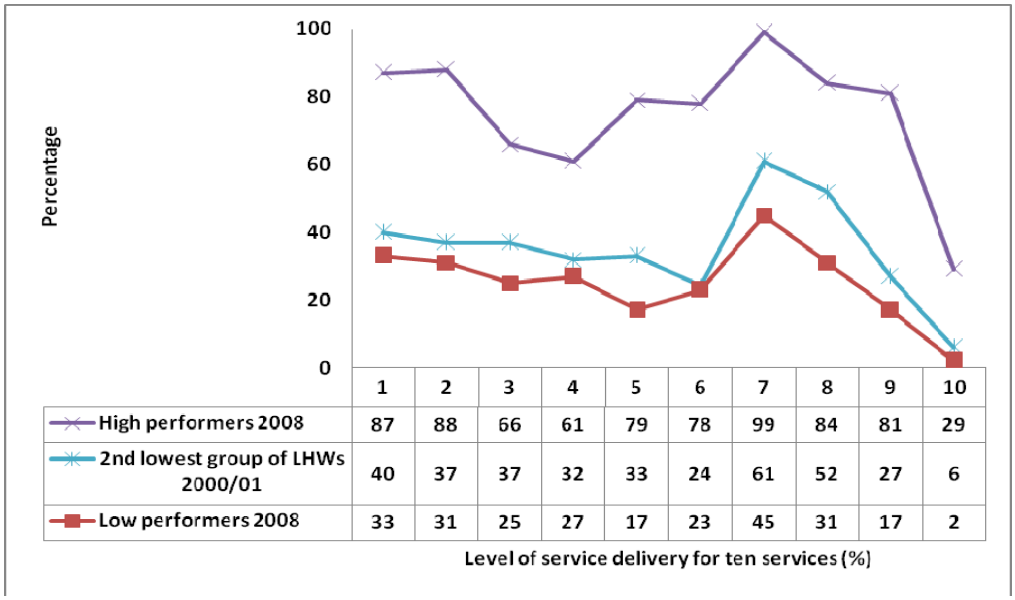
- Percent of households who report that LHW talked about ways to improve cleanliness of water;
- Percent of households who report that LHW talked about ways to improve hygiene;
- Percent of women aged 15–49 years, who are non-users of modern contraceptives, who report that the LHW discussed family planning;
- Percent of women aged 15–49 years, who are users of modern contraceptives, who report that the LHW supplied them or referred them to a health centre;
- Percent of mothers who gave birth since 2004 who report that LHW gave advice on which foods to eat during pregnancy;
- Percent of mothers who gave birth since 2004 who report that the LHW saw the mother at birth or within a week of the birth;
- Percent of children < 3 years old whose mothers report that the LHW talked about vaccination;
- Percent of children < 3 years whose mothers report that the LHW encouraged vaccination at the correct age;
- Percent of children < 3 years whose mothers report that the LHW gave advice on feeding the child;
- Percent of children < 3 years whose mothers report that the LHW weighed the child within the previous three months.

Using the performance measure, the evaluation team found major differences in the levels of service delivery amongst LHWs, as was the case in the 3rd Evaluation. The top quarter (the *High Performers*) provide significantly more services to their eligible clients (78 percent) than the bottom quarter (the *Poor Performers*) (26 percent). In between, we have the *Good Performers* (63 percent) and those who are *Below Average* (49 percent).

Service delivery has improved overall. On almost every one of the 10 measures that make up the Performance Score, the high performers are delivering more services. Even the poor performers (the bottom quarter) are providing a higher level of services than previously. However, these poor performers are still not managing to deliver what the second-to-lowest group of LHWs (the 25 percent to 50 percent of lower performers) were managing to deliver at the time of the 3rd Evaluation (Figure 8.1). Despite improved training and supervision, there are LHWs who are not working.

Interviews with Programme managers revealed that it can be very difficult to terminate non-performing LHWs. ‘Clean-out’ campaigns can ensure that residency criteria are maintained, but there are not many incentives to fire non-working LHWs, particularly if they have support from people with influence who will act to ensure their reinstatement. The MIS does not provide useful data on terminations as, apparently, terminations are often recorded as resignations. It should be borne in mind, however, that in any organisation people are often given the choice to resign before formal termination procedures are carried out.

Figure 8.1 Levels of service provision by high-performing LHWs and low-performing LHWs, and a comparison with the second-to-lowest group of performers from 2000



Note: The ten services, in the order presented in Box 2.

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Busy at work

The survey did find, unsurprisingly, that service delivery is higher when LHWs work more hours. The policy is for LHWs to visit all registered households regularly (visiting five to seven households each working day) and that an LHW must, in her normal routine, visit all households in her catchment areas at least once a month.

In the week prior to the survey, 44 percent of the LHWs reported working seven days a week (Table 8.1). This is not in accordance with Programme policy. Field visits to LHWs by the evaluation team confirmed that this was a common practice, and that it was being reinforced with monitoring by the LHSs. The LHWs in Sindh and NWFP reported this practice as a reason for their looking for an alternative job. Our analysis shows that LHWs who work seven days a week have significantly lower Performance Scores. In our judgement, backed up by discussion with LHWs in the field, we believe that LHWs should have one day off each week, except in the case of emergencies.

The average number of hours worked by LHWs each week has increased from 20 hours in 2000 to 30 hours in 2008, with almost 60 percent of LHWs working more than 25 hours.[68] LHWs who are not involved in NIDs are still working, on average, around 20 hours. Also, there are still 20 percent of LHWs (70 percent in Balochistan) who worked fewer than 15 hours in the week preceding the survey.

[68] See Quantitative Survey Report, August 2009, for additional data.

Table 8.1 Number of days each LHW reported working in the previous week

Number of days LHW worked in the previous week	Percentage
Did not work at all	4
1–3 days	7
4–5 days	10
6 days	35
7 days	44

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Visiting households

An LHW should visit all her households at least once a month. The high-performing LHWs do so once a month. Of the households served by high-performing LHWs, 94 percent said they had visited them at least once in the past three month, compared with the lowest-performing LHWs (the bottom 25 percent) where only 76 percent of their households said they have they had received a visit. However, this is a huge improvement over 2000, when the lowest performing group of LHWs had only visited 45 percent of their households (Table 8.2).

Table 8.2 LHW household visits, by Performance Score quartile

Measure	Lowest quartile		Best quartile	
	2000	2008	2000	2008
Percentage of households who report that the LHW visited the household within the last three months	45.0	74.0	86.0	94.0
Mean number of visits of LHW within the last three months per household, as reported by households	1.3	2.0	3.7	3.1

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

All LHWs have a supervisor

While, during periods of expansion, the Programme finds it difficult to recruit LHSs at the appropriate rate to equate with LHW recruitment, by 2008 only a few LHWs were unsupervised (Table 8.3). The ratio of LHS to LHWs at the time of the survey was 1:23, with fewer than 10 percent of the LHSs now having responsibility for more than 30 LHWs.

Regular supervisory visits of LHWs The Programme target of 75 percent of LHWs receiving a supervision meeting in the previous month has been met (Table 8.3). Only a few LHWs had not received a supervisory visit for more than two months. Results have improved since the 3rd Evaluation (Table 8.3). LHSs tend to make 30 visits a month to LHWs, which means that some LHWs are being visited more than once a month.

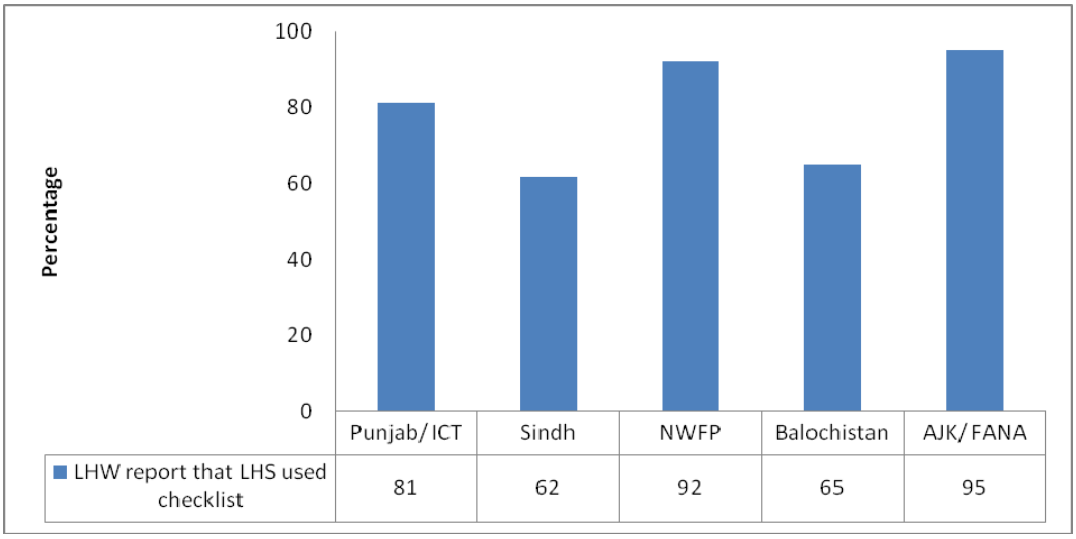
Table 8.3 LHW supervision meetings

	2000	2008
30 days	70	78
31–60 days	12	13
More than 60 days	10	5
Never had a meeting	1	1
No supervisor	7	3
Total	**100**	**100**

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

LHS checklist The LHS checklist is used to inspect an LHW's service delivery, check her knowledge and provide a Performance Score. Over 80 percent of LHSs reported using their checklist on their previous supervision visits; of these, almost 40 percent had informed each LHW of her score, with almost two thirds of the LHSs writing the score in the LHWs' diaries. The results vary between provinces, with LHSs in NWFP and AJK/FANA being more likely to use the checklist.

