### TECHNICAL ASSISTANCE MANAGEMENT AGENCY TO THE NATIONAL HEALTH AND POPULATION FACILITY, PAKISTAN



# REFERENCE MANUAL FOR IMPLEMENTING PRIMARY HEALTH CARE STANDARDS IN NWFP

**Volume 1: Standards for Service Management** 





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**Volume 1: Standards for Service Management** 

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**Dr. Shaheen Afridi** HSR Coordinator

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### **Acronyms**

AFB Acid Fast Bacilli

AFP Acute Flaccid Paralysis

AIDS Acquired Immune Deficiency Syndrome

ANC-1 First Antenatal Care Visits
ARI Acute Respiratory Infections

BHU Basic Health Unit

BPCR Birth Preparedness and Complication Readiness

CCHF Crimean Congo Haemorrhagic Fever

CCM Cold Chain Monitor CSF Cerebro Spiral Fluid

DEWS Disease Early Warning System
DHDC District Health Development Center
DHIS District Health Information System

DHO/ADHO District Health Officer / Additional District Health Officer

DHQ District Head Quarter

DHQH District Headquarter Hospital

DOH Department of Health

DOTS Directly Observed Treatment Short Course

DPT Diphtheria, Pertusis, Tetanus DPWO District Population Welfare Office

DSV District Supervisor DT Diphtheria Tetanus

EDO (H) Executive District Officer (Health)

ENT Ear Nose Throat

EPI Expanded Program on Immunization FHA Filamentous Heamaglutinin Antigen

FHTs Female Health Technicians

FPAP Family Planning Association of Pakistan FSMO Field Supervisory Medical Officer

FSV Field Supervisor FSWs Female Sex Workers HBV Hepatitis B Virus

HIV Human Immunodeficiency Virus

HMIS Health Management Information System

HRA Health Regulatory Authority

I/D Intradermal

IHD Ischemic Heart DiseasesITNs Insecticide Treated NetsIUD Intra Uterine Device

JICA Japan International Cooperation Agency

LBW Live Birth With
LFTs Lever Function Tests
LHV Lady Health Visitor
LHW Lady Health Worker

LRBT Layton Rehmatullah Benevolent Trust

MCHC Maternal and Child Health Center

MO I/C Medical Officer In charge MP +ve Malarial Parasite Positive MSS Marie Stopes Society MSUs Mobile Service Units

NGO Non Governmental Organization
NWFP North West Frontier Province
OPD Out Patient Department
OPV Oral Polio Vaccine
ORS Oral Rehydration Salt
ORT Oral Rehydration Therapy

PCMC Primary Care Management Committee

PCR Polymerase Chain Reaction

PHC Primary Health Care

PPHCI President's Primary Health Care Initiative

PT Pertussis toxin

PTB Pulmonary Tuberculosis

PWD Population Welfare Department RDS Respiratory Distress Syndrome

RHC Rural Health Care

RHS-A Reproductive Health Services Center – A type

ROEC Reed's Odourless Earth Closet

S/C Subcutaneous

SARS Severe Acute Respiratory Syndrome

SCM Standard Case Management SOP Standard Operating Procedure SRSP Sindh Rural Support Programme STIs Sexually Transmitted Infections

TB Tuberculosis

TBA Traditional Birth Attendant
THQH Tehsil Headquarters Hospital

TT Tetanus Toxoid UC Union Council

UTI Urinary Tract Infection
VIP Ventilated Improved Pit
VVM Vaccine Vial Monitor

#### Introduction

Standards for quality services in primary health care (PHC) facilities was developed under the auspices of the Health Regulatory Authority (HRA) in 2006 and were approved by the Department of Health (DoH) in April 2007. The HRA is designated by the Government of NWFP to function as the regulatory body for public and private health services in NWFP.

The standards not only provide a framework for the HRA to assess the quality of care provided in public and private health facilities, but also a framework for public and private health facilities to assess and improve quality in a structured manner. The Standards also provide guidance when problems and questions about quality arise in the daily work of the health staff. In this way, they are a useful management tool for managers and staff of PHC facilities to identify their strengths, gaps and areas for improvement and they provide a mechanism for the Government of NWFP to identify priority areas for overall improvements in the healthcare delivery system.

The PHC standards consist of two major sections:

- Section 1: Service Management
- Section 2: Service Provision

Each section consists of "standards" and "measurable criteria". Whereas "standards" are broad statements of the expected level of performance, the "measurable criteria" make the standards operational and provide details on structures and processes necessary to ensure high quality of care..

The rapid assessment survey and consultative workshops conducted for development of standards revealed that health providers are willing to improve their services and there is earnest desire for making such an effort. But, it was also evident that many primary health care facility managers, incharge and staff members will not be able to implement the standards as they lack relevant information even about the measurable criteria. It is evident that without a reference manual providing details about the measurable criteria; it will not be possible for the providers and managers of healthcare to implement services based on quality standards. This necessitated development of a comprehensive reference manual for describing and providing minimal necessary information about the primary care standards for quality health services that can be used by the staff at a primary health care facility and its supervisors and managers for maintaining and measuring the quality of services. The consultant hired by the Health Sector Reform Unit (HSRU) through TAMA for developing the Reference Manual was advised "not to reinvent the wheel" but to review and make appropriate use of the available published provincial, national or international documents, as feasible.

The Reference Manual: Primary Care Standards for Quality Health Services in NWFP has two volumes. Volume 1 deals with Standards of Service Management and information about their measurable criteria, while Volume 2 has Standards of Service Provision and descriptions about their measurable criteria.

This is Volume 1 of the Reference Manual.

# **List of Standards of Service Management**

	Standard		Measurable Criteria
1.1	A Primary Care Management	a.	The Primary Care Management Committee includes representatives from local government, staff and users.
В	Committee plans and manages its resources, supports the Service's	b.	Clients/Users who are members of the committee are provided with information to enable them to contribute to the decisions of the health committee.
	processes and communicates decisions and information to	C.	All members of the committee are oriented and trained in the NWFP healthcare system, processes for running meetings and in basic management skills.
	relevant persons and organizations.	d.	The committee meets regularly according to a set agenda that includes follow-up from the last meeting.
		e.	Minutes of meetings are kept for five years and are available at the facility.
		f.	An annual planning process results in an annual plan which is implemented and reviewed on a regular basis.
		g.	The annual plan includes goals, planned actions, staffing and financial and physical resources to implement the planned actions.
		h.	Monthly HMIS Reports are submitted to EDO Health and include progress against the annual plan, identify problems and make recommendations.
1.2	Client/Patient information is	a.	Client/Patient registers are used, up to date, complete and accurate.
А	registered, coded, analyzed and used as a mechanism for monitoring and planning		Written information in the registers includes dates, client/patient characteristics (name, sex, age and address), diagnosis and treatment (dosage, times/day, no of days) and follow-up in line with operating procedures.
	3 1 3	C.	Registers used to document client/patient information include but are not limited to:
			<ul> <li>Health card (mother and child) which is maintained and used as a mechanism for informing the client/patient about their care;</li> </ul>

	Standard	Measurable Criteria
		ii. Immunization card which is maintained and used as a mechanism for informing the client/patient about their care;
		iii. Register of expectant mothers and deliveries which is maintained and analyzed;
		iv. OPD register.
		d. A consistent disease coding system is used and analyzed
		e. Analysis of the information is used by staff and results are fed back to the community.
1.3	Notifiable diseases are	a. A list of notifiable diseases is available.
Α	reported promptly and appropriate action is taken to	b. Notifiable diseases are reported within a specified time period, but no longer than 24 hours.
	minimize the spread of the disease.	c. Procedures for managing notifiable diseases are based on infection control principles, are used and roles and responsibilities are clearly defined.
		d. The 'Zero report' is completed and submitted weekly (for polio)
1.4 A	The equipment and utilities are functional, meet the	a. Equipment is registered, maintained, repaired and disposed of according to an equipment maintenance and replacement schedule.
``	defined needs of planned services, and are properly	b. The facility has functioning electricity and natural gas.
	maintained and used.	c. A backup generator in working condition and the budget for its maintenance and for its fuel are available.
		d. A stretcher and at least two examination couches,
		i. are available
		ii. are clean with no visible dust, stains or blood, and
		iii. are covered with a clean, uniform Macintosh or a plastic sheet.
		e. Each health worker providing curative services has the following functioning equipment:

	Standard		Measurable Criteria
			i. Thermometer
			ii. Stethoscope
			iii. BP machine
			iv. Screen for privacy
			v. Gloves, masks, apron
			vi. Torch.
		f.	The following additional functioning equipment is available in the facility and ready to use:
			i. Baby weighing scale, fetoscope, neonatal weighing scale, speculum
			ii. Refrigerator, stools, lantern or alternate lighting source such as solar lamps or torch, equipment for boiling/ sterilizer, timing device, stainless steel bowls, kidney bowls, dressing drum, gloves, masks, aprons
			iii. Adult weighing scale, nebuliser, suction machine, oxygen cylinder(?), x-ray viewer, suture set, needle safety box, resuscitation kit
			iv. ORS corner [including the following ORT equipment: water jug: 2 cups and 2 spoons]
			v. ENT diagnostic set
			vi. D&C set
		g.	Additional equipment, based on the defined needs of the planned services, is available and functioning.
1.5	There is a reliable, clean and	a.	Running water (pipe) is available within the facility
А	safe supply of water from a protected water source.		OR there is a water tank within the facility
	p. stocked water source.		OR there is a protected water source within 200 metres of the facility: borehole, water tank or protected spring (with tubing of water for outflow, concrete slab, drainage and the spring is at least 33 meters away from latrines/toilets) and temporary storage containers, e.g. jerry cans or drum.

	Standard	Measurable Criteria
		b. A supply line and storage system keep water clean and free from contamination.
1.6 B	The waiting area is clean and protected.	<ul> <li>a. The waiting area protects clients/patients from the sun, rain and extremes of temperature.</li> <li>b. There are designated separate male and female waiting areas and toilets/latrines.</li> <li>c. The waiting area has chairs or other seating arrangements.</li> <li>d. The floor is swept or mopped and the area is clean of debris/ trash.</li> <li>e. The walls and ceiling are intact with no broken masonry and are free from dirt and stains.</li> </ul>
1.7 A	The facility has clean latrines or toilets.	<ul> <li>a. Latrines or toilets exist within the facility or facility compound.</li> <li>b. Staff and clients/patients have access to separate latrines or toilets which are clearly signed and are lockable from the inside.</li> <li>c. The client/patient latrine or toilet is not locked from the outside.</li> <li>d. The toilet bowl is clean and empty and/or the latrine slab is clean.</li> <li>e. Soap and water are available at the washing point near the toilet(s)/ latrine(s)</li> </ul>
1.8 A	The facility compound is clean and uses a rubbish pit for disposal of refuse and medical waste.	<ul> <li>a. The compound is free from litter such as plastic bags, refuse and medical waste.</li> <li>b. There is a rubbish pit within the compound (possibly a garbage bin in urban settings)</li> <li>c. The pit (bin) is not overflowing and is properly used, i.e. rubbish is not disposed of anywhere else</li> <li>d. Medical waste is disposed of in a functional covered pit, e.g. not accessible for children and animals, within the compound.</li> </ul>
1.9 A	The staff work to written Operating Procedures for managing the Primary Care services, written guidelines for management of	<ul> <li>a. Standard Operating Procedures are used for managing the facility, finances, equipment, cleaning procedures, and stocks, e.g. equipment maintenance</li> <li>b. National and Provincial Treatment Guidelines for the priority illnesses are available at the facility, form the basis of regular training for relevant staff and are followed in providing care to the patients/clients.</li> </ul>

	Standard	Measurable Criteria
	clients/patients and written guidelines for common	c. Where National and Provincial Treatment Guidelines are not available they are developed and used by the Primary Care service.
	illnesses.	d. Written guidelines for the management of clients/patients exist and are used, e.g. confidentiality, privacy, registration, recording and coding.
1.10	Primary Care staff are	a. An updated roster is kept of who is on duty at what time.
А	available for service delivery during all official times.	b. A qualified healthcare provider is available whenever the facility is open.
1.11 A	Staff are appointed, trained and evaluated in accordance with documented procedures, job descriptions and service needs.	<ul> <li>a. Staff appointments are made in line with the required qualifications and experience for the job and the job description.</li> <li>b. All staff are oriented to the Primary Care services and their specific positions through a documented induction programme.</li> <li>c. The induction programme includes: <ol> <li>i. The Service's mission, values, goals and relevant planned actions for the year</li> <li>ii. Services provided</li> <li>iii. Roles and responsibilities</li> <li>iv. Relevant policies and procedures, including confidentiality</li> <li>v. Use of equipment</li> <li>vi. Safety</li> <li>vii. Emergency preparedness</li> <li>viii. Quality improvement.</li> </ol> </li> <li>d. All staff have a copy of their job description that is kept current. The job description includes the responsibilities, accountabilities, tasks, performance measures and reporting relationships.</li> </ul>
		e. All staff have a copy of their conditions of employment.