Figure 8.2 Percentage of LHSs that LHWs reported as using a checklist in the previous supervision visit



Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008

Performance feedback by LHS to LHW As already stated, the LHS checklist provides a tool with which the LHS can monitor the LHW and provide feedback. Almost one quarter of LHSs reported having an LHW who had scored lower than 60 percent for three consecutive months in the previous year. The main actions they reported taking were to discuss the result with the LHW, provide closer supervision, and discuss the problem with the management at the DPIU.

Other factors supporting performance High-performing LHWs tend to have functioning Women's Health Committees. As this is a part of their job, again, it is not surprising. However, reinforcement might occur where, as the community becomes more engaged, it acts to increase the accountability of the LHW. LHWs who have been working for over 10 years have a Performance Score that is, on average, 8.4 percent higher.

Management and monitoring practices are shown to improve LHW performance:

- consistent priorities for service delivery (adopted by the district, the LHS, and the LHW) result in higher performance;
- district management support where the EDO-H fulfils a leadership role, and there is managing and monitoring by the DPIU;
- provincial monitoring by the FPOs;
- LHSs who provide monthly supervision (where they visit the LHWs and their households (with and without the LHWs) and use their checklist) have higher-performing LHWs;
- The LHS is expected to report on non-performing LHWs at the monthly meeting;
- functioning health facilities where an individual person has responsibility for the Programme and attends meetings at the DPIU; and
- high-performing LHWs also have functioning Women's Health Committees.

Non-performing LHWs If an LHW is not providing services, she should be terminated after being provided with the opportunity to improve. If this policy were being applied, there would only be a small percentage of LHWs who are not delivering the services to Programme standards. This is not the case. One quarter of LHWs (Poor Performers) still only provide 26 percent of the preventive and promotional health services they should be providing to eligible clients. This is in contrast to the one quarter of LHWs (High Performers) who provide these services to 80 percent of their eligible clients. These measures were derived from the Performance Score that was calculated through the Quantitative Survey.

Overall, almost one quarter of LHSs reported that there had been at least one LHW during the previous year that, for three consecutive months, they had scored lower than 60 percent on the checklist. Almost three quarters of LHSs had then discussed these cases with their DC or ADC and provided closer supervision of the LHW. Almost 50 percent also referred the LHW to the DC or ADC.

DCs request a written explanation from LHWs who have been reported as non-performing. In the previous six months, on average, 42 LHWs per district had been reported to the DPIU.

System development

In 2005/06, the District Supervision and Monitoring manual was updated and courses (sponsored by UNICEF and UNFPA) were held in most of the districts. The increase in the number of districts meant that FPOs were monitoring more districts than had been planned for in the PC-1 (Table 8.4). In addition, during this period, reportedly, the turnover of FPOs has been high in Punjab (because of management issues) and Balochistan (due to NGOs paying higher rates). On average, districts receive a monthly visit from an FPO for an average of six days per month. At the time of the survey, 15 percent of the districts were not being monitored by an FPO.

Table 8.4 Ratio of FPOs to districts

	No. of districts		PC-1 allocation of posts		Total	Districts/FPO	
	2003	2008	FPIU (BPS 18)	PPIU (BPS 17)		2003	2008
Punjab	34	35	2	12	14	2.4	2.5
Sindh	16	23	2	7	9	1.8	2.6
NWFP	23	24	2	6	8	2.9	3.0
Balochistan	26	28	2	5	7	3.7	4.0
AJK	7	8	1	2	3	2.3	2.7
FANA	6	7	1	2	3	2.0	2.3
FATA	7	7	1	2	3	2.3	2.3
ICT	1	1	1	1	2	0.5	0.5
Total	**120**	**133**	**12**	**37**	**49**	**2.4**	**2.7**

Source: PSP database January 2009, LHWP, MoH.

8.5 Reported causes of non-performance

- Recruitment of women who meet the selection criteria, but have no intention of working, and have protection against sanctions for non-performance;
- Vehicle or driver shortage, which impairs an LHS's capacity to visit her LHWs, thus putting the performance monitoring system at risk;
- That the DPIU do not respond seriously to the LHS assessments of LHWs; and
- The quality of the working relationships within the DPIU management team, between them and the FPO, and these parties and the LHSs.

8.6 Findings

1. **Service delivery has improved overall** The LHWs are delivering more services on almost every one of the 10 measures that make up the Performance Score for delivering preventive and promotive services. Even the Poor Performers (the bottom quarter) are providing a higher level of services than previously. However, these Poor Performers are still not managing to deliver what the second-to-lowest quartile of LHWs was managing to deliver last time. Despite improved training and supervision, there is a group of LHWs who are not working;
2. **Performance management** There is a performance system in place for LHWs that is being utilised. However, there is still a large number of LHWs providing a very low level of services. The system needs to be managed to ensure improved performance levels, and to implement sanctions for those LHWs who fail to perform;
3. **Supervision is available** The Programme has managed to provide a supervision ratio of 1:23 (LHS:LHWs) that is below the target of 1:25. Fewer than 10 percent of supervisors now have responsibility for more than 30 LHWs. The Programme target of 75 percent of LHWs receiving a supervision meeting in the previous month has been exceeded, with a result of 80 percent;
4. **Health Committees** High-performing LHWs tend to have functioning Women's Health Committees; as this is a part of their job, again, it is not surprising. However, reinforcement might occur where, as the community becomes more engaged, it acts to increase the accountability of the LHW;
5. **Duration of service** An LHW's performance improves the longer she has been engaged with the Programme;
6. **Management and monitoring** practices are being shown to improve LHW performance, including:
    - consistent priorities for service delivery (adopted by the district, the LHS and the LHW) result in higher performance;
    - district management support where the EDO-H fulfils a leadership role, and there is managing and monitoring by the DPIU;
    - provincial monitoring by the FPOs;
    - LHSs who provide monthly supervision (where they visit the LHWs and their households – with and without the LHWs – and use their checklist) have higher-performing LHWs;
    - an LHS is expected to report on non-performing LHWs at the monthly meeting;
    - functioning health facilities, where an individual person has responsibility for the Programme and attends meetings at the DPIU;
    - high-performing LHWs also have functioning Women's Health Committees.
7. **Seven days a week** Almost half of the LHWs reported working seven days in the week prior to the survey. This is not in accordance with Programme policy. Field visits by the evaluation team to LHWs confirmed this was common practice, and that it was being reinforced with monitoring by the LHSs. The LHWs in Sindh and NWFP reported this practice as a reason for their looking for an alternative job. Our analysis shows that LHWs who work six days a week provide a higher level of services than those who are working seven days a week. In the judgement of the evaluation team, backed-up with discussion with LHWs in the field, we believe that LHWs should have one day off each week, except in the case of emergencies.

9 Transportation

'We have a shortage of drivers because of the low salary package. We have 29 vehicles in district Muzaffarabad but 50 percent not being used due to shortage of drivers. Same as problem in other districts which were affected by the earthquake as the NGOs are paying more than Rs.10,000 a month.' (RPIU manager, January 2008)

'Polio day comes then all the vehicles are involved in EPI. The vehicles are taken for 10 days –for the polio days and post monitoring. So that is 90 days a year they take all the vehicles. They bring their own drivers from the health department or from open market. Or if they use our drivers then we give a payment. EPI pays the LHW and the LHS.' (District Manager, January 2008)

9.1 Purpose

To provide the transport for monitoring and supervision of the Programme – primarily of the LHWs in their communities, but also of their monthly meetings and training programmes.

9.2 Performance measures

- Percentage of functional vehicles in use by LHS;[69]
- No vehicle is over 10 years old;[70]
- LHS provided with an average of 70 litres per month POL (or Rs. 70 per field visit day Fixed Travel Allowance (FTA));[71]
- Payment of the POL to the LHSs with vehicles, FPOs, and the Implementation Units (PC-1);[72] and
- Travel allowance paid for LHSs without vehicles.[73]

9.3 In operation

9.3.1 Description

Vehicles for supervision and monitoring The Programme purchases vehicles primarily for supervision and inspection purposes. In most instances Suzuki Ravi pick-ups are provided. However for more difficult terrain, Suzuki Potohar Jeeps have been purchased. Managers, FPOs, and LHSs are required to make regular field visits for the purposes of monitoring and supervision, and are provided with a POL. Vehicles purchased by the Programme are not part of the general vehicle pool at the district level, and their use is restricted to Programme activities. Each district has a budget allocation for repair and maintenance, and POL.

LHS mobility Each LHS is provided with a driver of her choice from her community[74] When the LHS does not have a vehicle, or is without a driver, she is paid a travel allowance. POL for the LHS should be, on average, 70 litres per month.[75] The actual amount of petrol

[69] PC-1, LHWP: 54.

[70] PC-1, LHWP: 46.

[71] PC-1, LHWP: 37–8.

[72] PC-1, LHWP: 37, 38, 45.

[73] PC-1, LHWP: 37.

[74] PC-1, LHWP: 39.

[75] In the previous PC-1 (the Revised PC-1), the Programme budgeted a petrol allowance per LHS of Rs. 1,250 per month. The Financial and Economic Analysis of the 3rd Evaluation, March 2002, found that assuming an LHS would have to travel around 1,000 km to meet all their LHWs twice a month, and assuming fuel consumption of 9 km/litre, this would require 111 litres per

provided to the supervisors can be varied according to the type of vehicle, the terrain, and the distances involved during field duty. Each LHS submits a tour plan for the month to the DPIU.

Procurement of vehicles The system for purchasing vehicles is the same as for procurement of supplies.[76] The tender is advertised, bids received, a decision is made, and orders are placed. Supply is then made to the PPIU or DPIU.

By mid-2003, the Programme had a record of 1,484 vehicles, with 840 more in the pipeline. The Programme planned to purchase an additional 1,884 vehicles during 2003–04 to bring the total up to 4,208. They also budgeted in the PC-1 for the replacement of 1,087 vehicles that were over 10-years-old (Table 9.1).

Table 9.1 Number of vehicles purchased per year, and the number of vehicles condemned, 1993–2008

Year of purchase	Planned purchase of vehicles after 2002	Actual no. of vehicles purchased	No. of vehicles condemned (target= 1,087)
1993–1994		–	
1994–1995		275	
1995–1996		–	
1996–1997		812	
1997–1998		–	
1998–1999		–	
1999–2000		33	
2000–2001		–	
2001–2002	Already purchased: 1,484	364	
2002–2003	840	240	
2003–04	1884	500	
2004–05	Replacement of 10-year-old vehicle: 275	709	
2005–06	–	1,168	
2006–07	Replacement of 10-year-old vehicle: 812	–	
2007–08	–	–	
Total	**5,295**	**4,101**	**0**

Source: LHWP, MoH.

9.4 Planned systems development, 2003–08

The Strategic Plan emphasises the importance of addressing LHS mobility through vehicle procurement and rational POL allocation.[77] The PC-1 specified that all LHSs should have full access to a vehicle to carry out their duties. This was a shift in policy, away from using FTAs that had had been provided to LHSs when the Programme was unable to purchase vehicles due to a government ban.

The PC-1 called for a review of the FTAs, which would still be paid where vehicles were not available. The PC-1 also budgeted for vehicles for FPOs who had previously had to request

month (a total cost of Rs. 3,300 for petrol) and a further 5 percent for oil and lubrication. The conclusion was that the amount allocated per the LHS was severely inadequate. This resulted in the budgeting of POL in the new PC-1 being in litres rather than in rupees. Even then, the 70 litres a month was significantly less than the 111 litres calculated by the Financial and Economic Analysis.

[76] PC-1: 73.

[77] Strategic Plan: 23.

vehicle access from each DPIU for the purpose of district inspections. Vehicles over 10-years-old were to be disposed of according to government procedures.

Fleet management was considered an important issue in 2005 in a TAMA report.[78] This report proposed that a Fleet Management System be developed, supported by USAID. The system would have a database and inventory of vehicles; criteria for the distribution of vehicles; a monitoring system for vehicle usage: procedures for provision of POL, vehicle repair and maintenance, and the disposal of vehicles. It was envisaged that the system would have modules for application at the district level.

9.5 System performance

9.5.1 Performance indicators

Table 9.2 Number of vehicles purchased per year, 1993–2008

Year of purchase	Planned purchase of vehicles after 2002	Actual no. of vehicles purchased
1993–1994		–
1994 –1995		275
1995–1996		–
1996–1997		812
1997–1998		–
1998–1999		–
1999–2000		33
2000–2001		–
2001–2002	Already purchased: 1,484	364
2002–2003	840	240
2003–04	1,884	500
2004–05	Replacement of 10 year old vehicle: 275	709
2005–06	–	1168
2006–07	Replacement of 10-year-old vehicle: 812	–
2007–08	–	–
Total	**5,295**	**4,101**

Source: LHWP, MoH.

Vehicle purchases While the Programme did purchase more vehicles during the period of this PC-1, it was not able to purchase as many as had been planned and budgeted for (Table 9.2). The Programme had planned to have 4,208 vehicles by June 2004, but only achieved 1,512. Even by June 2008, they still had 460 vehicles fewer than planned. The budget for procurement of vehicles was Rs. 1,216.559 million. It was underspent by Rs. 296.261 million.

Ratio of vehicles to LHSs The PSP database allows for the calculation of the ratio of vehicles to LHSs (Table 9.3). This ratio is close to 1:1, but does not account for the approximately 214 vehicles that need to be allocated to the Programme management and FPOs. However, this is, reportedly, partially accounted for by there being a small number of vehicles in use by the Programme provided by development partners.

[78] Dr Syed Zulfiqar Ali and Gary Leinen, *Assignment Report on Development of TAMA Work Plan for USAID Funded Assistance to Lady Health Worker and TB Programmes*.

Table 9.3 Ratio of vehicles to LHSs, by year, by province/region

	Punjab + ICT	Sindh	NWFP + FATA	Balochistan	AJKK+ FANA
2002	0.83	0.61	0.79	1.20	0.66
2003	0.83	0.53	0.69	0.83	0.83
2004	0.78	0.56	0.76	0.70	1.08
2005	0.59	0.68	0.70	0.92	0.76
2006	0.72	0.93	0.98	1.05	0.94
2007	0.81	0.99	0.87	1.00	0.87
2008	1.08	0.98	1.03	1.06	0.97

Source: PSP database January 2009, LHWP, MoH.

Table 9.4 LHS access to Programme vehicles, and POL received

Measure	2000 (%)	2008 (%)
Supervisor's usual access to a Programme vehicle		
Usually or always available	64	72
Sometimes available	11	5
Never	25	23
Total	100	100
Access to vehicle in month preceding the survey		
Full-time	37	60.
Part-time	26	17
None	37	23
Total	100	100
Percentage of supervisors having a monthly POL budget	71	77
Percentage of (all) supervisors receiving any POL allowance in previous month	35	58
Percentage of the supervisors who used public transport during last month	48	20

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

LHS access to vehicles While the survey shows that the percentage of LHSs with access to a vehicle (either part-time or full-time) has increased substantially between 2000 and 2008, the target in the PC-1 (of providing all LHSs with a vehicle) was not met (Table 9.3).

In 2008, 72 percent of LHSs reported that they had usually had access; only 60 percent had had full-time access to a vehicle in the month prior to the survey; 23 percent of LHSs reported having no access to a vehicle. This corresponds with 77 percent of them reporting that they have a monthly POL budget, though only 58 percent received this allowance in the previous month.

Variation between provinces Access by an LHS to a vehicle varies between provinces. Full-time LHS access to vehicles has improved in all provinces. LHSs in NWFP and Sindh are considerably more likely to have full-time access than LHSs in Balochistan or the Punjab.

Non-operational vehicles The survey sampled almost half of the districts in the country and found that over 25 percent of all vehicles were reported as non-operational.[79] The Programme is aware of this issue as the PSP database records the number of operational and non-operational vehicles by district and by province (Table 9.5).

[79] A vehicle can be classified as non-operational if it is under repair, is broken down (waiting for funds to be available to have the vehicle repaired), is waiting to be condemned, or has no driver.

The database shows that, with 3,583 LHSs working in June 2008, each of whom required a vehicle, along with the approximately 214 vehicles required by Programme management and FPOs, there is a shortage of around 165 vehicles.

Table 9.5 Number of operational vehicles, by year, by province/region, as recorded in the PSP database

June	Punjab + ICT	Sindh	NWFP + FATA	Balochistan	AJKK+ FANA	Total
2002	616	303	224	133	123	1,399
2003	654	325	223	135	128	1,465
2004	659	349	241	135	128	1,512
2005	857	474	321	182	138	1,972
2006	1,133	673	495	247	175	2,723
2007	1,338	794	579	247	186	3,144
2008	1,901	821	592	251	183	3,748

Source: PSP database January 2009, LHWP, MoH.

Vehicle disposal One reason for the large number of non-operational vehicles is that, while there should be 1,087 vehicles over 10-years-old and awaiting disposal in accordance with Programme policy, no vehicle has ever been condemned.[80]

Availability of drivers As well as insufficient operational vehicles, at the time of the survey there was a 33 percent vacancy rate for drivers at the district level.[81] In the Punjab, the vacancy rate was 50 percent.

Expenses incurred by the LHS If an LHS did not have vehicle, she used other forms of transport. However, this incurs expenses. The average cost for the previous month was Rs. 1,745. This was paid by the LHS, and only 66 percent of them reported that they expected it to be reimbursed.

In addition, 64 percent of LHS were responsible for the repair of their vehicle, and only 77 percent reported being reimbursed for vehicle repairs (with the exception of LHSs in AJK/FANA, where almost 100 percent reported being reimbursed). On average, there had been three breakdowns per vehicle in the previous year.

Insufficient POL budget

The POL budget for 2007/08 was Rs. 166.368 million; actual expenditure was only Rs. 164.945 million. If one assumed receipt of the Rs.13.167 from the Reproductive Health Project, the total expenditure would be Rs. 178.112.

Given that there were fewer vehicles than had been planned, Rs. 152.204 million would have been a sufficient POL budget, had petrol prices increased at the assumed rate of inflation (Table 9.6). However, as the actual increase in the price of petrol was considerably more than had been envisaged (an average rate, in 2007/08, of Rs. 69.42 per litre), the total budget would have needed to have been Rs. 232.701 million.

The POL budget for the Programme for 2007/08 was sufficient for only three quarters of the vehicles at the actual rate of the 2007/08 petrol prices. It is only if it is assumed that one quarter of all vehicles were actually non-operational that there would have been a sufficient POL budget (as only three quarters of what would have been needed was actually required; i.e. Rs. 174.536 million).

[80] The data from the FPIU in March 2009 lists only 310 vehicles waiting to be condemned.

[81] The low salary for drivers was given by the Programme as a reason for the vacancies.