	Standard	Measurable Criteria
		f. Well-maintained and secure staff housing with all utilities is provided as per staff terms and conditions.
		g. Staff performance is evaluated annually with the staff member against their job description and agreed targets and is used to identify strengths, areas for improvement and training needs.
		h. Accurate and complete personnel records are kept at the facility.
		i. Staff receive ongoing in-service training relevant to their job and the healthcare service and in areas such as health and safety, quality improvement and client/patient rights.
		j. Documents guide the work of staff and cover staff appointments, performance evaluations, disciplinary procedures and terms and conditions of employment.
1.12	The health and safety of	a. The Service is designed to allow service delivery to be safe, accessible and respect clients'/patients' needs for privacy.
Α	clients/patients, staff and visitors are protected.	b. The Service is inspected annually by the Works and Services Department and declared safe.
	violeto di o protostodi	c. A current Safety Certificate has been issued and is displayed in the facility.
		d. Chemicals, drugs and equipment are stored safely.
		e. Risks and hazards are identified and eliminated, isolated or minimized as appropriate.
		f. Guidelines exist for major risks and hazards and are known to the staff.
		g. Incidents, accidents and near misses are reported and analysed to identify causes and the analysis is used to improve systems and processes, e.g. needle stick injuries.
		h. Staff are provided with and use protective equipment, e.g. gloves, aprons, masks.
		i. Staff are trained in fire safety and other emergencies and drills are practised regularly.
		j. Staff health is protected by the provision of immunization for infections such as Hepatitis A and B and influenza.
1.13 B	Client/Patient feedback is collected and used to improve services.	a. Clients/Patients have access to a culturally appropriate feedback mechanism, e.g. suggestion box, questionnaires, regular interviews with clients by an independent person.

	Standard	Measurable Criteria
		b. Data collected on client/patient satisfaction with services and treatment is analyzed and used to improve services.
1.14 A	Clients/Patients have the right to complain about services and treatment and their complaints are investigated in a fair and timely manner.	<ul> <li>a. Clients/Patients are informed of their right to express their concerns or complain either verbally or in writing.</li> <li>b. A documented process which is fair and timely is used for collecting, reporting and investigating complaints.</li> <li>c. Clients/Patients are informed of the progress of the investigation at regular intervals and are informed of the outcome.</li> </ul>
1.15 B	The Service identifies opportunities to continuously improve its processes and services, makes improvements and evaluates their effectiveness.	<ul> <li>a. Performance indicators for priority diseases and key processes are measured, reported and used for continuous improvement.</li> <li>b. Performance data from activities such as audits, complaints, incident reports, satisfaction surveys and risk assessments are collected, analysed and used to identify improvement opportunities. This is coordinated by the quality group.</li> <li>c. Improvements are planned, appropriate action is taken, the effectiveness of the action is evaluated and the results are fed back to staff and clients/patients.</li> <li>d. All relevant legal requirements are identified and compliance is monitored.</li> </ul>

#### Standard 1.1

A primary care management committee plans and manages its resources, supports the service's processes and communicates decisions and information to relevant persons and organizations.

1.1.a The Primary Care Management Committee includes representatives from local government, staff and users.

Why Primary Care Management Committee: A health facility will be more utilized if health care interventions are tailored to prevailing behaviors and to the demands expressed by the local communities. Involvement of community members in decision making and implementation of health care programs is one of the principles of delivering Primary Health Care (PHC). One of the strategies to achieve community participation in health care activities is to form a Primary Care Management Committee (PCMC) for each PHC facility such as a Basic Health Unit (BHU), Rural Health Center (RHC), Maternal and Child Health Center (MCHC), NGO Clinic. This helps to develop an effective health care delivery through participation of the community as PCMC can help to:

- Improve planning of health care activities by making them culturally acceptable and responsive to community needs.
- Involve community leaders to provide support from the local power structure for resource mobilization, for improving understanding about available services and enhancing the coverage and utilization.
- Monitor health care activities, organize and understand evaluations, and replan healthcare activities.
- Inform community about the progress at the health facility at regular intervals.

**Steps For The Formation of PCMC**: Following general steps are suggested for the formation of PCMC for each of the PHC facility. These steps can be modified according to local needs and requirements.

The health facility Incharge along with his team members plan and initiate community contact with prominent community members such as political or religious leaders, social workers, teachers, community volunteers, representatives of NGOs etc.

- Facility team organizes a meeting with the identified community members and important health and health related problems are discussed with the invitees.
- Facility team facilitates the discussion to bring socio-cultural, environmental and behavioral factors attached with the identified health problems, into the picture, especially those behaviors that have negative consequences. The idea of a health management committee is evolved during discussions as one of the strategies to deal with these problems.
- A selected group of community members develop criteria for a PCMC member and form a 8-10 member PCMC. At least 3-4 members of PCMC should be females, as majority of clients at a health facility are women and their children



#### The Members Of The PCMC Could Include:

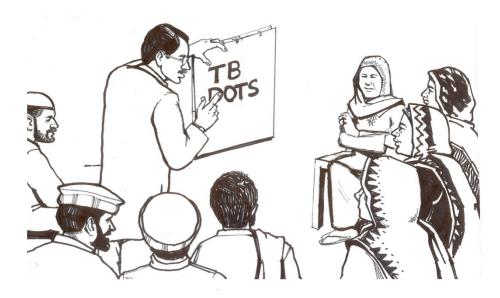
- Union Council Nazim
- Union Councilor (male)
- Union Councilor (female)
- School Principal (male)/teacher (male)
- School Principal (female)/teacher (female)
- Imam of the mosque
- NGO representative
- Social worker
- A respected women of the area
- Leading TBA of the area
- Incharge of Health Facility
- A private medical doctor

#### A well functioning PCMC has following characteristics:

- members regularly attend the meetings
- participate in decision making
- participate in planning of activities
- help the health facility in field based activities
- participate through generation of resources (cash or kind and human)
- maintain a record of their activities
- maintain a bank account for funds raised locally.

# 1.1.b Clients/Users who are members of the committee are provided with information to enable them to contribute to the decisions of the health committee

Incharge of the health facility should brief the PCMC members about the determinants of health and diseases, priority health problems, possible measures to overcome them, resources that are required and potential ones that can be tapped. This should enable the members of PCMC to contribute productively to the decisions of the committee.



Briefing examples are given below:

Maternal Health: In Pakistan, at least 25,000 women die each year due to treatable complications of pregnancy and childbirth. The high maternal mortality is attributed to a high fertility rate, low skilled birth attendance rate, female illiteracy, malnutrition among women of reproductive ages, and insufficient and inadequate emergency obstetric care services. The four main causes of maternal deaths in Pakistan include post partum hemorrhage, puerperal sepsis, hypertensive disease of pregnancy and obstructed labor. The 3 D's contribute significantly in high mortality: a) delay in decision making to seek adequate medical care during obstetric emergencies, b) delay in transporting the women to an adequate secondary care hospital after the decision is made, and c) delay in receiving adequate care after arrival at the hospital. We could significantly reduce maternal mortality if these negative factors are overcome by:

- Making all adult women and men aware of the warning signs of complications of pregnancy and childbirth
- Promoting spousal communication and communication within family decision makers for birth preparedness and complication readiness (BPCR). BPCR should minimally include identification of a functional emergency obstetric care facility, planning for availing transport in emergency without delay, identifying the potential blood donors, and making arrangement for money. BPCR should start

as soon as the pregnancy is diagnosed to meet any potential complication at any time

- Promoting antenatal care, deliveries and post partum care by skilled birth attendant
- Training TBAs in early recognition of warning signs of complications in pregnancy and childbirth, in safe deliveries, and optimal post partum care.
- Establishing referral links with functional hospitals that provide emergency obstetric care.

PCMC's role is to devise strategies to effectively take these messages to people and facilitate their implementation.

Acute Watery Diarrhea: Acute watery diarrhea is one of the major health problems of Pakistan, especially for children less than 5 years of age. There are over 21 million children less than five years of age in Pakistan. A conservative estimated incidence of 3 episodes per child per year would result in 63 million episodes each year. Thus the disease is the principal cause of attendance at primary care health facilities and also the leading cause of infant and child mortality, killing over 200,000 children less than 5 years in a year. These deaths are caused by the loss of fluids and salts from the body. Even though oral rehydration salts (ORS) packets have been promoted since early 1970s to prevent or treat dehydration but its utilization is not optimal. Besides the logistical problems in transportation, storage and distribution, the cultural acceptance of oral therapy has limited the use as it may not diminish the frequency or volume of diarrhea. Also, the people are unaware about "how much ORS to give", "how often to give", and "how long to give". PCMC needs to play its role in improving understanding of the people "ORS is not an anti diarrheal drug and does not work to stop the diarrhea but saves life by replacing lost fluids and salts" and enhance the utilization of ORS by the mothers and families for the children with diarrhea and save their lives.

Acute Respiratory Infections (ARI): ARI are also leading cause of childhood illness and death and pneumonia is responsible for the majority of these deaths. Children who die from pneumonia are likely to do so at a young age and within a short time after becoming ill. Therefore, it is important to recognize children with pneumonia early from those who have mild self-limiting conditions. To decrease mortality in children under five from pneumonia, it is necessary to inform the mothers and families about the danger signs and encourage them to seek timely care from a health facility. On the other hand, it is also important to train health workers in standard case management (SCM) i.e. to recognize pneumonia based on a limited number of clinical signs and treat accordingly. PCMC could advise on ways for increasing the knowledge of the community people and also ensuring that the staff in their facility is trained in SCM.

EPI: Expanded Program on Immunization (EPI) is the title of efforts to achieve "Universal Childhood Immunization". In Pakistan, the diseases that EPI is targeting are polio, tuberculosis, diphtheria, pertussis, tetanus, measles and Hepatitis B. These diseases receive particular attention for two reasons: (a) the vaccines that exist against them are effective, relatively inexpensive, and much experience exists in their use, (b) these diseases contribute to at least one-third of infant and childhood mortality. A coverage target of 80% is desired, i.e. 80% of children are to be fully vaccinated. This level is base on the theory that at 80% coverage transmission of disease to the unprotected 20% is decreased. Of the target diseases, measles and neonatal tetanus kill the most children. Immunizing a pregnant woman against tetanus will protect her and her newborn from this infection, which is often caused by non-sterile delivery procedures. PCMC needs to find innovative solutions to local operation problems that hinder EPI.

Malaria: Malaria kills one million people each year globally and majority of them are children. With an acute disease a child may die within 24 hours without prompt and effective treatment. In endemic areas, women are likely to have malaria during pregnancy that can lead to severe anemia and a higher risk of death. Infants born to mothers with malaria are more likely to have low birth weight, which is the single greatest risk of death during the first month of life. Early detection and prompt and effective treatment of malaria cases is the key strategy for controlling this problem. Other elements include prevention measures and one of these is use of insecticide treated nets (ITNs) by the vulnerable communities. These bed nets are treated with an insecticide that is safe for humans, kills mosquitoes on contact, and remains effective for as long as the net lasts, even though the net will be washed many times during this period. PCMC could play an important role in identifying mechanisms for promoting their use especially by pregnant women and young children, and also for other preventive measures and prompt treatment.

**Tuberculosis:** Every year, about 250,000 new cases of TB occur in Pakistan and only one in four or five cases is ever diagnosed. Patients who have TB bacilli in their sputum (sputum smear-positive) are the most potent sources of infection to others and have poor outcomes without proper treatment. Almost two-third of them dies within 2-3 years if not treated. Also, an ineffectively treated sputum positive patient can infect 10-15 individuals in one year. For effective treatment, Directly Observed Treatment Short Course (DOTS) is recommended in which patient swallows each dose under direct observation of a health worker or a responsible family or community member. The health services monitor the patient's progress until cured. Hence, it is important for PCMC to understand and propagate DOTS to cure TB and to stop TB from spreading in the community.

Malnutrition: Maternal and child malnutrition is a significant problem in Pakistan. Poor nutrition of women results in poor growth from generation to generation. At least 40% of women are anemic. Factors contributing to high rates of Anemia are early marriage and child bearing, short intervals between pregnancy, high parity, high incidence of intestinal worms, skewed intra-household food distribution practices and poor nutrition resulting due to poverty. Nutritional deficiencies affect not only the women but also their offspring. About one in four Pakistani infants have low birth weight (less then 2.5 kg). Improper and inadequate feeding promotes malnutrition among children as evident from the fact 38% children under five years of age are malnourished. PCMC can play its role by looking into the factors responsible for malnutrition and supporting interventions, such as family planning.

Lack of Family Planning: Studies in Pakistan show that there is a high unmet need for family planning. More than one-third women have expressed desire for making family planning services available to them as they want to space or limit childbearing. Frequent and multiple pregnancies not only deplete the women and increase their chances of dying but also has a powerful influence on the survival of the new born. A short birth interval (less then 2 years more than doubles an infants risks of dying when compared with birth intervals of 2-3 years). Large family size also has devastating effects on the country. At the time of independence, the population of Pakistan was 32.5 million and today it is estimated at 160 million, i.e. it increased 5 times in 60 years. If the population continues to grow at the same rate it will have destructive effects; more and more people will become jobless, there will be extreme shortage of food, prices of daily items will increase substantially. All these will lead to increasing poverty, illiteracy and poor health. The answer lies in increasing the adoption of family planning practices by use of contraceptives. PCMC could respond to this need by seeking intervention from potential partners like District Population Welfare Office (DPWO), Marie Stopes Society (MSS), FPAP, Greenstar Social Marketing.

**Hepatitis B and C:** Hepatitis B and C affects the liver severely. Liver is a very important organ of our body that cleans the circulating blood from undesired elements and also helps in digestion of food. With hepatitis, the liver fails to function normally and ultimately leads to death. Therefore, PCMC needs to identify mechanisms to control the spread of these two important illnesses in the catchment area of the facility.

HIV and AIDS: AIDS is a fatal disease, which has no cure. It is spreading all over the world very rapidly and its target is mostly the young people in their 20s and 30s. Once a person contracts the HIV virus, it may take up to 10 years for the disease AIDS to appear. During this period the person appears healthy and can pass on the infection to others through different modes, most common being unprotected sex i.e. sex without condom. A study conducted in Peshawar found that more than 1500 female sexworkers are operating and their clientele is 5-10 per night. Assuming that 1000 FSWs are operating and 5000 people are visiting them each night, then 150,000 visits are being made to FSWs in a month in one city. Most of these sexual interactions are unprotected. It is impossible to stop people having sex outside marriage, as it has happened over centuries and will continue to happen. Many of these men are married and after getting married could convey the infection to their (innocent) wives, who in turn will infect the baby in new pregnancies. This should not be allowed to happen and action should be taken now to prevent it. For this, people must be informed that they must use condoms in all premarital and extramarital sex encounters. PCMC should play its role in deciding how this sensitive information be conveyed to the people.

Trachoma: This disease is one of the leading causes of blindness in Pakistan. It is a chronic inflammation of the eyes, leading to shrinkage and turning-in of eye lids and blindness that result from corneal scars. This is a disease of poverty, unhygienic surroundings (flies and scarce water) and dust and is usually discovered when people seek care for some other eye condition. Encouragement to seek care for chronic itching in eyes could save many eyes from becoming blind. PCMC could play its role in organizing eye camps to screen trachoma and other important eye illnesses through collaboration with organizations like Layton Rehmatullah Benevolent Trust (LRBT) or eye departments of district or tertiary care hospitals.

NOTE: It will be more helpful if district specific information is used while discussing the priority health issues. The EDO(H) Office should be able to provide the information as generated through HMIS and by other programs and surveys. The above listed problems are examples. More information about these health problems and about the programs to overcome them should be obtained from EDO(H) Office, DOH or respective National Programme.

1.1.c Members of the committee are oriented and trained in the NWFP healthcare system, processes for running meetings and in basic management skills.

**NWFP** Healthcare System: The incharge of the facility should brief the members of PCMC about the health care system in NWFP, and more specifically about the facilities and programs in the district. In case, s/he is not familiar herself/himself, then s/he should seek the information from EDO(H) Office.

**Running Effective Meetings:** Meetings are good for exchanging opinions and information, identifying problems, discussing issues, brainstorming and making decisions. They are held to plan activities, to review the progress of existing ones, to discuss alternatives for solving a problem, to make decisions, etc. the following steps helps in running a meeting more effectively.

**Define the Purpose:** The head or the secretary of the PCMC should give a clear understanding to all members of what is required from the meeting. The incharge of the facility should act as the secretary.

**Prepare an Agenda:** The head on consultation with the secretary should prepare an agenda for the meeting that should list the topics to be covered and has the names of the persons who would lead discussions on different topics (if needed). This should be circulated to all the members so that they come prepared to discuss the topic. The place, time and duration of the meeting should also be mentioned so that members arrange to be present for the entire meeting.

**Set Ground Rules:** The head of PCMC should become or designate a facilitator for keeping the meeting on track, to moderate any conflicts and monitor time. A recorder should be identified to keep a written record of the discussions and decisions. Make explicit the rules on how the meeting will be conducted, for example: to respect one another, not to interrupt when someone is speaking, to make decision by consensus etc.

Facilitate Effective Discussion: The facilitator should ask for clarification when a point is not understood, try to rephrase so that it becomes clear. S/he should encourage participation of quieter members, avoid unnecessary conflicts, let all members feel that their opinions are valued and listen to all ideas. S/he should try to avoid irrelevant discussions and digressions, and draw conclusions at the end of each agenda item and make sure that people agree with the conclusions.

End with a Follow-up Plan of Action: The facilitator should end the meeting with a summary of agreed-upon action and with responsibilities designated to different members s/he and the secretary should. Follow up a few days later to check whether the action is taking place or not. At the next meeting ask responsible persons to provide their status report of their agreed upon actions from the previous meetings.

**Basic Management Skills:** Management is getting things done. Several skills are required to get the things well and some of these are briefly presented below:

**Management by Objectives:** Specifying what one wants to accomplish is setting an objective. An important skill is to first specify the objectives and then achieve them. As a management committee PCMC may set objectives as follows:

#### Example 1.

Next year, in the catchment area of the BHU

- there will be no case of Polio
- there will be one protected well for every 20 families
- 60% of the pregnant women will acquire antenatal care
- All known cases of TB will receive treatment through DOTS

#### Example 2

For the quarter ending on 31st March 2008,

- BHU staff will complete the inventory of repairs required at the facility and submit request refurbishments and renovation to the EDO(H)
- PCMC to hold a meeting to discuss child malnutrition in the catchment area and define interventions
- PCMC to develop a defined referral link with a hospital that provides 24 hour emergency obstetrics care

All objectives should state what is to be accomplished, how much of it, where it is to be done and when it is to be completed. A clear statement of objectives makes it possible to evaluate how effective one is in approaching and reaching the objectives.

**Effectiveness:** Effectiveness is the degree to which a stated objective is being achieved. For example: if, by the end of next year, the population of catchment area of the facility has one protected well for every 35 families, and the target was one for every 20 families, it would be clear that PCMC has not managed the program effectively.

Learning from Experience: When a gap occurs between the defined objectives and achieved results, management makes an analysis of achievements and identifies causes that resulted in gaps. In this process learning takes place, which helps in removing constraints or taking remedial actions.

**Efficiency:** Efficiency is concerned with the balanced use of resources referred as 'the 3 Ms' Manpower, Materials and Money.

**Division of Labor**: This consists of assigning the right proportion of each kind of staff to the job in hand. When this is applied and work is distributed among members of a group, the group becomes a team.

Convergence of work: Activities should be designed in a manner that they support each other towards the achievement of objectives. In general health activities are described under three main headings: (a) service activities, (b) development activities and (c) support activities. Service activities e.g. vaccination require preceding development activity (e.g. training of vaccinator) and continuous support activities (e.g. supplies). Hence these different activities should be managed to ensure proper convergence to produce the intended results.

**Delegation:** Delegation takes place when one person's authority is lent to another person so as to enable that person to take responsibility when the occasion arises.

**Use of information:** Management needs information to make the right decision. Information can easily handicap management if it is not the right kind, at the right time, too abundant and confusing. Learn to gather accurate information and then use it.

Motivation of Staff: It is important for management to understand what motivates staff as they are the most important resource of the facility. Often, care is taken of equipment and money but people are neglected. This affects their optimal performance. PCMC should not assume that financial compensation is the only factor that motivates people. Sense of achievement, recognition, interesting work, responsibility also motivates people. Even a genuine "thank you" and praise in from of others often serves the purpose. Giving incentives should be part of operational procedures and they should be defined and followed.

**Supervision behavior:** The PCMC has to influence the behaviors of staff. Depending on the level and commitment of staff, they should advise the incharge to adopt one of four supervision styles:

Staff level and Commitment	Supervision Style
Low Competence	DIRECTING
High Commitment	Structure, control supervision
Some Competence	COACHING
Low Commitment	Direct and support
High competence	SUPPORTING
Variable commitment	Praise, listen and facilitate
High competence	DELEGATING
High commitment	Turn over responsibility for day-to-day
	decision making

**Conflict management:** Conflicts occur because of differences in approaches, roles are not clearly understood, or people have difficulty in getting along. The incharge of facility should act as an arbitrator, listen to both sides and evaluate as objectively as possible, and avoid assumptions. However, conflicts of the staff with the incharge should be resolved by the PCMC.

# 1.1.d The committee meets regularly according to a set agenda that includes follow-up from the last meeting.

Meeting schedules for PCMC should be developed for a year, six months or a quarter, whatever is considered feasible. The meeting should preferably be held once every month and should not be held with a gap of more than three months. It should also be called earlier than scheduled, if the need arises.

A sample agenda for the meeting is given below:

#### PCMC Jhagra

#### Agenda for the Meeting on 07 January 2008

- 1. Feedback on actions agreed in the last meeting in November All concerned
- 2. Discuss repairs of the BHU Dr. Naseem Afridi MO I/C of BHU
- 3. Preparations for participation in Polio eradication campaign Mr. Fazal Khattak, Vaccinator
- 4. Health Education sessions in schools Ms. Palwasha Khan
- 5. Any other business

**Venue and Time:** The meeting will be held at the Union Nazims Office at 2 pm

Distribution: To all members of PCMC, Jhagra

Circulated by: Dr. Naseem Afridi, Secretary PCMC, Jhagra on 24 Dec 2007

# 1.1.e Minutes of meeting are kept for five years and are available at the facility

The minutes of each meeting should be recorded in English, Urdu or local language as considered feasible. The minutes should have:

- Date of the meeting
- Venue of the meeting
- Names and designation of participants
- Record feedback/progress on decisions of previous meeting
- Specify the subjects discussed, decisions taken for each, actions agreed, and name the persons with specific responsibilities for carrying out the action.

A sample of minutes is given below:

#### PCMC Jhagra

#### Minutes of the meeting held on 07 January 2008

Venue: Office of the UC Nazim Time: 2-3.30 pm

#### Participants:

- 1. Mr. Ghaffar Khan, UC Nazim
- 2. Ms. Parveen Agha, Union Councilor
- 3. Ms. Palwasha Khan, School Teacher
- 4. Mr. Nadeem Khan, member from NGO
- 5. Dr. Naseem Afridi, MO I/C
- 6. Mr. Fazle Khattak, vaccinator BHU

Feedback/Progress on decisions of last meeting:

- 1. Dr. Afridi reported that requisition for medicines for first quarter were submitted on time and the medicines have been received from the EDO(H) Office. He expressed his confidence that shortage will not occur in the current quarter. All members were happy to hear about this achievement.
- 2. Mr. Ghaffar Khan informed that a public transporter has been awarded license to operate wagon service that will link the BHU to various communities in catchment area. This news was applauded by all members as it will increase accessibility of the BHU that was a problem. Mr. Khan was warmly congratulated by all.
- Ms. Parveen Agha reported the progress about receiving nominations of teachers from schools for receiving Master Trainers training in health education. She informed the participants that all schools, except two, have forwarded names of the teachers for receiving training.