Table 9.6 Planned POL budget for 2007/08, considering the actual number of vehicles

	No. of vehicles (1)	Litres allowance	Total Rs. million required for 12 months at Rs. 45.40595 (4)	Total Rs. million required for 12 months at Rs. 69.42/litre (5)
Supervisor (3)	3,232	70	123.27	188.47
DPIU (2)	135	240	17.65	26.99
PPIU	24	300	3.92	6.00
FPIU	5	300	0.82	1.25
FPO	50	240	6.54	10.00
Total	**3,446**		**152.20**	**232.70**

Source: PC-1 (2003-2008), LHWP, MoH.

Notes: (1) The average number of vehicles in the PSP data base from June 2007 and June 2008 was 3446; (2) the vehicles have been allocated in the same ratio as given in the PC-1 with the exception of the districts, which have increased in number from 120 in 2003 to 135 in 2008; (3) the number of vehicles for supervisors is the remainder after the others have been allocated; (4) Rs. 34/litre inflated at 7.5 percent per year results in Rs. 45.4,095 in 2007/08; (5) data sourced in the *Pakistan Energy Yearbook*, 2008.

9.5.2 System development

- The Fleet Management System proposed in 2005 was never developed. The number of vehicles managed by the Programme more than doubled, and yet the system for managing them did not become more sophisticated; and
- There was no review of the travel allowance for LHSs, which remained fixed at Rs. 70 per day regardless of the size of an LHS's catchment area.

9.6 Reported causes of non-performance

- Vehicles being use commandeered by higher authorities for their use;
- Vehicles being used for campaigns, and therefore unavailable for routine supervision;
- Insufficient funds for repairs or POL, the vehicle therefore remaining non-operational;
- Vacant positions for drivers; and
- Law and order issues.

9.7 Findings

1. **Fleet management** Vehicles are an essential resource in providing supervision and inspection of this dispersed community-based service in Pakistan. However, the incentives for misuse are high, and they require further controls and greater authority to implement controls than some of the other systems. Also, the fleet is aging, and the amount budgeted for repairs and maintenance has not been released. In addition, the process for condemnation of the vehicles is reportedly cumbersome and has not resulted in any vehicles being condemned. It is also important that the most appropriate vehicles are purchased according to terrain. Vehicles are the main capital asset of the Programme, and there is no specialist capability in fleet management within the Programme;
2. **Providing mobility** is important for the supervision and inspection of LHWs. The Programme has been plagued by insufficient drivers for vehicles, insufficient POL, and vehicles not being available because of being used for some other purpose (e.g. Polio days), and non-operational vehicles. The alternative to a vehicle is the payment of a travel allowance to LHSs. However, these allowances have been subject to

delays. These problems call for management attention, and yet there is no designated manager at the FPIU or the PPIU responsible for transportation; and

3. **The cost of doing the job** It is unacceptable that an LHS should bear the cost of their transportation in order to carry out their work. An LHS should be 100 percent confident that she will receive her full allowance of POL or FTA, and reimbursement for any vehicle repairs.

10 Management information system

10.1 Purpose

To provide an information system that is efficient and that responds to the information needs of various decision-making levels of the health system.

10.2 Performance measures

- The MIS is designed to provide performance reporting on selected KPIs in the Strategic Plan, and process and output indicators of the PC-1;
- This information is accurate and timely; and
- This information is used to inform strategic and management decisions.

10.3 Assessment of the MIS

Core to the purpose of the MIS is the measurement of results against the KPIs. In the first instance, the assessment of the MIS is whether it is designed to provide the information on the KPIs. The indicators in the PC-1 and the Strategic Plan are provided in Annex C, together with the role in the MIS in providing information for its measurement.[82]

The next section provides the system description. It is similar in format to the other systems reviewed in this report. This is followed by an assessment of the system's performance, with results from the Quantitative Report; the evaluation team's use of the PSP database, document analysis, and observation of several management meetings.

10.4 Description

The paper trail The MIS, as required by the PC-1, has procedures and instruments for data collection from the community level (through LHWs) on key areas that have an impact on the health status and on performance indicators important to ensuring a successful Programme. The MIS collects data through a series of monthly reports in standard formats (Figure 10.1). This data is available to the health facility, and district, provincial and federal levels for compilation and analysis.

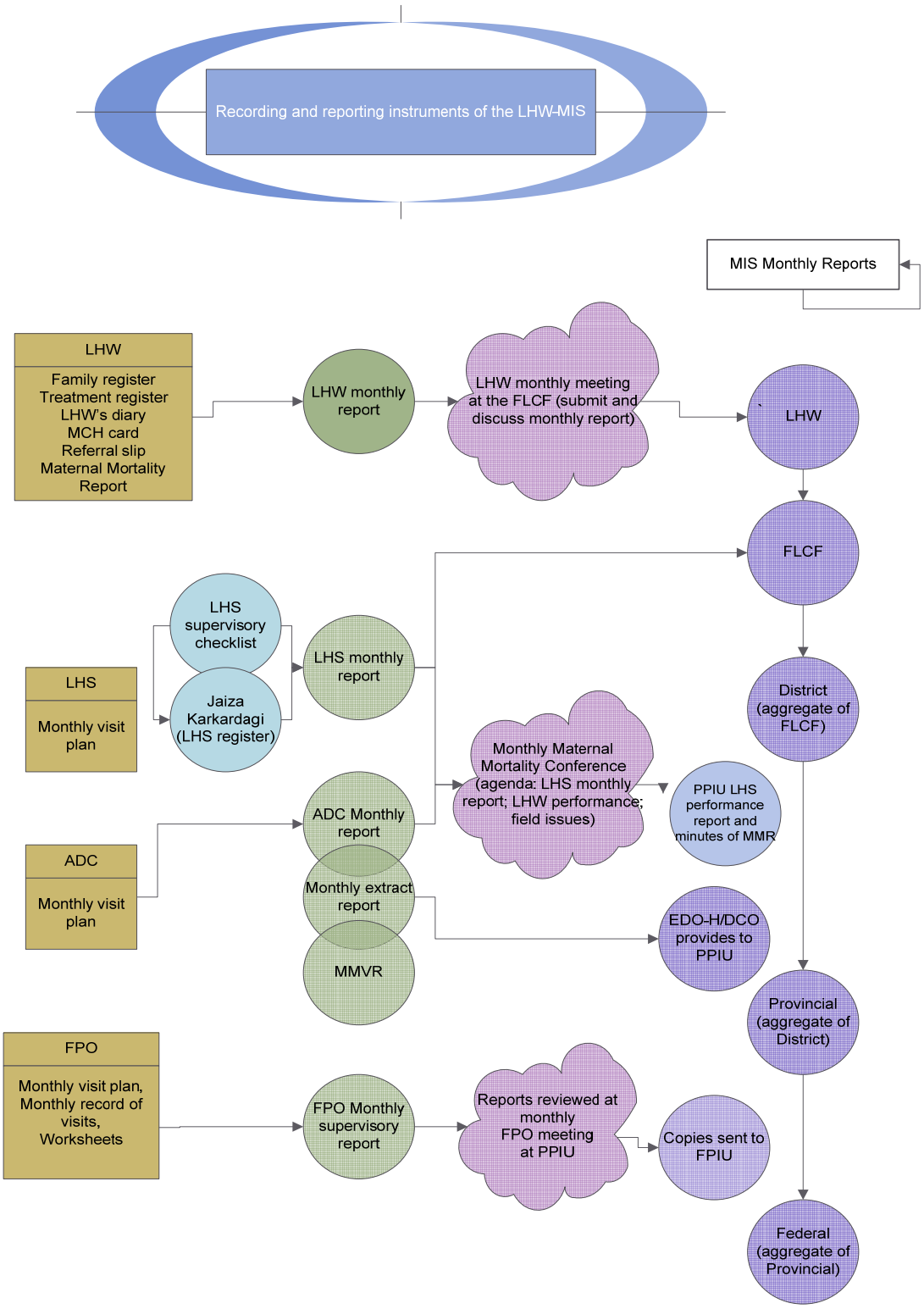
The Strategic Plan emphasises the need not to rely purely on data collected by the system, but to continue to use external evaluations.

Management meetings There are meetings held at the district level, and the provincial and federal levels by Programme managers and inspectors, where data is presented and where barriers to performance are discussed with the aim of achieving resolution. The schedule of meetings is as follows:

- FPIU quarterly meeting at FPIU with PPIU (Provincial Co-ordinator, Assistant Provincial Coordinator, Logistic Coordinator);
- FPIU quarterly meeting of Provincial Training Coordinators;
- PPIU quarterly meeting with DPIUs (includes discussion of training issues);

[82] The PC-1 is the operational plan for the LHWP. It is instrumental in gaining access to resources by being translated into the annual Cash/Work Plan, which is the budget request to the Ministry of Finance. The input for the Cash/Work Plan is provided by the PPIU to the FPIU after consultation with the DPIUs. It is time-bound by the requirements of the Planning Division and the Ministry of Finance.

Figure 10.1 Recording and reporting instruments of the LHW MIS



- DPIU monthly meeting with LHS: MMV (with ADC, FPO, LHS);
- DPIU meeting with health facility managers prior to training;
- DPIU monthly meeting with EDO-H and other DPIU members and FPO to discuss issues, responsibilities, decisions, the progress from the previous month's meeting, and to agree on future plans;
- DPIU meet twice a year, at least, with District Population Welfare Officer (DPWO), NGOs, and the Education Department (needs-based).

Issues that are unable to be resolved are referred to the provincial and then the national level of the Programme. Issues of strategic importance should be referred to the Programme Review Committee.