#### Discussions and Decisions:

- Dr. Afridi presented the list of repairs that are required for the BHU. He praised
  the efforts of the staff, especially of the dispenser, for working so meticulously
  and preparing a very detailed list. The list was reviewed, discussed and
  approved by all members. Mr. Ghaffar advised Dr. Afridi to submit it to the PWD
  by 15 January and forward a copy to his office for follow up.
- 2. Mr. Khattak informed the PCMC members about the next round of Polio eradication campaign scheduled on 2 and 3 March 2008. He informed that some households refused vaccination in the last round on the pretext that it has medicines to make children sterile as a move for population control. Mr. Ghaffar advised Dr. Afridi to meet these family members with the Imam Shafi (who is also a member of PCMC, but was absent on that day) before the next round and convince these community member. He said that he would not like the situation to be repeated.
- 3. Ms. Palwasha Khan praised Ms. Parveen Agha for her efforts in getting the nominations for training the teachers as Master Trainers in health education. She informed that the first training course will be held at the DHDC from February 6-10. Letters to 10 trainees will be sent by 10 January. The second course will be scheduled after the completion of the first course.
- 4. Mr. Nadeem raised his concern that no action has been taken by the concerned department for construction of the 10 tube wells that were sanctioned in July. He reminded that this issue was discussed in September 2007 meeting also but the progress was neither reported in November meeting nor today. Members discussed the possible actions for expediting the matter. Mr. Ghaffar assured to look into the matter.

Minutes prepared by: Ms. Palwasha Khan

Circulation: To all members of PCMC and EDO(H)

- 1.1.f An annual planning process results in an annual plan which is implemented and reviewed on a regular basis
- 1.1.g The annual plan includes goal, planned actions, staffing and financial and physical resources to implement the planned actions.

One of the objectives of PCMC is to find ways to increase coverage of target population through simple yet effective procedures. For achieving this PCMC needs to develop realistic annual work plans that will lead to improved coverage. To do this PCMC needs to setup a system that determines the health needs of the target populations, sets priorities

amongst those needs and then assigns staff to provide services to them. The system must also provide adequate information so that PCMC can continually assess needs and adjust plans accordingly, monitor results, reassess needs, and readjust plans and so on.

Following are the steps to develop annual plan for PHC activities in the catchment area:

- 1. Define and describe the catchment area:
  - Make map of the catchment area, if not already available
  - Determine population by different age groups such as children under 5, women in reproductive age etc.
- 2. Identify community needs and available resources
  - Identify sources of information and gather available data
  - Review health and demographic indicators
  - Identify health problems and set priorities
  - Identify target and high risk groups
  - List other existing health services and resources
- 3. Plan PHC activities for the next year
  - Identify and plan clinic-based activities
    - a. Determine client load for the last year by different target groups
    - b. List activities to be performed in the next year
    - c. Determine staff capacity for relevant knowledge and skills and define training needs
    - d. Determine resource requirements in terms of manpower, materials and money
    - e. Compare availability of resources with need and identify mechanisms to bridge the gap
    - f. Develop tools and plan to monitor outreach activities
  - Identify and plan outreach activities
    - a. List activities to be performed
    - Determine the number of units to be covered e.g. number of children to be immunized, number of pregnant women to be given TT vaccination
    - c. Schedule each activity
    - d. Determine resource requirements in terms of 3 Ms
    - e. Compare availability of resources with need and identify mechanisms to bridge the gap
    - f. Develop tools and plan to monitor clinic-based activities
- 4. Develop work plan and schedules with staff responsibilities
- 5. Develop monitoring and continuous performance assessment plans

The outcome of the above planning process will result in an annul plan. A brief sample of an annual plan is given below:

#### BHU: SUNGO ANNUAL PLAN FOR 2008

#### Goals:

To provide quality health care to population in the catchment area, especially women and children, which is accessible, effective, acceptable, affordable and responds to their needs, as their right.

#### Objectives:

In the year 2008:

- a. The BHU should have all physical facilities as provisioned
- b. Medicine shortages to be decreased from 60% of the time in last year to not more than 25% of the time
- c. Increase delivery at home by trained TBA from 25% to 100%
- d. Increase contraceptives prevalence from current 15% to 25%
- e. Decrease prevalence of malaria by introducing ITNs\*
- f. Construct 10 tube wells to increase water supply

Note: Objective is not well defined as it is not measurable

#### Activities:

#### Repair of the physical infrastructure of the BHU:

The medical officer incharge in collaboration with PWD will prepare a detailed list of work to upgrade infrastructure of the BHU as provisioned. This will be presented in the first PCMC meeting in January for approval and will then be forwarded to PWD. Funds will be provided by EDO(H)

#### Overcoming shortage of medicines:

The dispenser of the BHU with the assistance of the MO I/C will review the quarterly requirements for the medicines in 2007 and will use this information to make projections for 2008. The dispenser will ensure the timely submission of requirements on quarterly basis and MO I/C will collect them from EDO(H) office.

#### **TBA Training:**

16 untrained TBAs out of 20 in the catchment area will be trained in collaboration with Midwifery Association of Pakistan. The training will focus on:

- Birth Preparedness and Complication Readiness (BPCR)
- Safe delivery
- Warning signs of pregnancy and childbirth
- Warning signs of neonatal complications

UNICEF will be approached through the EDO(H) office for funding this activity. Female counselor member of PCMC will pursue the case

#### Increase contraceptive prevalence

UC Nazim will contact DPWO for organizing Mobile Service Units (MSUs) at BHU every 2 months for providing hormonal contraceptives and IUD insertions. MO I/C will coordinate with the RHS-A center at the DHQ to hold tubal ligation camps in June and December 2008. Cases will be identified through the efforts of LHWs. LHV of the BHU will mobilize LHWs to enhance their efforts in increasing contraceptive use by married women of reproductive age. LHWs will obtain the contraceptives from their programme while LHVs will obtain contraceptives from the DPWO office.

#### Increase use of ITNs

In January and February 2008, the facility incharge will ask each LHW to submit a list of expected pregnant woman and number of children less than 5 years of age in the households of their catchment area in 2008. A list of total requirement will be prepared by the LHV. MO I/C will approach the EDO(H) in March 2008 to obtain ITNs from the Malaria Control Programme. These will be distributed through LHWs to the households that have pregnant women or children under 5 in their catchment areas.

#### Construction of tube wells

The male union counselor member of PCMC will approach SRSP to construct 10 tube wells in the 10 already identified areas. The cost will be met through community participation in which the community will pay 30% while SRSP will bear 70% of the expenditures through the grant it has received from a donor agency for improving the water supply in the communities.

#### **PCMC Meetings**

The meetings will be held every 2 months on the first Saturday of that month. First meeting will be held in January. PCMC will closely monitor the progress of activities described in the annual plan for example through feedbacks of the responsible persons, direct observations, responses of the clients and community meetings.

#### Work Plan for 2008

S.	Activity*						noM	nths					
No.		٦	F	Μ	Α	M	٦	J	Α	S	0	Ν	D
1	Repair of BHU infrastructure	Χ	Χ	Χ									
2	Submit requirements of medicines for next quota			Χ			Χ			Χ			Х
3	TBA training (8 in each)				Χ				Χ				
4	MSUs at BHU		Χ		Χ		Χ		Χ		Χ		Χ
5	Tubaligation camps						Χ						Χ
6	LHW mobilization		Χ	Χ	Χ	Χ	Χ	Χ					
7	Distribution of ITNs					Χ	Χ	Χ	Χ				
8	Construction of 10 tube wells			Χ	Χ	Χ							
9	PCMC meeting of the year	Χ		Χ		Χ		Χ		Χ		Χ	

\*Note: In the above sample of workplan, all activities have not been listed. For example for distribution of ITNs several prior activities are required. These include needs assessment by LHWs, then placement of order, then acquisition, and then distribution. An actual workplan should have schedules for all these activities.

1.1.h Monthly HMIS Reports are submitted to EDO Health and include progress against the annual plan, identify problems and make recommendations.

Monthly Health Management Information System (HMIS) report is to be submitted on form "DHIS – 21 (MR) PHC Facility Monthly Report". With this report, progress against the annual plan, identified problems in achieving the targets, and actions for EDO (H) office for their resolution should also be submitted.

A sample form DHIS 21 (MR) is shown below as an example.

	th:, Working Days			P	HC F	acilit	y N	Monthly	Rep istric			23-01-(	)6
Secti	on I: Identificatio	)II											
1.	Facility ID					4.	Sig	nature of F	acilit	y In-c	harge:		
2.	Facility Name												
3.	Tehsil					5.	De	signation:					
	on II: Achieveme							Target			Perfor	тапсе	
1. 2.	Daily OPD atter Full immunization												
3.	Antenatal care c		-			+							
4.	LHW pregnancy		n covera	TA TA		+							
5.	Delivery coverage	_		50									
6.	Proportion of TI			ssing									
7.	СҮР	•											
8.	Monthly report	lata accurac	су										
Section	on III: Outpatien	ts Attenda	nnce (Fro	m OPD R	egister)	<lyr< th=""><th>S</th><th>1-4yrs</th><th>5-]</th><th>14</th><th>15 - 49</th><th>50 +</th><th>To ta</th></lyr<>	S	1-4yrs	5-]	14	15 - 49	50 +	To ta
1.	Male (New Case	s)											
2.	Female (New Ca	ses)											
3.	Follow-up cases					4		Referred o	ases a	ttende	ed		

Date of Submission

G	W. C. W. H. OND							
(From	Section IV: Cases attending OPD (From OPD Abstract Form)							
(212	Cardiac Diseases							
1	Ischemic Heart Diseases(IHD)							
2	Hypertension							
	Respiratory Diseases							
3	Asthma/COPD							
4	Cough continuing > 3 weeks (Suspected pulmonary TB)							
5	Acute Upper Respiratory Infections							
6	Pneumonia in <5 years old							
7	Pneumonia In > 5 years old							
	Vaccine Preventable Diseases							
8	Suspected Diphtheria							
9	Suspected Measles							
10	Suspected Pertussis							
	Other Medical/ Pediatric Diseases							
11	Clinical Malaria							
12	Confirmed Malaria							
13	Diarrhoea / Dysentery in <5 y.o.							
14	Diarrhoea / Dysentery in >5 y.o.							
15	Enteric fever/ Typhoid fever							
16	Parasitic Infestation							
17	RTI/STI in Females							
18	STI in Males							
19	Suspected Meningitis							
20	Suspected Viral Hepatitis							
21	Urinary Tract Infection (UTI)							
22	Fever due to other causes							
23	Diabetes Mellitus							

24	Epilepsy	
25	Goiter	
26	Malnutrition in <5 y.o.	
	Dental Diseases	
27	Dental Caries	
28	Periodontitis	
	Eye Diseases	
29	Night Blindness	
	Mental /Behavioral Disorders	
30	Drug (Psycho-Active substance) Abuse	
31	Mental Disorder	
	Orthopedic Diseases	
32	Arthropathies	
33	Fractures	
	Skin Diseases	
34	Cutaneous Leishmaniasis	
35	Dermatitis & Eczema	
36	Scabies	
	Any Other Unusual Disease	
	(Specify)	
37		
	Emergency (From OPD Register for	
	Emergency Department)	
38	Animal / Dog bite	
39	Cardio Vascular Emergencies	
40	Poisoning	
41	Road Traffic Accident/Injuries	
42	Snake /Scorpion bite	

Section `	V- Immunization (From EPI Register)			
1.	Children <1 fully immunized	3.	Children <1 received DPT 3	
2.	Children <1 received measles vaccine	4.	Pregnant women received TT -2 vaccine	

Secti	on VI: TB-DOTS (From TB Card TB-01)			
1.	Intensive-phase TB-DOTS patients	2.	Intensive phase TB-DOTS patients missing treatment >1 week	

Secti	Section VII: Family Planning Services/Commodities provided (From FP Register)							
1.	COC cycles		4.	Net-En Inj.		7.	Tubal Ligation	
2.	POP cycles		5.	Condom Pieces		8.	Vasectomy	
3.	DMPA inj.		6.	IUD		9.	Implants	

Sectio	Section VIII: Maternal and Newborn Health (From Mother Health & Obstetric Registers)							
1.	First Antenatal Care visits (ANC-1)		7.	Live births in the facility				
2.	ANC-1 women with Hb. <10 g/dl		8.	Live births with LBW < 2.5kg				
3.	Antenatal Care revisit in the facility		9.	Stillbirths in the facility				
4.	Postnatal Care visit		10.	Maternal deaths in the facility				
5.	Normal vaginal deliveries in facility		11.	Neonatal deaths in the facility				
6.	Vacuum / Forceps deliveries in facility							