10.4.1 Monitoring and management information

3rd Evaluation results The Programme relies on independent evaluations to provide management information on the performance of the Programme. The previous evaluation was the 3rd Evaluation, conducted in the eight years since the Programme's inception. The evaluation did not seek to comment on the accuracy of the Programme's MIS. However, a third party (the World Bank) was utilised to conduct a rapid assessment of monitoring and supervision in 2006, which included reference to the MIS.

Monitoring There are no external controls or regular monitoring of the MIS. However, the World Bank conducted a 'rapid assessment' of the LHWP's monitoring and supervision system in 2006. Objectives included evaluation of data collection, determining the extent of data utilisation and analysis, understanding the perceptions of data quality, and obtaining feedback on the 'Use of Information' training programme. The findings of the assessment were that:

- visits to the field were considered more valuable for tracking programme performance than the LHW MIS;
- data quality checks were irregular and focused on the completeness of data entry rather than accuracy;
- the perception by managers was that the highest quality of data was the LHW monthly report, but that aggregating the information led to inaccuracies being introduced;
- the data on Male Health Committee meetings, MMR, growth monitoring, and CPR were more prone to inaccuracies than others;
- overall analysis of data was considered poor, with data not being used to understand short- or long-term trends;
- due to the lack of good quality analysis, use of data was limited; and
- people who had attended the 'Use of Information' course had found it important for their work.

10.5 Planned systems development, 2003-08

The Programme has always recognised the limitations of information collected by LHWs, both on health indicators and management information. The Strategic Plan addressed this issue under its strategy for 'Improving Performance Monitoring and Evaluation for Evidence-Based Programme Design and Management'. The plan noted that LHW-focused information systems 'are time consuming for the LHW to complete and appear not to be used for informing decisions at any level of the organisation'. The Plan proposed reducing, but not eliminating, the amount of information collected by the LHW, and developing a mini-survey (based on the questionnaires of the 3rd Evaluation) that could be used regularly to monitor key indicators of Programme performance (e.g. LHW test scores, client coverage, adherence to selection criteria, and so on).

The Strategic Plan outlined new or improved MIS tools that were to be developed. These included new instruments, such as: mini-surveys for operation at the district level; a fleet management database; a procurement management database; and a review of the personnel database; further development of the MIS administrative records; and a review of the LHW/LHS reporting system, which would take into account management capabilities at using the information collected.

In addition to new MIS instruments, the PC-1 (p. 51) referred to the need for an efficient computerised system that would support decision-making, improving accuracy, and timeliness of data. All PIUs were to be equipped with computers and printers for proper compilation and analysis of reports on a monthly, quarterly, and annual basis. All PIUs were to be linked through WAN or email for timely and efficient transfer of data.

10.6 System performance

10.6.1 Performance indicators

MIS reports on KPIs

The analysis of whether the MIS gathers information to measure the KPIs is provided in Annex C.

Information from the MIS is used to inform strategic and management decisions

Management information that can be used for decision-making is provided through summaries of the PSP to show results against some of the Programme's main targets (e.g. the number of LHWs employed, the ratio of LHS to LHWs, the number of vehicles, and population coverage. However, this information does not provide for measures of a broad range of KPIs.[83]

Information for strategic decision-making and policy development is primarily generated by external evaluations. There is a clear progression from the findings of the 3rd Evaluation to policies in the Strategic Plan and budgeted activities in the PC-1.

However, a mid-term evaluation planned for 2005 did not take place, and the planned mini-surveys to be derived from the 3rd Evaluation were not developed. In the absence of this information, the Programme had to rely on the results from the evaluation conducted in 2000 and the information collected by its internal management information system.

The Programme did not implement Phase 2: Development of a Sustainable Programme (outlined in the PC-1) that had been planned for July 2005. If it had done so, then there

might have been more demand for the evaluation undertaken in 2005 in order to inform options.

There also appears to be a lack of demand from the Ministry of Health and the Planning Commission as a part of a performance monitoring process. Annual planning and review would provide an obvious need for high quality data. The Programme produced a National Plan of Action in 2003, 2004, and 2005 but failed to do so after that date.

While annual reviews are published, they do not place a high demand on the MIS.[84] While Provincial Review meetings have been held between the PPIU and District Coordinators,

[83] The MIS is described in detail in the 'Module on Use of Information at District Level: LHW MIS'. This manual guides the DPIU staff through the analysis and use of data collected from the LHWs and the LHSs. It was produced in 2005, and training courses were held throughout the Programme. In the introduction, Dr Zahid Larik (the then National Coordinator) said: 'Providing adequate and accurate information for the management of health care services is still a big challenge for the MIS sections' of the Implementation Units, '[w]hile some data are unreliable, most are often not processed or analysed for management use

[84] The Programme does produce annual Cash Plans/Work Plans, for the Ministry of Finance; however, these do not require reporting against the range of KPIs.

and the PPIU and the FPIU (albeit more on a biannual than a quarterly basis), the Programme Review Committee did not meet during the period 2003–08.

There is no audit of the MIS data provided to measure KPIs. Audit is purely financial, not system or performance oriented. The main performance indicator that is required to be reported on externally is the number of working LHWs. The quarterly review by the Planning Commission, as a part of the Public Sector Development (PSDP) and the MoH quarterly review, reportedly, focuses on only a few indicators.

Operational decision-making

For Programme management at the district and provincial levels, managers appear more reliant on the reporting of exceptions from the field (by FPOs, LHSs, and their own staff) when facing management challenges. Given that the main purpose of the Implementation Units is operational, the main information that they find useful is information on operational problems. It is the day-to-day challenges that take up management attention.

Accuracy, timeliness and relevance of information

The lack of an external evaluation in 2005, and the mini-surveys, presented a drawback to the MIS, which is dependent on external verification of indicators (see Annex C). This impacted on the Programme having accurate, timely, and relevant information to support strategic planning and policy decisions.

A substantial amount of information is collected by the Programme's internal MIS. The collection of this information also demands considerable effort by the LHWs and their supervisors. However, there are still some gaps. The evaluation team had to calculate the number of LHWs recruited annually over this period indirectly. This was surprising, given that this is a key cost driver.

Compliance with on submitting the regular monthly reports is monitored at the provincial and federal levels at regular meetings (e.g. the provincial quarterly meetings with DCs, and the monthly meeting at the PPIU of the FPOs). The data for entry into the PSP begins with the monthly reports of the LHWs and LHSs. The Quantitative Survey results show that there has been a significant increase in the percentage of LHWs and LHSs who could show their monthly work-plans and their monthly reports (Table 10.1).

The health facility staff members are supposed to prepare the MIS report at the health facility. The survey shows that almost 60 percent of LHSs are now undertaking this task. This does not necessarily mean that facility management is not interested in LHW service provision. However, there is a risk that this could indicate a lack of engagement.

Table 10.1 Percentage of LHWs and LHSs who had produced and could show a work-plan for the current month, and a monthly report for the previous month, comparing 2000 with 2008

	LHWs		LHSs	
	2000	2008	2000	2008
Could show a work-plan for the current month	67	85	74	91
Could show a report for the previous month	84	90	53	80

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

Table 10.2 Who prepares the Health Facility MIS monthly report?

Person to prepare MIS report	Punjab	Sindh	NWFP	Balochistan	AJK/FANA	Overall
Manager of facility	4	31	2	61	12	15
Other staff at the facility	20	18	13	14	16	18
Other LHSs working at same FLCF	7	1	0	4	0	4
LHS	65	40	78	12	56	55
Staff at DPIU	1	2	0	8	2	2
Others	4	8	8	2	15	6
Total	100	100	100	100	100	100

Source: OPM LHWP 4th Independent Evaluation, Quantitative Survey data, 2008.

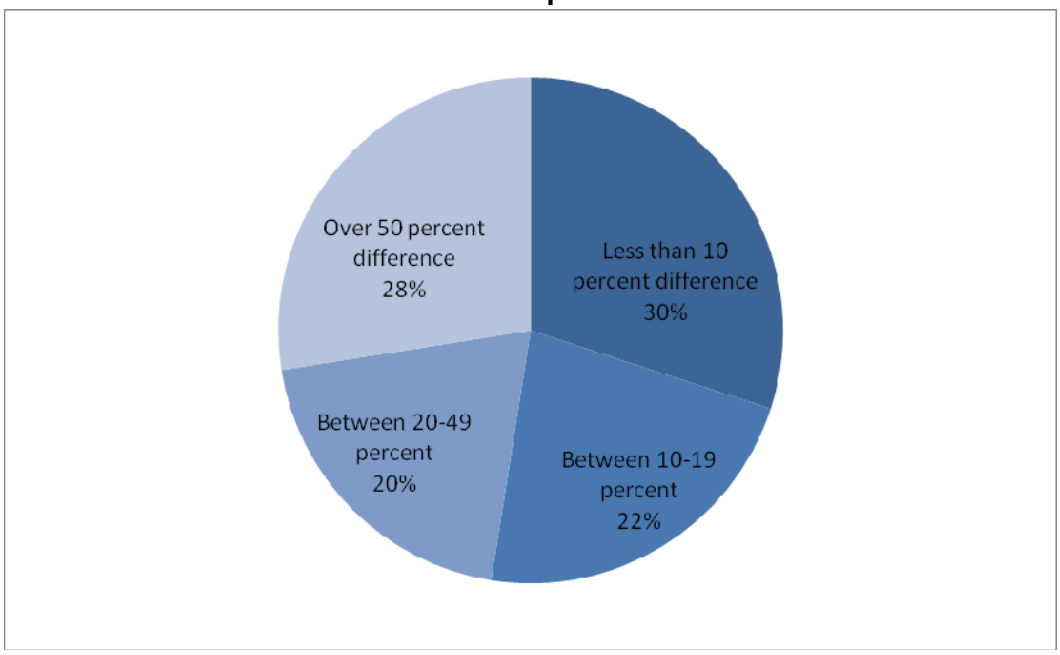
Accuracy of the internal MIS can be verified by the external evaluations and by checks on internal consistency. In using the data from the PSP database, the researchers came across numerous examples of inconsistency in data. What was apparent was that the MIS officers do not have the authority to demand accuracy, and need the support of senior managers. When this happens, as was apparent in one province visited by the evaluation team, the quality of the data and the responsiveness of the MIS section improve considerably.