	Section IX: Community Based Data (From LHW Report)			Infant deaths reported	
1.	Pregnant women newly registered by LHW		5.	No. of modern FP method users	
2.	Delivery by skilled persons reported		6.	<5 year diarrhea cases reported	
3.	Maternal deaths reported		7.	< 5 year ARI cases reported	

	Section X: Community Meetings (From Community Meeting Register)			No. of Participant	Male	
1.	No. of community meetings				Female	

Secti ONLY	Section XI: Diagnostic Services (From Laboratory Register / TB Lab Register/ Radiology Register) (For RHC NNLY)									
	Services Provided	OPD		Indoor		Services Prov	ided		OPD	Indoor
1.	Lab Investigations				3.	Ultra Sonogra	phies			
2.	X-Rays				4.	ECGs				
	Laboratory Investigation for Communicable Diseases									
	Malaria			T.B				Viral Hepatitis & HIV		
1.	Slides examined		1.	Slides for A	AFB Dia	agnosis		1.	Patients scree	ened
2.	Slides MP +ve		2.	Diagnosis s	lides w	ith AFB +ve		2.	Hepatitis B+	ve
3.	Slides P. Falciparum +ve		3.	Follow-up slides for AFB			3.	Hepatitis C+	ve	
			4.	Follow-up slides with AFB +ve			4.	HIV +ve		

	Section XII: Stock out Report: Stock out of tracer drugs for any number of days this month (From Stock Register for Medicine/ Supplies) Tick where applicable							
1.	Tab. Diclofenac		9.	Syp. Metronidazole		17.	Tab INH	
2.	Syp. Paracetamol		10.	Syp. Aminophyline		18.	Tab Rifampicin	
3.	Tab. Hyoscine		11.	I/V Infusion		19.	Measles Vaccine	
4.	Syp. Amoxicillin 250 mg		12.	Tab. Chloroquine		20.	Vaccine Syringes	
5.	Cap. Amoxicillin 500 mg		13.	ORS		21.	Hepatitis B Vaccine	
6.	Tab. Cotrimoxazole		14.	Tab. Iron/Folate		22.	TT Vaccine	
7.	Syp. Cotrimoxazole		15.	Antihelminthic syrup		23.	Oral Pills (COC)	_
8.	Tab. Metronidazole		16.	Inj. Dexamethasone		24.	Inj. Gentamycin	

Secti	Section XIII: Indoor Services (From Daily Bed Statement Register) (For RHC ONLY)								
	Allocated Beds Admissions Discharged /DOR LAMA Referred				Deaths	Total of Daily Patient Count	Bed Occupancy		
1.	Male								%
2.	Female								%

Section	Section XIV: Surgeries (From OT Register)							
1.	Operations under GA		3.	Operations under LA				
2.	Operations under Spinal Anesthesia		4.	Other operations				

	XV: Indoor Deaths door Register) (For RHC ONLY)	Number of Admission	Number of Deaths
1.	Diarrhea/Dysentery in < 5 yrs.		
2.	Pneumonia in <5 yrs.		
3.	Malaria		
4.	Pulmonary TB		

	Post Name/Category	Sanctioned	Vacant	Contract	On General duty in Facility	On General duty out of Facility
1	Senior Medical Officer					
2	Medical Officer					
3	Women Medical Officer					
4	Dental Surgeon					
5	Head Nurse					
6	Staff Nurse					
7	Sanitary Inspector					
8	Lab Assistants					
9	Dental Assistant					
10	X-Ray Assistant					
11	Lady Health Visitor					
12	Health Technician					
13	Dispenser					
14	EPI Vaccinator					
15	CDC Supervisor					
16	Midwife/Dai					
17	LHW					
18	Others					

Secti	Section XVII-A: Financial Report (From Receipt Register)					Total Receipt	Deposited
Total Receipt De		Deposited	5.	X-Ray	Rs.		
1.	OPD	Rs.		6.	Ultrasound	Rs.	
2.	Indoor	Rs.		7.	Dental Procedures	Rs.	
3.	Laboratory	Rs.		8.	Ambulance	Rs.	
4.	ECG	Rs.		9.	Others	Rs.	

Secti	Section XVII-B: Financial Report (From Budget and Expenditure Statement) (For RHC ONLY										
		Total Allocated Budget	Expenditure this quarter	Balance to date							
1.	Salary	Rs.	Rs.	Rs.							
2.	Non-Salary	Rs.	Rs.	Rs.							
3.	Utilities	Rs.	Rs.	Rs.							
4.	Medicine	Rs.	Rs.	Rs.							
5.	General Stores	Rs.	Rs.	Rs.							
6.	M&R Equip/Transport/Furniture	Rs.	Rs.	Rs.							
7.	M&R Building Dept	Rs.	Rs.	Rs.							
8.	Annual Development Plan	Rs.	Rs.	Rs.							
9.	Others	Rs.	Rs.	Rs.							

Detailed instructions to fill this form can be obtained from DHIS Manual developed by  $\sf JICA$ .

#### Standard 1.2

Client/Patient information is registered, coded, analyzed and used as a mechanism for monitoring and planning

- 1.2.a Client/Patient registers are used, up to date, complete and accurate.
- 1.2.b Written information in the registers includes dates, client/patient characteristics (name, sex, age and address), diagnosis and treatment (dosage, times/day, no of days) and follow-up in line with operating procedures.
- 1.2.c Registers used to document client/patient information include but are not limited to:
  - i. Health card (mother and child) which is maintained and used as a mechanism for informing the client/patient about their care.
  - ii. Immunization card which is maintained and used as a mechanism for informing the client/patient about their care.
  - iii. Register of expectant mothers and deliveries which is maintained and analyzed.
  - iv. OPD register.

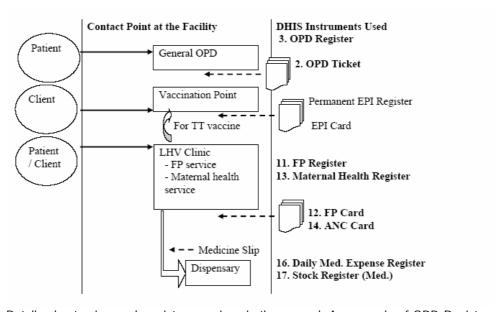
It is important for each primary health care facility that the client/patient information is effectively stored in relevant registers which can be coded, analyzed and used as a mechanism for monitoring and planning. Therefore it is essential that the information is complete, accurate and up to date as required.

Requirements for collecting and recording information for patients/clients on different registers have been clearly described and defined in the manual "the study on improvement of management information systems in health sector in the Islamic Republic of Pakistan - DHIS Manual" developed for National Health Information Resource Center, Ministry of Health, Pakistan, by Japan International Cooperation Agency (JICA) and Systems Science Consultants, Inc. in February 2007.

The above mentioned DHIS Manual describes in great detail about every instrument (register) that is used in a health facility i.e. the purpose of instrument, by whom and when it is completed, instructions for making entries and samples of filled instruments. HRA/DoH in NWFP would like the PHC facilities to adopt these instruments for recording information. These include various registers that records information besides clients/patients, such as for medicines, equipments. The proposed registers are:

DHIS – 01 (R)	Central Registration Point Register
DHIS – 02 (F)	OPD Ticket 8
DHIS – 03 (R)	Outpatient Department Register
DHIS – 04 (F)	OPD Abstract Form
DHIS – 05 (R)	Laboratory Register
DHIS – 06 (R)	Radiology/Ultrasonography Register
DHIS – 11 (R)	Family Planning Register
DHIS – 12 (C)	Family Planning Card
DHIS – 13 (R)	Maternal Health Register
DHIS – 14 (C)	Antenatal Card
DHIS – 15 (R)	Obstetric Register
DHIS – 16 (R)	Daily Medicine Expense Register
DHIS – 17 (R)	Stock Register (Medicine/Supplies)
DHIS – 18 (R)	Stock Register (Equipment/Furniture/Linen)
DHIS – 19 (R)	Community Meeting Register
DHIS - 20(R)	Facility Staff Meeting Register
DHIS – 21 (MR)	PHC Facility Monthly Report Form
DHIS – 24 (YR)	Catchment Area Population Chart

The use of these registers will vary with the level of primary health care facility, for example, use of some of these at a BHU are shown in the diagram below.



Details about using each register are given in the manual. An example of OPD Register from DHIS Manual is presented below (with amendments for making it specific to a PHC facility):

#### Outpatient Department (OPD) Register, DHIS - 03 (R)

This register is maintained at the OPD for recording all the visits of the patients and treatment given at the OPD. Records of both new and follow-up/repeat cases attending the OPD are made in this register.

#### Purpose:

- To serve as a facility-based archive of clinical diagnosis and treatment by the OPD
- To provide facility-based morbidity data
- To provide data on load of new cases on the OPD disaggregated by sex and age
- To provide data on follow-up visits and referred cases attended at the OPD

Month: JAN Year: 2008

When filled: At the time of consultation at OPD

Who fills: Entries in the OPD register are made by the service provider at OPD.

Monthly OPD Serial No. (New cases)	Follow-up Cases (Put Tick only)	Name with Father / Husband Name	Address	SEX & AGE CATEGORY (Tick in appropriate column)										u * c			
					MALE					FEMALE				friti   S lo   for age	rrec om keable		
				<1 year	11	514	1549	+05	<li><li>vear</li></li>	14	5-14	1549	+05	Malnutrition (Text if <5 low weight for age)	Referred From	Diagnosis	Action Taken/Special Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
		<< Total Brought From	Previous Page>>														
			01 - Jan														
1		Asma Bibi d/o Atif	Rawalpindi							1						Acute URI	
2		ch. Dickens S/o Ejaz	Lahore					/								Fracture of Rt.	X-Ray Rt.
3		Fatima Begum W/o M. Malik	Topi									/			LHW	Rheumatoid	
4		Ghulam Hussain 5/6 Hamid Hussain	Swabi		V									/		Diarrhoea	
5		Ibrahim Jamshed	Khunda				V									Amoe bic dysentery	

OUT-PATIENT DEPARTMENT (OPD) REGISTER

Instructions for filling the columns of the OPD register

There are 18 columns in the OPD Register that are spread over in two adjacent pages. During interactions with the patients, entries are made in Column No. 1-18 depending upon whether the patient is a new patient\* or a follow-up case\*\*. For new cases, entries are required to be made in all the columns except Column No. 2; for follow-up cases entries are only necessary in Column No. 2, 3 and 18. Please do not fill in Column No. 4-17 for follow-up cases as this will lead to miscalculation of morbidity data and data on OPD load.

Start a new page of the register at the beginning of each month. Write the name of the month and the year on the right upper corner of the page. Write the date of the first working day of the month in the top row of the page. Subsequently, at the beginning of each day:

- draw a horizontal line below the last entry of the preceding day

<sup>\*</sup>A new case is the one who is coming for the first time to the facility, or is revisiting the facility for a different disease or asking for a different type of service from the facility.

\*\*Follow-up case is a patient who comes for the same episode of a disease (e.g., diarrhea, hypertension) or for same type of service (e.g. maternal health check-up during the same pregnancy).

- note down the date of the current day below the above-mentioned horizontal line,
- start current day's entries in the same page below the horizontal line

Repeat the procedure every month by starting a new page. For a given month in the last row of each page, write down the totals in respect of Column No. 1, 2 and 5-14. Transfer/bring forward these totals to the first row of the next page in their respective columns. Continue the practice till last day of the month. At the end of the month, calculate the entire month's totals in respect of column No. 1, 2 and 5-14. The month's totals in these columns would later be used for completing the monthly report. Repeat the procedure every month by starting a new page. Do not transfer the previous month's total to the next page on which current month's entries are to be made.

**Column 1: Monthly OPD Serial No. :** Any new client/patient coming to the OPD is allotted a monthly serial number which is recorded in this column. The monthly serial number:

- starts from 1 that is given to the first client/patient coming to the OPD on the first working day of a month
- ends with the number given to the last client/patient coming to the OPD on the last working day of that month.

The monthly number will provide up-to-date total of all new patients/clients attending a particular OPD point for that month; yearly total can also be calculated using the monthly number. If more than one OPD points are functional at the facility, each point will maintain separate monthly serial numbers for patients attending that particular OPD point.

**Column 2: Follow-up case:** For all follow-up cases, put a tick mark in this column.

**Column 3: Name with Father/Husband's Name:** Write the patient's name and his/her father/husband's name in this column.

**Column 4: Address:** Write the name of the village/mohallah/union council/city name to which the patient belongs to.

**Column 5-14: Age Category:** These columns are to record the age group of the new patient according to his/her sex (male/female). Only put a tick ( ) mark in the appropriate column according to the patient's age and sex. Note that:

<1 year = age group between 0 to 11 months and 29 days
1-4 years = age group between 1 year to 4 years 11 months and 29 days
5-14 years = age group between 5 year to 14 years 11 months and 29 days
15-49 years = age group between 15 year to 49 years 11 months and 29 days

50+ years = age group 50 years and above

Column 15: Malnutrition (Tick if < 5 years low weight for age): In case of children of less than 5 years of age and who are underweight for age, put a tick mark in this column.

**Column 16: Referred from:** Write the name of the health facility from where the patient has been referred to this health facility. If LHW has referred the case to the facility, write LHW.

**Column 17: Diagnosis:** Write the provisional diagnosis of the patient after taking history and doing clinical examination. In case of Emergency Cases coming to the Emergency Department, note the findings in detail for future reference. You may use more than one row to note down the findings, if required.

Column 18: Action Taken/ Special Remarks: Filling up this column is optional depending upon the situation in the district/province. If it is a requirement from the district/provincial health department for audit purpose, then this column must be filled with the names of the medicines prescribed or to be provided from the facility's dispensary. Otherwise, there is no reflection of data from this column in the monthly report. If investigation is advised, you can write the name of the investigation(s) in this column. If treatment is advised, you can write the name of the medicines prescribed to the patient; or if the patient is referred to another health facility, you can write the name of the referral facility in this column.

- 1.2.d A consistent disease coding system is used and analyzed.
- 1.2.e Analysis of the information is used by staff and results are fed back to the community.

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**Disease Coding System:** All diseases should be coded systematically as described in the DHIS OPD Form as given below:

Example:

## **Respiratory Diseases**

- Acute (upper) respiratory infections
- Pneumonia < 5 yrs.</li>
- Pneumonia > 5 yrs.
- Cough > 3 weeks
- Chronic Obstructive Pulmonary Diseases
- Asthma

#### **Gastro Intestinal Disease**

- Diarrhoea/Dysentery < 5 yrs.</li>
- Diarrhoea/Dysentery > 5 yrs.
- Typhoid
- Worm Infections
- Peptic Ulcer Diseases
- Cirrhosis of Liver

### **Urinary Tract Diseases**

- Urinary Tract Infections
- Nephritis/Nephrosis

- Sexually Transmitted Diseases
- Benign Enlargement of Prostrate

#### Other Communicable Diseases

- Suspected Malaria
- Suspected Meningitis
- Fever due to other causes

#### Vaccine Preventable Diseases

- Suspected Measles
- Suspected Viral Hepatitis
- Suspected Neo Natal Tetanus

#### Cardiovascular Diseases

- Iscemic heart disease
- Hypertention

#### **Skin Diseases**

- Scabies
- Dermatitis
- Cutaneous Leishmaniasis

#### **Endocrine Diseases**

Diabetes Mellitus

# **Neuro-Psychiatric Diseases**

- Depression
- Drug Dependence
- Epilepsy

# Eye & ENT

- Cataract
- Trachoma
- Glaucoma
- Ortitis Media

#### **Oral Diseases**

Dental Caries

### Injuries/Poisoning

- Road traffic accidents
- Fractures
- Burns
- Dog bite
- Snake bits (with signs/symptoms of poisoning)

#### Miscellaneous Diseases

- Acute Flaccid Paralysis
- Suspected HIV/AIDS

#### **Any Other Unusual Disease**

The use of consistency in coding of diseases helps in understanding the trend of illness at a given facility and also in comparing this with other health facilities.

Analysis of the Information: the information gathered each month should be collated, reviewed and analyzed by the facility staff and PCMC. A methodology for summarizing client/patient data is given in the last page of the OPD Register, which helps in preparing summary using data from the OPD Register. At the end of each month, the service provider who maintains the OPD Register will prepare summary from his/her own OPD Register. The benefits of preparing the monthly summary using the table (sample format given below) are given below:

- The facility incharge and other staff will be able to make self-assessment of the change in the performance of the facility for the past month and for over the months.
- PCMC will also be able to track the performance of the facility each month.

This information should be shared with the community people at possible relevant forums.

# OPD Register Monthly Summary

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Year Total
Total New Cases From Col. 1													
Follow Up Cases The total count of all the ticks for the given month in Column No. 2 of OPD Register													
Referred from Cases The total count of all the ticks for the given month in Column No. 16 of OPD Register													

The Summary Table has 12 columns (vertical lines) representing 12 months of a year, i.e. from January to December, and another last column for recording the total of all the months. There are three rows representing:

- 1. **Total New Cases**: The data for this will come from the monthly total of Column No.1 of the OPD Register
- 2. **Follow-up Cases**: The data for this will come from the monthly total of Column No.2 of the OPD Register

Year:\_\_\_\_\_

3. **Referred from** (cases): The data for this will come from the monthly total of Column No. 16 of the OPD Register.

Instructions for transferring the data on to the relevant rows of the Summary Table are given in the corresponding boxes of the table. These instructions tell from which column of the related register the data should be transferred to which row of the table. Each health provider who maintains the OPD Registers is responsible for preparing the summary of the data from his/her OPD register. This summary is prepared at the end of each month and the data is also transferred to the monthly report of the facility.

If a new register is started anytime during a given year, transfer the data of the previous months of the year from the Summary Table of the previous register on to Summary Table in the new register. This will help in keeping record of the month-wise data for the whole year in one place for quick reference.

Year: 3000 2500 đ 2000 1500 Total New Cases 1000 500 Month F J J Μ Μ J Α S 0 Ν D Α

Graph of Monthly Total New Cases Attended at the OPD

The above format given in the OPD Register is to help draw a graph of the Monthly OPD cases attended. The graph is updated every month corresponding to the Summary table and it will help to visualize the progress of the monthly OPD performance. In order to construct the graph, calculate the total number of new cases attending OPD from Column No. 1 of the OPD Register. Shade all the cells of the format corresponding to the current month that match with the value of the total new cases for the current month. For example, if 1500 patients were attended in the month of January, shade Cell Number 1a, 1b and 1c of the above format. Then, in February, if there were 1740 patients who attended the OPD, shade Cell Number 2a, 2b, 2c and approximately half of 2d.

5

6

8

9

10

11

12

2

3

4

In case the scale of the values of Total New Cases given in the format is too high for your OPD, you can change it to a lower level but maintaining a uniform scale of the values, e.g. 100, 200, 300, 400, 500 and so on, or 250, 500, 750, 1000, 1250 etc.

# Standard 1.3

Notifiable diseases are reported promptly and appropriate action is taken to minimize the spread of the disease.

# 1.3.a A list of notifiable diseases is available.

# 1.3.b Notifiable diseases are reported within a specified time period, but no longer than 24 hours

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Outbreaks of infectious diseases can be effectively controlled if a system exists for early recognition and warning the concerned authorities through timely notification, outbreak verification and effective response. For achieving this goal, Disease Early Warning System (DEWS) has been initiated in Pakistan that obligates the health providers to report on the following 18 diseases:

- Acute Watery Diarrhea
- Crimean Haemorrhagic Fever
- Dengue Fever
- Diphtheria
- Acute Viral Hepatitis
- Human Immunodeficiency Virus (HIV)
- Influenza
- Leishmaniasis
- Malaria
- Measles
- Meningococcal Meningitis
- Pertussis
- Human Plague
- Poliomyelitis
- Severe Acute Respiratory Syndrome (SARS)
- Neonatal Tetanus
- Tuberculosis
- Typhoid Fever

It is important for a facility incharge to understand what signs, symptoms or other features classify a case to be among the listed 18 diseases. Brief descriptions are being given below to help him/her identify the case.

#### 1. Acute Watery Diarrhea/Cholera

#### Suspected case:

- In an area where the disease is not known to be present, severe dehydration or death from acute watery diarrhea in a patient aged 5 years or more.
- In an area where there is a cholera epidemic, cholera should be suspected in all patients with acute watery diarrhea.

**Confirmed Case:** Any suspected case confirmed by laboratory through isolation of Vibrio cholerae 01or 0139 from stool in any patient with diarrhea

#### 2. Crimean Congo Haemorrhagic Fever

**Suspected case:** Patient with sudden onset of illness with high-grade fever over 38.5°C for more than 72 hours and less then 10 days, especially in CCHF endemic area and among those in contact with sheep or other livestock (shepherds, butchers, and animal handlers). Note that fever is usually associated with headache and muscle pains and does not respond to antibiotic or anti-malarial treatment..

**Probable case:** Suspected case with acute history of febrile illness 10 days or less, AND any two of the following: Thrombocytopenia less then 50,000 /mm3, petechial or purpuric rash, epistaxis, gum bleeding, other hemorrhagic symptom. And no known predisposing host factors for hemorrhagic manifestations.

**Confirmed case:** Probable case with positive diagnosis of CCHF in blood sample, performed in specially equipped high bio-safety level laboratories. Positive diagnosis includes any of the following:

- Conformation of presence of IgG or IgM antibodies in serum by ELISA or any method
- Detection of viral nucleic acid by PCR in specimen or isolation or virus.

#### 3. Dengue Fever

**Suspected case:** Any person with acute febrile illness of two to seven days duration AND two or more of the following symptoms: Headache, retro-orbital pain, myalgia, Arthralgia, rash, hemorrhagic manifestations and leucopoenia.

**Probable case:** Any suspected case, which occurs in an area where an outbreak of Dengue exists, with laboratory-confirmed cases and presence of the vector.

**Confirmed Case**: Any suspected case confirmed by laboratory isolation of the virus or by IgM-ELISA test or by PCR.

**Probable Dengue Hemorrhagic Fever:** A probable or confirmed case if dengue AND any two of the following: thrombocytopenia less then 100,000 /mm³, petechial or purpuric rash, epistaxis, hematemesis, hemoptysis, blood in stools, ecchymosis, gum bleeding, other hemorrhagic symptom-AND no known predisposing host factors for hemorrhagic manifestations.

#### 4. Diphtheria

**Probable Case:** Any acute illness characterized by an adherent membrane on the tonsils, pharynx and/ or nose and any of the following: laryngitis, pharyngitis, or tonsillitis.

**Confirmed Case**: A confirmed is a probable case who has been laboratory confirmed or linked epidemiologically to a laboratory confirmed case. At least one of the following criteria is used for diagnosing a confirmed case :

- The isolation of Corynebacterium diphteriae from a clinical specimen ; or
- A four fold or greater rise in serum antibody (but only if both serum samples were obtained before the administration of diphtheria toxoid or antitoxin).

Note that asymptomatic persons with positive C. diphtheriae cultures (i.e. asymptomatic carriers) should not be reported as possible or confirmed diphtheria cases.

#### 5. Acute Viral Hepatitis

Suspected case viral hepatitis syndrome: An acute illness with discrete onset of symptoms of jaundice, dark urine, anorexia, malaise, extreme fatigue, and right upper quadrant tenderness OR elevated serum alanine aminotransferase level > 2.5 times the upper limit.

Note: Most early childhood infections and a variable proportion of adult infections are asymptomatic.

**Confirmed Case**: A suspected case that meets the clinical case definition AND is laboratory confirmed for:

- Hepatitis A: Anti-HAV IgM antibodies (anti-Hepatitis A virus immunoglobulin M) positive
- Hepatitis B: Positive test of any: HBsAg (Hepatitis B surface antigen), Anti-HBs, Anti-HBc (antibody to Hepatitis B core antigen), HBeAG (Hepatitis B e antigen, indicates infectively of patient), or Anti-Hbe.
- Hepatitis D: HDV-Ag (Hepatitis D antigen) positive
- Hepatitis C: Anti-HCV (anti-Hepatitis C virus antibodies) positive
- Hepatitis E: Anti-HEV immunoglobulin M (IgM) positive
- For Hepatitis A only: a case compatible with the clinical description, in a person who has a epidemiological link with a laboratory confirmed case of hepatitis A, e.g. household contact with an infected person during the 15-50 days before onset of symptoms.

# 6. Human Immunodeficiency Virus (HIV)

Suspected case: Not applicable

NOTE: Sentinel sites should focus on testing high risk groups which include patients seeking treatment for sexually transmitted diseases, users of intravenous drugs, commercial sex workers seeking health treatment etc. Cases suspected at first level care facility should be referred to second level care facility for confirmation.