One example is the allocation of LHWs positions at the district level. There is a wide variation between the records on the PSP database (June 2008) of the number of allocated positions for each district compared with the number reported by the sample districts at the time of the survey.[85]

There was no formal reallocation process between June 2008 and the survey timetable of July–November 2008. Only 30 percent of the sample districts reported an allocation of LHWs that was equivalent to the PSP database. Almost 30 percent of sample districts had over 50 percent difference (Figure 10.2). As the overall number of allocated posts for the province remains the same, this must indicate a redistribution in the allocation of posts between the districts within a province, as well as outdated information in the PSP database.

[85] This is also referred to in the Management Review.

Figure 10.2 Difference between the recorded allocation of LHW posts, by district, in the PSP database (June 20008) and the districts' report of their allocation of LHW posts



Source: PSP database January 2009, LHWP, MoH and OPM LHWP 4th Independent Evaluation.

10.6.2 System development

Improved MIS tools

A number of tools were planned during the period of this PC-1 (Table 10.3), the majority of which were not developed. The survey of district managers found that 56 percent of the DPIUs were using a computerised MIS, 50 percent of which starting in 2008 and around 40 percent in 2007.

Table 10.3 Were the new or improved MIS tools developed as planned in the Strategic Plan?

Instrument	Was it done? (provide some detail)
New Instrument: A mini-survey instrument using the 3rd Evaluation questionnaires for operation at the district level	These were not developed. A modified survey was conducted internally in 2007 (the FPO Survey), but this was not a mini-survey instrument.
New Instrument: Fleet management database	This was not created.
New Instrument: Procurement management database	A logistic management manual was produced in 2005, with the support of UNFPA. The aim was to improve the use of the current system. By 2006, 250 people had been trained at the provincial and district levels. While a draft manual has been developed for health facility staff, it has not been distributed and training has not taken place. Training in the system is important; however, the new instrument is not the instrument that was envisaged.
Review and refine the personnel database	Computerisation of the personnel database was started, but the project has not been completed.
Further develop the MIS using the Programme's administrative	The Programme Status pro forma, which records the main administrative data of the Programme, is computerised primarily at the provincial and

Instrument	Was it done? (provide some detail)
records	FPIU levels. Computerisation has been fragmented at the district level.
Reduce and refine the LHW/LHS reporting system to reflect management capabilities in using information	The aim here was to reduce the reporting load on the LHWs and the LHSs, and rely on mini-surveys and external evaluations for additional management information. This did not take place.

10.7 Reported causes of non-performance

- The existing system is not relied on, as it is considered inaccurate. Yet, it is costly in time and resources (Strategic Plan: 26). Inaccurate performance information undermines sound policy-making;
- The Strategic plan claims a weak culture of evidence-based planning and management below the level of the FPIU;
- There has not been consistent demand for quality information by management at all levels of the Programme. This results in inaccurate data not being challenged and corrected. This, in turn, leads to information on which managers do not feel confident to rely. Lack of managerial attention, together with lack of response and feedback, undermine motivation for accuracy of inputs.

10.8 Findings

1. **Lack of demand** There was a lack of demand for high-quality management information. The Planning Commission requests performance feedback, but only on a few key indicators. While the Annual Report produced by the Programme for the Ministry of Health reports on some of the targets of the PC-1, it does not provide a full report of its implementation. There is little evidence of demand for reporting on many of the KPIs determined in the Strategic Plan or on the implementation strategies of the PC-1;
2. **Accuracy, timeliness, and relevance of information** A substantial amount of information is collected by the Programme's internal MIS, requiring considerable effort by the LHWs and their supervisors. The main information that is actually used is reporting against budget and reporting the number of working LHWs. It is surprising that a key cost-driver such as the number of LHWs recruited in a year has to be calculated indirectly;
3. **Compliance with monthly reporting** There is a high level of compliance with LHWs and their supervisors on filling in the monthly reports. LHSs are being used to complete the health facility's monthly report. This does not necessarily mean that the facility management are not interested in the LHW's service provision. However, there is a risk that this could indicate a lack of engagement;
4. **Over-reliance on the MIS** Due to the lack of development of the mini-surveys and no mid-term external evaluation, the Programme had to rely on their MIS for information. The mini-surveys and evaluations were to be important sources of performance information and MIS validation. The MIS is reliant on inputs from over 95,000 people, many health facilities, and over 130 districts. While it can provide ongoing management information, which is used by some of the active districts and provinces, it does need to be supported by additional high-quality monitoring and evaluation information; and
5. **Reducing the amount of information collected by the LHW** This, as proposed by the Strategic Plan, was not explored.

11 Conclusion

The performance required of the LHWP systems is relatively well specified in the Strategic Plan and the PC-1. Overall, the systems of the LHWP have coped with the large expansion of the Programme from 40,000 LHWs in 2000 to almost 90,000 LHWs in 2008. The systems have operated to: recruit LHWs and LHSs (although there was a failure to recruit drivers); provide training (including continuing training) at the health facility and refresher training courses; improve the level of supplies to LHWs (although there are still problems); improve the payment of salaries (although, again, there are still unacceptable delays), and increase the level of supervision of LHWs.

The core design of the systems appears robust and has been sustained over the 15 years of the life of the Programme. Poor systems performance occurs most often when there is a shortage of inputs, or non-compliance with the system's standards. For example, there was insufficient procurement of supplies for the LHWs (Logistics System); there is non-compliance with residency criteria in Sindh (Selection and Recruitment System); and lack of funds for salary payments was evidenced at the time of the Quantitative Survey.

These problems are management and governance problems, not systems problems.

Three particular areas of non-performance in systems need to be highlighted:

- the system for dealing with non-performance of LHWs requires improvement so that, where there is evidence of non-performance and a non-willingness to work, the LHW can be terminated efficiently;
- the process for condemnation of vehicles is not operating; and
- the procurement process conducted by the MoH and the FPIU has experienced problems, resulting in long delays in purchasing.

Systems also need continuous improvement (not, necessarily, radically change), and planned systems developments were generally not implemented. This cannot be attributed to lack of funding, as many of the developments did not require additional funds. It is also not due to the tensions of rapid expansion, as most of the expansion of the Programme had occurred by 2003.

Our conclusion is that there is a lack of management attention focused on systems improvements. Attention is absorbed by operational concerns. It is also difficult to build up the necessary experience to deal with system development when there are frequent changes in senior management in the Programme and in the Ministry of Health (also refer to Management Review). There is also a lack of accountability to the Ministry of Health for developments approved and budgeted for in the Strategic Plan and PC-1.

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Annexes

Annex A All variations in curriculum since 2000

Table A.1 All variations in curriculum since 2000

Change/addition to curriculum	Change mechanism: response from the training division on what stimulated the revision	Was there piloting?	How and when was the change implemented nationwide?	Is it integrated into the supervision/ inspection mechanisms?
The Basic Curriculum was revised in 2001/02.[86]	The knowledge scores of the 3rd Evaluation gave the initial stimulus. The objective was to improve LHW knowledge and skills. During the trainer training for the revised curriculum, further areas of improvement were identified (e.g. on antenatal visits, micronutrients, MIS case studies, and strengthening of training in counselling skills). Field experience of LHWP management highlighted the weakness of the MIS, which resulted in the revision of the MIS section. At the same time, the MMR verification pro forma was introduced.	No	In 2002/03, throughout the country, all LHWs were given 15 days' refresher training on the revised LHW manual.	Yes
The LHS curriculum was updated in 2003/04 with the strengthening of the supervision and monitoring component. Chapters on anatomy/ physiology were deleted as they were not relevant. The subject matter is the same as the LHW curriculum, but with more in-depth coverage of topics.	The LHS manual was revised based on the changes in the LHW curriculum. Field experience showed that the LHS course was not as practical as it needed to be. Initially, it was thought that the LHSs would become LHVs; therefore, their course work included basic anatomy and physiology, etc. This idea was later dropped and the curriculum was revised and adapted to the requirements of the LHS's role and responsibilities. Also, more in-depth knowledge was provided to the LHS. Verification of infant mortality was introduced, but this has yet to be implemented. Updated section of MIS was included.	Mechanism similar to LHS. No piloting was undertaken, and the refresher training started throughout the country in 2005.	All working LHSs received 12 days' refresher training from 2005 onwards. Complete in all provinces.	Yes

[86] Some topics were revised. Most of the changes were in the MIS, on a few indicators on monthly reports. The following changes were made in the curriculum: maternal death reporting; break up of child death (into infant death, death of children under five years of age); registered number of pregnant women; number of newborns weighed at birth; break up of contraceptives; and the antenatal visit number (4) during pregnancy was mentioned. Other changes included: CBA age changed from 15–45 years to 15–49 years; introduction of adolescent health topic; exclusive breastfeeding definition changed (six months, instead of four); position and latching at breastfeeding were introduced; instead of children under 3 years old, the child age range was changed to 0–35 months. Some topics were revised. Topics added were the TB DOTs with strategy and HIV Aids (enhancing the STD section).