**Confirmed case:** A case confirmed by laboratory and reported as HIV antibody positive.

#### 7. Influenza

**Suspected Case**: Any person with sudden onset of fever greater than 39°Centigrade, AND sore throat or cough in the absence of another known cause. Headache, myalgias, and prostration are often present.

**Confirmed Case**: Any suspected case with laboratory confirmation by isolation of virus in culture, by IFAT or by serologic test demonstrating a rise in specific antibody titer.

#### 8. Leishmaniasis

#### **Suspected Case:**

- In cutaneous Leishmaniasis there are lesions on the face, neck, arms, and legs, which begin as nodules and turn into skin ulcers, eventually healing but leaving a depressed scar.
- In visceral Leishmaniasis, the parasite invades the spleen, liver, bone marrow, and lymph nodes. Symptoms include mainly irregular fever, splenomegaly and weight loss; also fatigue, enlargement of the lymph nodes and the liver, secondary infections such as pneumonia and it can be fatal if left untreated

**Confirmed Case:** Suspected case with positive parasitological evidence from a stained smear by microscopy or culture from the lesion.

#### 9. Malaria

Suspected case of uncomplicated malaria: History of recent fever (may be continuous or irregular in beginning), chills, headache, body aches, weakness, anaemia, heptosplenomegaly. (In falciparum infection the fever maybe continuous with bouts of high peaks.)

Suspected case of severe or complicated malaria:

- Only Falciparum malaria can develop into severe malaria if not treated promptly, especially in children and pregnant women.
- History of fever with prostration (inability to sit), altered consciousness (lethargy, coma), generalized seizures (followed by coma), difficulty in breathing, low urinary output or dark urine, severe anemia, abnormal bleeding, and hypoglycemia. (The parasites may not be visible in peripheral smears, as they are sequestrated in the capillaries).

**Probable case:** A suspected case with history of same type of manifestation in other members of the household; or in the same patient in the past.

**Confirmed case:** Clinical case which is confirmed by :

- Laboratory diagnosis of malarial parasites in the peripheral blood film.
- Parasite antigens by immunodiagnostic test kit.

#### 10. Measles

**Suspected case:** A patient presenting with complaints of fever with rash should be investigated as a suspected case of measles.

**Probable case:** A probable case is characterized by the following symptoms:

- Fever > 38.3°C (101°F)
- Cough, coryza (i.e. runny nose), or conjunctivitis (i.e. red eyes)
- Generalized maculopapular rash (non-vesicular type) for at least 3 days, usually last 5-6 days. The rash begins at the hairline, and then involves the face and upper neck. During the next three days, gradually proceeds

downward and outward, reaching extremities last and being less pronounced on hands and feet. Rash fades in the same order that it appears, from head to feet.

Koplik's spots may occur 1-2 days before rash to 1-2 days after rash. They
appear as pin-point, depressed blue white spots on bright red background on
the buccal mucosa.

**Confirmed Case:** Measles case is confirmed by the laboratory , in the absence of recent (1-14 days) immunization with measles-containing vaccine, with one of the following:

- Isolation of measles virus from an appropriate clinical specimen OR
- Significant rise ( about 4 fold) in measles specific antibody titer between acute and convalescent sera OR
- Positive serologic test for measles IgM antibody using a recommended assay

Clinical measles in a person who is epidemiologically linked to a laboratory-confirmed case is also considered to be a confirmed case.

# 11. Meningococcal Meningitis

**Suspected case:** Any person with acute illness that demonstrates:

- Sudden onset of fever (> 38.5°C rectal or > 38°C axillary), AND one or more
  of the following: neck stiffness, altered consciousness, other meningeal sign
  or petechial or purpural rash.
- In patient under one year of age, when fever is accompanied by a bulging fontanelle.

**Probable case:** A suspected case of meningococcal meningitis with turbid CSF, OR, link to a confirmed case.

**Confirmed case:** A suspected or probable case with CSF antigen detection for Neisseria meningitides; or, a culture positive result from CSF and /or blood sample with identification of Neisseria meiningitides.

# 12. Pertussis

**Suspected case:** A person with a cough lasting at least 2 weeks with one of the following paroxyms (i.e. fits) of coughing; or inspiratory "whoop"; or post –tussive vomiting (i.e. vomiting immediately after coughing) AND without other apparent cause.

**Confirmed case:** A confirmed case is a suspected case that is a laboratory confirmed or linked epidemiologically to a laboratory confirmed case. The criteria used for laboratory diagnosis are:

- The isolation of Bordetella pertussis; or
- The presence of IgG or IgA directed toward pertussis toxin (PT) or filamentous haemaglutinin antigen (FHA) or PCR positive.

#### 13. Human Plague

**Suspected case**: A case characterized by rapid onset of fever, chills, headache, severe malaise, prostration together with the following symptoms, depending upon whether it is the bubonic or pneumonic form:

- Bubonic form: Extreme painful swelling of lymph glands (buboes)
- Pneumonic form: Cough with blood stained sputum, chest pain, difficulty in breathing.

**Probable case:** A probable case is a suspected case with:

- A positive FA test for Yersinia pestis in clinical specimen; or
- PHA test, with antibody titre of >1:10 specific for F1 antigen of Y. pestis as determined by HI; or an epidemiological link with a confirmed case.

**Confirmed case**: A confirmed case is a suspected case or probable case laboratory – confirmed by:

- Isolation by culture Y. pestis from buboes, cerebrospinal fluid or sputum; or
- PHA test demonstrating a four fold change in antibody titre, specific for F1 antigen of Y. pestis (HI test) in paired sera.

Note: Case report universally required by International Health Regulations.

#### 14. Poliomyelitis

**Suspected case [acute flaccid paralysis (AFP):** Any child under 15 years of age with recent onset of floppy weakness of any cause including Guilian-Barre Syndrome or any person of any age with a paralytic illness, in whom poliomyelitis is suspected.

Confirmed poliomyelitis cases as per Virological Classification: "An AFP case, from which, the wild poliovirus is cultured". This definition is applied if a country programme has non-polio AFP rate of 1/100,000 children under 15 years of age, two adequate specimens collected from at least 60% of all AFP cases and all specimens processed in a WHO-accredited laboratory. Adequate stool specimens are two stools collected at least 24 hours apart, within 14 days of onset of paralysis, and arriving lab with proper documentation, maintained reverse cold chain, sufficient quantity for laboratory analysis without drying or leakage.

Compatible case: A case of acute flaccid paralysis (AFP) in which a diagnosis of poliomyelitis cannot be excluded with confidence based on all available clinical and epidemiological information in the absence of good viral cultures, by the Expert Review Committee.

**Discarded case:** A discarded case, who is neither diagnosed as confirmed nor compatible with a polio definition.

# 15. Severe Acute Respiratory Syndrome (SARS):

**Suspected case:** A person presenting after 1<sup>st</sup> November 2002 with history of: high grade fever (>38°C) AND, Cough or breathing difficulty AND, One or more exposures during the 10 days prior to the onset of symptoms:

- Close contact with a person who is suspect or probable case of SARS
- History of travel, to an area with recent local transmission of SARS
- Residing in an area with recent local transmission of SARS

A person with an unexplained acute respiratory illness resulting in death after  $1^{\rm st}$  November 2002, but on whom no autopsy has been performed AND one or more of the following exposures during 10 days prior to onset of symptoms:

- Close contact with a person who is a suspect or probable case of SARS
- History of travel to an area with recent local transmission of SARS
- Residing in an area with recent local transmission of SARS

Suggested laboratory investigation in a suspected case of SARS will require the collection and safe transport of the following specimens to the reference laboratory;

- Throat and/or nasopharyngeal swab
- Bronchial lavage
- Blood culture
- Urine specimen
- Blood for complete examination and serology

#### Probable case:

- A suspect case with radiographic evidence of infiltrates consistent with pneumonia or respiratory distress syndrome (RDS) or chest X-ray.
- A suspect case of SARS that is positive for SARS corona virus by one or more assays. ELISA, IFA and RT-PCR have been developed but have not been evaluated without for routine use.
- A suspect case with autopsy findings consistent with the pathology of RDS without an identifiable cause.

#### 16. Neonatal Tetanus

**Suspected case:** Any neonatal death between 3 and 28 days of age, for which the cause of death is unknown; or any neonate reported as having suffered from neonatal tetanus between 3 and 28 days of age and not investigated.

#### Confirmed case:

- A confirmed case is any neonate with a normal ability to suck and cry during the first 2 days of life and who, between the ages of 3 and 28 days cannot suck normally and becomes stiff or has convulsions (i.e. jerking of the muscle) or both.
- Confirmation is entirely clinical and does not depend upon bacteriological confirmation.

#### 17. Tuberculosis

#### Suspected case of TB:

- Any person who presents with symptoms or signs suggestive of pulmonary TB, in particular cough for more than two weeks.
- May also have hemoptysis, chest pain, breathlessness, fever/night sweats, tiredness, loss of appetite and significant weight loss.

 All TB suspects should have three sputum samples examined by light microscopy, early morning samples are more likely to contain the TB organism than a sample later in the day

#### Confirmed case of TB:

Pulmonary TB smear- positive (PTB+): Diagnostic criteria should include:

- At least two sputum smear specimens positive for acid fast bacilli (AFB) or
- One sputum smear specimen positive for AFB and radiographic abnormalities consistent with active pulmonary TB or
- One sputum smear specimen positive for AFB and a culture positive for M Tuberculosis.

**Pulmonary TB smear- negative (PTB-)**: A case of pulmonary tuberculosis that does not meet the above definition for smear-positive TB. Diagnostic criteria should include:

- At least three sputum specimens negative for AFB and
- No response to course of broad spectrum antibiotics and
- Decision by a clinician to treat with a full course anti-tuberculosis chemotherapy
- Radiographic abnormalities with active pulmonary TB

#### 18. Typhoid Fever

**Suspected case:** Any person with acute illness and demonstrates insidious onset of sustained fever, headache, malaise, anorexia, relative bradycardia, constipation or diarrhea and abdominal tenderness progressing to prostration. The pulse is often slower than would be expected for the elevation of the temperature.

**Confirmed case:** A suspected case that is laboratory confirmed by: Isolation of Salmonella typhi from blood, stool, or urine specimen or A suspected case that has positive Widal, i.e. a four fold increase in agglutination titer against S.typhi O and H antigens, in the third week of illness. In the first week of fever, blood culture is the most important diagnostic method in suspected cases. During the second and third weeks, the feces will contain the organism more frequently.

- 1.3.c Procedures for managing notifiable diseases are based on infection control principles, are used and roles and responsibilities are clearly defined.
- 1. Management of Acute Watery Diarrhoea / Cholera: Cholera can be successfully treated by immediate replacement of the fluid and salts. Patients can be treated with oral rehydration solution (ORS). Intravenous electrolyte solutions should be used only for the initial rehydration of severely dehydrated patients, including those who are in shock. Ringer's lactate solution (Hartman's solution for injection) is the preferred fluid as its composition is suitable for treating patients of all ages and with all types of diarrhea. Plain glucose solutions are ineffective and should not be used.

After vomiting stops, 500 ml fluid should then be given orally every hour. Total fluid requirements can be in excess of 50 liters over a period of 2-5 days. Food should be given after 3-4 hours of treatment, when rehydration is completed. Breastfeeding of infants and young children should be continued

The choice of antibiotic should take into account local patterns of resistance to antibiotics. In 2004, sensitivity patterns in Pakistan showed that Vibrio cholera 01 is sensitive to Doxycycline, Ciprofloxacin, Norfloxacin, Tobramycin, and Tertacycline.