Change/addition to curriculum	Change mechanism: response from the training division on what stimulated the revision	Was there piloting?	How and when was the change implemented nationwide?	Is it integrated into the supervision/ inspection mechanisms?
In 2006, the LHWP revised the whole MIS manual and incorporated the change into the Basic Curriculum of LHWs and LHSs (2007).	Revision of the MIS was based on the changes in the LHS/LHW curriculum. Additional indicators were added, based on the LHW manual (e.g. number of antenatal visits, registered number of pregnant women, children aged 0–35 months, maternal mortality ratio, etc). LHWs were involved in TB Dots. The indicator for this activity was introduced. Indicators of Initiation of BF, SBA, and the number of ANC visits were also included. The denominator of tetanus toxoid vaccination, the number of ANC visits denominator was changed from all pregnant women to all women delivered. Non-drug items (e.g. weighing machines, torches, etc.) had not previously been recorded in the MIS. They were introduced to record availability and functionality.	No piloting	New recruit in the LHWP receive training on revised manual. All working LHWs received the refresher training. New LHSs received training on the revised manual. All working LHSs have 12 days' mandatory refresher training on the new MIS module for LHS incorporated in the Basic Curriculum 2007. Four days' training on revised curriculum in 2007, and again in 2008 and 09.	Yes
Refresher training was given greater emphasis after the 3rd Evaluation, and included as a requirement in the PC-1				
Counselling cards	This initiative was based on the findings of 3rd Evaluation, where weak counselling skills were identified. The LHWP felt the need to provide job support to the LHWs to help them in counselling.	Piloted in 2003/04 in Save the Children districts, followed by UNICEF and UNFPA districts. Replicated in 2005/06 throughout the country.		Yes
Child Survival and Child Health Module based on Community IMNCI (initiatives by UNICEF and WHO).	The 3rd Evaluation of the LHWP suggested that the use of charts was insufficient, and it was suggested that a tool be introduced. UNFPA introduced the intervention at LHW level, as the IMNCI skills were present at the first-level health facility, but not at LHW level, so it was piloted at LHW level.	Piloted by UNFPA and UNICEF in 2004/05. Replicated in 2005–08.		Yes
Nutrition manual	The National Nutrition Survey Report suggested that nutrition is an important and cross-cutting issue; however, the indicators were not good, which is why this training was	No pilot. Training of LHWs conducted in 2005.		It was already covered in supervisory checklist.

Change/addition to curriculum	Change mechanism: response from the training division on what stimulated the revision	Was there piloting?	How and when was the change implemented nationwide?	Is it integrated into the supervision/ inspection mechanisms?
	initiated. A theoretical training was provided on the micro- and macronutrients. No practical training was imparted. It was undertaken by the Nutrition wing of the Ministry of Health. The LHWP was not involved.			
Injectable contraceptives	In the Maternal Neonatal Tetanus (MNT) campaign with UNICEF in 2001–02, the LHWs were trained on intramuscular injection (IM). The evaluation of the MNT campaign showed that an LHW can safely give IM injections. The LHWP then thought that LHWs could deliver injectable contraceptives. This would: increase client choices and increase the acceptance of the LHW, as well as contraceptives, at community levels (according to the literature review), and ensure the visit of the client to the health facility once a year.	The pilot study was funded by UNFPA in 2005/06 and designed to test LHW skills in delivering IM.	Replicated throughout the country in 2006/07. All LHWs are trained but, as yet, no injectable contraceptives have been provided. UNFPA provided 3 month' initial supply.[87]	Included in Logistics list Only CPR is seen in the LHS/FPO report.
OBSI module	New concept introduced by USAID, and there was change in the definition of family planning as the concept of birth-spacing of 3 years, instead of contraception, was introduced.	Piloted in 10 districts of Catalyst consortium in 2004/05.	Replicated in 2007/2008.	Part of the checks on family planning services.
Use of Information Course, for managers at the district and provincial levels, and FPOs	MIS report from districts were not being fed back properly, hindering planning and corrective action planning.	Implemented initially in UNFPA districts, followed by UNICEF districts. (1)	2004/05	Replicated throughout the country. Some parts of Sindh still to be covered.
District supervision and monitoring for managers at district and provincial levels, and FPOs.	Initiated in 1999. It was designed as a middle-management-level course, and included job descriptions and use of checklists. The purpose was to provide new managers with the skills to supervise and inspect the Programme in the field.		Implemented from 1999. Updated in 2007.	Not monitored or evaluated.

Source: LHWP, MoH.

Note: (1) UNICEF districts and UNFPA districts refer to the districts where these development partners sponsor programmes.

[87] There is no approval given for the purchasing of injectable contraceptives in the PC-1. The Planning Commission gave assurance that funds would be available from November 2008. However, they have yet to be released.

Annex B Personnel positions of the LHWP

Table B.1 Positions, roles, sources of funding and employment status of personnel working for the LHWP

Job title	Main role	Accountable to	Payment from Programme funds	Employment status
Lady Health Worker	To deliver services	Managed by the LHS and DPIU; is recruited by the FLCF and can be fired by DPIU.	Full salary and training allowance (basic training and for refresher training)	1-year Contract
Driver	To drive the LHS	DC/DHO	Full salary	1-year contract
Lady Health Supervisor	Performance management of LHWs	DC-DPIU	Full salary and refresher training allowance	1-year contract
Accounts Supervisors (including Logistics)	Accounts, logistics, clerical work	District Coordinator	Full salary	1-year contract
Assistant District Coordinator (female)[88]	Collects and collates diary data from LHSs; monitoring/supervision; and field visits	DC/DHO	Project allowance: 20% of basic salary	Public servant on deputation
District Coordinator	District Programme Manager	DHO/PPIU	Project allowance	Public servant on deputation
EDO-H	Chairman of the DPIU	Provincial DoH-DG or Divisional Director of Health Services (this position no longer exists in NWFP)	Project allowance	Public servant
Divisional Director of Health Services (5–10 positions per province)	Advocacy/promoter role	Provincial DG Health	Project allowance: 20% of basic salary (most of them)	Public servant
Field Programme Officer (20 positions)	Inspection of district activities	PPIU	UNICEF, and the Programme	1-year contract or on deputation
Health Education Officer	Supervision similar to FPO, Health Education Advisor	PPIU	Full salary	1-year contract or on deputation
Management Information Systems	Production of collated HMIS reports and Information analysis	Provincial Coordinator	Full salary	1-year contract
Logistics Officer	Stores and distribution	Provincial Coordinator	Full salary	1-year contract
Finance Officer	Prepare and monitor budget, preparation of financial accounts for PPIU, and consolidation of district accounts	Provincial Coordinator	20% funded by the Programme	Deputation from Auditor General's office
Assistant Provincial Coordinator	Monitoring and Programme Management	Provincial Coordinator	Project allowance	Can be on contract or a public servant on deputation

[88] Female managers are particularly needed in places such as Balochistan, where male professionals cannot visit a health house without a female colleague.

Job title	Main role	Accountable to	Payment from Programme funds	Employment status
Provincial Coordinator	e.g. Balochistan – District Health Officer	DG Health, accountable to FPIU for Programme responsibilities	Project allowance	Public servant on deputation (Punjab is the only province where this is a full-time position.)
Project Monitoring Specialist (4 positions)	Monitoring systems: DPIU to Community level	FPIU/UNFPA	UNFPA (withdrawn in the financial year 2000/01).	1-year contract
Federal Monitoring Unit (4 officers)	Analyse monitoring reports; conduct field visits	FPIU	UNICEF	1-year contract
FPIU Accountant		National Programme Management		Public servant on deputation
FPIU Deputy Coordinators (2 positions)	Programme management	National Programme Manager	Project allowance	Public servant on deputation
FPIU: National Coordinator	Programme management	DG Ministry of Health	Project allowance	Public servant
Federal-level Trainers	Training	FPIU	20% allowance while training	Public servant
Provincial-level Trainers, Doctors/ Paramedics	Training	PPIU	20% allowance while training	Public servant
District level Trainers, Doctors/ Paramedics	Training FLCF trainers	DPIU for training	20% allowance while training, but not if already working for DPIU	Public servant
FLCF-level Trainers, Doctors, LHV, Technician	Training LHWs	DPIU for training	20% allowance while training	Public servant

Source: LHWP, MoH.

Annex C MIS and the measurement of results against KPIs

Core to the purpose of the MIS is the provision of information that allows for the measurement of results against the KPIs. Is the MIS designed to provide measurement of the KPIs? The indicators in the PC-1 and the Strategic Plan are provided in Tables C.1–C.4.[89] For each indicator, there is a column that indicates whether or not the MIS provides this information.

Key performance indicators (KPIs) Both the PC-1 and the Strategic Plan (which is included as an annex of the PC-1) define the key indicators that are to be monitored.

Strategic Plan KPIs The Strategic Plan identified four key areas to be managed by the Programme, together with the strategies and actions to be taken: expansion of coverage to underserved and poor areas (Table C.1); improving quality (Table C.2); expanding the scope and mix of services of the LHWs (Table C.3); and improving performance monitoring and evaluation for evidence-based Programme design and management (Table C.4).

In each area, a set of key performance indicators was developed. Measures of these indicators would be provided from a range of sources, including: PIHS Survey, Programme payroll, Programme monitoring and evaluation systems, and external evaluations.

PC-1 input/process indicators

The Programme also had a list of input or process indicators identified in the PC-1 (Table C.5). To identify targets for these, it is necessary to research the rest of the PC-1 and the Strategic Plan.[90] The input indicators can be classified as either measures of population covered by services (the first goal of the PC-1); measures of the tools that are used to collect information on Programme performance, including outputs and outcomes; and measures of inputs under the Programme's control that were shown by the previous evaluation to increase LHW performance: supervision and LHW knowledge.

PC-1 output/outcome indicators

The Programme set itself the task of contributing to a number of important national health outcomes, listed in the PC-1 (objectives and targets, Table C.6).[91] While the Programme cannot be held directly accountable for these objectives and targets, the link between LHW services and improvements in indicators was demonstrated in the 3rd Evaluation (e.g. CPR, EPI).[92] The assumption is that high-performing LHWs will make a difference to health outcomes. The PC-1 provides output/outcome indicators (Table C.6, column 3) that it will aim to achieve in order to contribute to the national health outcomes.

[89] The PC-1 is the operational plan for the LHWP. It is instrumental in gaining access to resources translated into the annual Cash/Work Plan, which is the budget request to the Ministry of Finance. The input for the Cash/Work Plan is provided by the PPIU to the FPIU after consultation with the DPIUs. It is time-bound by the requirements of the Planning Division and the Ministry of Finance.

[90] The Strategic Plan (2003–11) is an annex of the PC-1 (2003–08).

[91] **Alignment with Health Policy** Most of the objectives and targets for the LHWP are aligned with the National Health Policy, 2001. In this policy, targets for 2010 were set at: IMR 55 per 1,000 live births; MMR was 180 per 100,000 live births; CPR was 50 percent of the total population; EPI at 100 percent coverage (higher than the LHWP targets); and 100 percent coverage by the LHW of the target population.

[92] The concept of contribution needs to be stressed here because, in some of the interviews conducted for this evaluation, it was apparent that the complexity of improving these outcomes was not fully understood: some officials thought that the Programme was the key initiative responsible for improving the primary health indicators.

Table C.1 Strategic Plan KPIs for the expansion of coverage, and their measures

KPI coverage	Programme source of information	External evaluations	Information collected by MIS?
LHW provide services to 50% of the poor	PIHS survey		
100,000 LHWs by 2005	Programme payroll and M&E systems		Yes
LHW fulfil selection criteria	Programme M&E	√	Yes
All registered households regularly visited by the LHW	Programme M&E	√	Yes

Table C.2 Strategic Plan KPIs for improving quality of services, and their measures

KPIs on improving quality	Programme source of information	External evaluations	Information collected by MIS?
90% of LHWs score over 80% in the Knowledge Test	Programme M&E	√	Yes
No medicines/contraceptives out of stock for more than two months for 90% of the LHWs	Not indicated		Yes[93]
90% of LHWs paid full salary in previous month	Programme M&E	√	Yes[94]
All LHWs have supervisors	Programme M&E	√	Yes
All LHSs have full-time access to a vehicle	Programme M&E	√	Yes
All PPIUs and DPIUs have a Strategic Plan	Programme M&E	√	Yes
All PPIUs and DPIUs are following agreed procedures	Programme M&E	√	Yes[95]
75% of Health Committees are fully functional	Not indicated		Yes[96]

Table C.3 Strategic Plan KPIs for expanding the scope and mix of LHW services, and their measures

KPIs on expanding the scope and mix of services provided by the LHW	Programme source of information	External evaluations	Information collected by MIS?
Clear guidelines on clinical priorities and efficacy	Not indicated		No[97]
% of LHWs providing 'new' services	Programme M&E	√	No
% of LHWs providing services guided by other national programmes	Programme M&E	√	Yes[98]
% of LHW households covered by EPI, TB DOTS and FP services	Not indicated		Yes[99]

[93] External evaluation.

[94] The Programme does have information on whether or not salary is paid. There is the possibility of some payments being made directly at the district level not being paid in full. The Programme is then dependent on complaints being made by the beneficiaries.

[95] From interviews of Programme managers, the evaluation team found they were very knowledgeable of when agreed procedures were not being followed. They did not always have the authority, ability, or willingness to impose sanctions.

[96] External evaluation.

[97] The committee that would have provided the oversight for such guidelines, the Programme Review Committee, did not meet during the period 2003–08.

[98] The DPIU would know how many LHWs and LHSs, and how many vehicles were involved in Polio days. The FPIU does not have summary data for this indicator. It is provided by the external evaluation. Information on the involvement of LHWs in TB Dots and Family Planning (working in collaboration with the Ministry of Population and Welfare) is collected both by external evaluation and, in the latter case, by the PDHS.

[99] External evaluation.

Table C.4 Strategic Plan KPIs on improving performance monitoring and evaluation for evidence-based Programme design and management, and their measures

KPIs on improving performance monitoring and evaluation for evidence-based Programme design and management	Programme source of information	Information collected by MIS?[100]
All three management tiers provided with regular performance reports	Not indicated	Yes
Performance reports are regularly used in supervisory meetings and performance reviews	Not indicated	Yes
Programme management and strategic directions linked to monitoring and evaluation evidence	Not indicated	Yes
Key decision-makers/sponsors regularly briefed on performance and issues in Programme implementation	Not indicated	No

[100] The Programme (through management meetings, FPO reporting mechanisms and those all-important Pakistani informal networks) receives a great deal of information on performance. The results of the 3rd Evaluation (2002) are strongly utilized in the Strategic Plan (2003–11) and the PC-1. One issue is that the evaluation planned for 2005 did not take place. Another is that it is hard to identify who were the key decision-makers and sponsors of the Programme during the period 2003–08. Certainly, the Programme enjoyed a high reputation during this period and was favoured by politicians, including the President and Prime Minister, and development partners. However, this reputation appears to be based on the results of the 2001 evaluation and the near-achievement of recruitment targets, rather than any further analysis using management information.

Table C.5 Performance Indicators: inputs/process indicators from the PC-1, their relationship to goals, their target, and whether MIS collects this information

No.	Input/process indicators	Related to	Target	Information collected by MIS?
1	Number of trainers identified/ trained	Improving knowledge	To train 9,000 trainers to provide refresher and core training during the period of the PC-1 (PC-1: 32)	No[101]
2	Number of trainer training workshops conducted	Improving knowledge	Budgeted training for 9,000 trainers, with a total of 12 days' training each during the PC-1 period (PC-1: 75)	No
3	Number of supervisors selected/ trained	Improving supervision	3,110 (Strategic Plan: 47); 4,000 (PC-1: 22, 28).	Yes
4	Number of LHWs deployed in a district	Goal: coverage	100,000 total for the Programme (PC-1: 17); Allocations made by province Strategic Plan: 47; Programme workshop in 2003 allocated LHWs to the districts.	Yes
5	Number of LHW training workshops conducted	Improving knowledge	Basic training for all newly recruited LHWs; 15 days' refresher training each year for each LHW after the completion of their 15 months' training; Additional training of LHWs on Safe Motherhood.	Yes[102]
6	% of functional vehicles in use by field supervisors	Improving supervision	4,208 functional vehicles (PC-1: 73).	Yes
7	% of population covered by LHWs in rural areas	Goal: coverage	100% coverage in rural areas (Strategic Plan: 47; 93,300 LHWs serving 1,000 people each to an estimated rural population of 93.3 million). Target in PC-1 (p. 28) of 100,000 LHWs by the end of June 2005.	Yes
8	% of population covered by LHWs in urban areas	Goal: coverage	15.32% coverage in urban areas (urban slums) (Strategic Plan: 47) 6,680 LHWs serving 1000 people to an estimated urban population of 43.59 million (this is not only urban slums).	Yes
	% of FLCF involved in Programme activities	Goal: coverage	No target mentioned. The PC-1 indicates that 3,327 health facilities were involved in the Programme at the end of 2002.	Yes
9	% of expected reports submitted by the LHWs	Management and output information	No target mentioned, but assume 100%.	Yes
10	% of expected reports submitted by health facilities	Management and output information	No target mentioned, but assume 100%.	Yes

[101] The Programme has records on the PSP of the number of trainers available, but not how many have been trained in this period.

[102] Information provided by the external evaluation.

Table C.6 PC-1 (2003-08) objectives, targets, and indicators

Specific objectives LHWP would contribute towards (PC-1: 23)	Targets in the PC-1: 4	LHWP output/outcome indicator in the PC-1: 54	Does the MIS collect this information?
Reducing IMR	From 85–55 per 1,000 live births	Number of oral rehydration salts packets distributed by LHWs	Yes: monthly report
		Infant mortality rate (per 1,000 live births)	Yes: monthly report
		Number of ARI cases seen by LHWs	Yes: monthly report
		Number of diarrhoea cases seen by LHWs	Yes: monthly report
		Number TB cases reported	
Reducing MMR	From 400 to180 per 100,000 live births	Maternal mortality rate (per 100,000 live births)	Yes: monthly report
Increasing the CPR	From 22% to 42% in rural areas, and from 40% to 58% in urban areas	Contraceptive prevalence rate	Yes: monthly report
		Number of condoms distributed by LHWs	Yes: monthly report
		Number of contraceptive cycles distributed by LHWs	Yes: monthly report
Increasing immunisation coverage in children aged 12–35 months;	Fully vaccinated from 45% to 80% in rural areas, and from 64% to over 90% in urban areas in liaison with EPI	% of children fully immunised	Yes: external evaluation and monthly report
Increasing TT-5 immunisation coverage in women of childbearing age	From 12% to 40%		No: not recorded or reported
Increasing percentage of children being exclusively breastfed until aged 6 months	From 18% to 50%	Number of children weighed per worker per month	Yes: monthly report
Increasing in births assisted by birth attendants	From 12% to 30% in rural areas and 43% to 80% in urban areas covered by the Programme	Number of women visited for antenatal care per worker per month;	Yes, but not in this manner. There is a record of the number of antenatal care visits by skilled birth attendants from the LHW diary
		% of low birth-weight babies	