- 2. Management of Crimean Congo Haemorrhagic Fever: A suspected or probable case should immediately be referred to Tehsil Headquarters Hospital (THQH), District Headquarters Hospital (DHQH), teaching hospital or a suitable private hospital.
- **3. Management of Dengue Fever:** A suspected or probable case should immediately be referred to THQH, DHQH, teaching hospital or a suitable private hospital
- **4. Management of Diphtheria**: A probable case should immediately be referred to THQH, DHQH, teaching hospital or a suitable private hospital.
- 5. Management of Acute viral Hepatitis: There is no specific management of acute uncomplicated hepatitis but general supportive measures can be helpful in the earlier recovery of the disease like bed rest, fluid replacement, nutritional support etc. It is also important to avoid all the hepatotoxic drugs during the illness. However, it is important to note that the management of chronic hepatitis requires specialist consultation.
- **6. Management of HIV:** In case of confirmed case of HIV infection or AIDS, the patient should receive counseling and be referred to tertiary level care facility for treatment of virus and opportunistic infections such as TB, and for follow up.
- 7. Management of Influenza: The goal of treatment is to alleviate the symptoms. Antibiotics are not effective against viruses. Bed rest is advisable until the fever is subsided. A mild analgesic such as parcetamol 0.5 -1 g every 4-6 hours usually relieves the headache and generalized pains and warm fluids help to relieve the discomfort of the symptoms. Pholcodine 5-10 mg 3-4 times daily may be used to suppress unproductive cough. Specific treatment of complications such as bronchitis, and pneumonia may be necessary.
- **8. Management of Leishmaniasis:** A suspected case should immediately be referred to THQH, DHQH, teaching hospital or a suitable private hospital.
- **9.** Management of Malaria: Early diagnosis and treatment especially in children and pregnant women is essential. The management of uncomplicated and complicated malaria cases is given in Standard 2.9: in Volume 2.

#### 10. Management of Measles:

For uncomplicated cases: Give Vitamin A and advise to treat the child at home if no complications develop (control fever, treat mouth ulcers, provide nutritional feeding)

For complicated cases: Refer to health facility. Ensure that 2 doses of Vitamin A are given. Clean eyes and treat with 1% tetracycline eye ointment. Clean ear discharge and treat with antibiotics. Treat malnutrition and diarrhea with sufficient fluids and high quality diet. Refer suspected encephalitis to hospital

- **11. Management of Meningococcal Meningitis:** A suspected or probable case should immediately be referred to THQH, DHQH, teaching hospital or a suitable private hospital.
- **12. Management of Pertussis:** Young infants particularly those younger then 6 months of age should be hospitalized and mild cases require only supportive treatment. Give Erythromycin 30-50 mg/kg body weight (in two to four divided doses) a day for 14 days to prevent bacteriologic relapse. Methadone (cough suppressant) may be helpful in controlling the severity of paroxysms.
- **13. Management of Human Plague:** A suspected or probable case should immediately be referred to THQH, DHQH, teaching hospital or a suitable private hospital.
- **14. Management of Poliomyelitis:** A suspected case should immediately be referred to THQH, DHQH, teaching hospital or a suitable private hospital.
- 15. Management of Severe Acute Respiratory Syndrome (SARS): A suspected or probable case should immediately be referred to THQH, DHQH, teaching hospital or a suitable private hospital.
- **16. Management of Neonatal Tetanus:** A suspected case should immediately be referred to THQH, DHQH, teaching hospital or a suitable private hospital.
- 17. Management of Tuberculosis: The priority is the diagnosis and treatment of smear positive infectious cases of TB. To ensure appropriate treatment and cure of TB patients, strict implementations of the DOTS strategy is important. The dots strategy has the following components: (a) case detection through sputum smear microscopy, (b) standardized short-course chemotherapy to, at least, all smear positive cases under observation of treatment, at least during initial phase of treatment, (c) regular supply of anti-TB drugs, and (d) monitoring system for program supervision and evaluation.

The treatment regimens are given in Standard 2.9 in Volume 2

**18. Management of Typhoid Fever:** The patient is treated in bed and preferably in isolation. Special attention must be paid towards the maintenance of nutrition and fluid intake, care of the mouth and prevention of pressure sores. Several antibiotics are effective, these include Co-trimoxazole (2 tablets or I.V. equivalent 12 hourly), Trimethoprim (300 mg 12 hourly), Amoxicillin (750 mg 6 hourly), Ciprofloxocin (500 mg 12 hourly), Chloramphenicol (500 mg 6 hourly). ORS plays an important role in correction of dehydration. Treatment should be continued for 14 days.

Each facility staff should be aware of their roles and responsibilities in management of the above 18 notifiable diseases.

# 1.3.d The "Zero Report" is completed and submitted weekly (for polio)

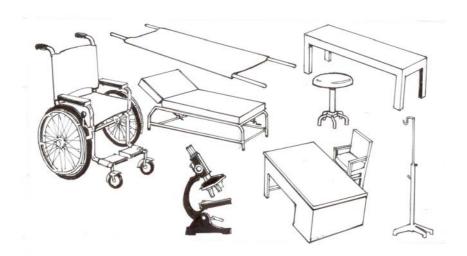
As required by the PPI programme the Zero Report for Polio cases should be completed and submitted weekly to the EDO(H) office

# Standard 1.4

The equipment and utilities are functional, meet the defined needs of planned services, and are properly maintained and used

1.4.a Equipment is registered, maintained, repaired, and disposed of according to an equipment maintenance and replacement schedule.

All primary care facilities have equipments that are necessary to run the facility such as tables, chairs, benches, stools, cupboards, beds, linen, weighing scales, BP apparatus, trays, scissors, forceps, etc. They last for some years and needs to be properly registered, maintained, repaired and finally disposed off.



Receiving Equipment: New equipment should be received with a delivery note, which must be placed in a separate file kept for this purpose. The receipt of the equipment should then be entered in "Stock Register for Equipment/Furniture/Linen DHIS-18(R)". Make a page for each item stocked and record: (a) date the article was received, (b) reference number, (c) number of items received, and (d) quantity in balance. Store keeper should sign the entry and also get it counter signed by the facility incharge. When the items are issued, they are also extended and the register signed.

STOCK REGISTER

				Equip	ment	/ Furr	niture/ l	Linen			
Name	e of Article: K	idne	y .	Tro	y		_ Sp	ecification:	8"	size	
		Quantity			Status						7
Date	Reference No.	Received	Issued	Struck Off	Balance	Repairable	Unserviceable	Store Keeper Sign	Counter Sign	Remarks	
1	2	3	4	5	6	7	8	9	10	- 11	
1/1/08	Balance broug		2	0	10		1 00				
8/1/08	0342	10	_	-	12	0	10	m	fl	Received from	EDD(H)
	"	_	2	_	10	0	10	m	je	to MO	
15/1/08	4	_	4	_	6	0	10	m	de	to LHV	
10 1 08 15 1 08 25 1 08	"	-	3		3	0	10	In	lee	to MT	-
-											
											-

Maintaining Equipment: Equipment needs to be kept in good working condition. For this, it is necessary to convince staff of the importance of cleaning, inspecting and keeping equipment in good order and of reporting defects immediately. Inspection is an uninteresting work and is often forgotten. Therefore, it is useful to have a time set for inspections in the annual plan.

Repair or Replacement: Defects should be given attention immediately. Minor repairs could be arranged through PCMC, as they could help to raise funds locally or seek physical assistance as part of community participation. For example, a local carpenter could repair a broken chair without charges. More expensive repairs or replacements should be sought promptly through EDO(H) Office. The status "repairable" or "unserviceable" should also be recorded in the stock register DHIS 18 (R).

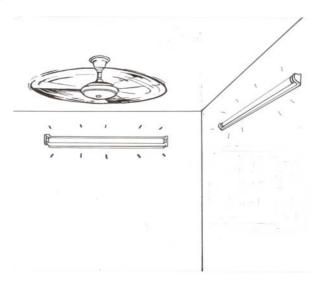
Detailed information to fill this register is given in DHIS Manual

# 1.4.b The facility has functioning electricity and natural gas



PCMC should ensure that the facility has proper installations for electric and natural gas as provisioned, and these are functional. Details of the provisions should be obtained from the EDO(H) Office. Efforts should be made to rectify any minor deficiency or defect

through local community participation, while major ones should be brought to the attention of EDO(H).



# 1.4.c A backstop generator in working condition and the budget for its maintenance and for its fuel are available.

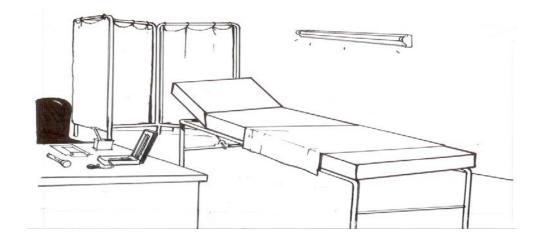
The facility should have a generator of at least 2500 watts that could facilitate working minimally of 6 tube lights, 5 fans and a refrigerator. This is essential as a backstop measure for maintaining power supply during load shedding or power failures, especially in summer months.

Incharge of the facility or any other designated staff should ensure that it remains in functional condition. The incharge with support of the PCMC should also ensure that the budget is available for its maintenance and fuel. This could either be done through local fund raising or through the EDO(H) Office.

1.4.d A stretcher and at least two examination couches: (i) are available, (ii) are clean with no visible dust, stains or blood, and (iii) are covered with a clean, uniform Macintosh or a plastic sheet.

Number of examination couches will vary from facility to facility. For example, a RHC may require 3 couches, a BHU need 2, an MCHC and a general practice clinic may need only 1. However, facilities primary health care facilities equivalent to a BHU or RHC should have at least 2 couches as they have female and male sections.

These should be kept clean and a staff should be designated for their maintenance. The Macintosh or plastic sheet covering them must be uniform (of one color and size) and clean.



1.4.e Each health worker providing curative services has the following functioning equipment: (i) thermometer, (ii) stethoscope, (iii) BP machine, (iv) screen for privacy,(v) torch.

The above standard is self explanatory and does not require further elaboration.

- 1.4.f The following additional equipment is available in the facility and ready to use:
  - Baby weighing scale, fetoscope, neonatal weighing scale, speculum
  - ii. Refrigerator, stools, lantern or alternate lighting source such as solar lamps or torch, equipment for boiling/sterilizer, timing device, stainless steel bowls, kidney bowls, dressing drum, gloves, masks, aprons
  - iii. Adult weighing scale, nebulizer, suction machine, oxygen cylinder, x-ray viewer, suture set, needle safety box, resuscitation kit.
  - iv. ORT Corner (including the following ORT equipment: water jug, 2 cups and 2 spoons.
  - v. ENT diagnostic set and disposable tongue depressors
  - vi. D&C set
- 1.4.g Additional equipment, based on the defined needs of the planned services, is available and functioning

Points i, ii, iii, v and vi of 1.4.f and 1.4.g are self explanatory and does not require further elaboration.

**ORT Corner:** In a primary care facility, a special place should be arranged for oral rehydration therapy (ORT). This is needed because a child who needs ORS will stay at the facility with the mother for some hours. This should be:

- a place where staff can frequently pass by to observe the child's progress and encourage the mother (but not in a crowded passage)
- near a water source
- near to a toilet and washing facility
- well-ventilated and pleasant

# Furniture should include:

- a table for mixing ORS solution and holding supplies a bench or chairs or preferably *dari* on the floor or small *charpoy* where the mother can sit comfortably while holding the child a tray where the mother can conveniently rest the cup of solution. Bench or chairs will need table or extended flattened arms.



# Supplies in ORT Corner should have:

- ORS packets (a supply of at least 60 packets per month if the facility receives 2 diarrhea cases per day)
- 2 containers (jugs or bottles or others that mothers will have at home) that will hold the correct amount of water for mixing the ORS packet
- 2 cups
- 2 spoons
- 2 droppers (may be easier to use than a spoon with some infants)
- Soap for handwashing
- Waste basket
- Mother's card a pictorial card that reminds mother how to care for a child with diarrhea



# Standard 1.5

There is a reliable, clean and safe supply of water from a protected water source

1.5.a Running water (pipe) is available within the facility

OR

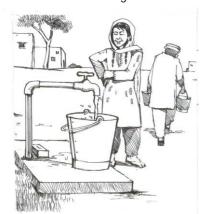
there is a water tank within the facility

OR

there is a protected water source within 200 meters of the facility: borehole, water tank or protected spring (with tubing of water for outflow, concrete slab, drainage and the spring is at least 33 meters away from latrines/toilets) and temporary storage containers, e.g. jerry cans or drum.

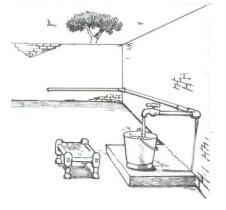
1.5.b A supply line and storage system that keep water clean and free from contamination.

A primary health care facility should have reliable clean and safe water from a protected water source. Drinking water should: (a) be free from pathogenic (disease-causing)



organisms, (b) fairly clear (i.e., low turbidity, (c) not be saline (salty), (d) not contain compounds that cause an offensive taste or smell, (e) not contain chemicals, metals or radioactive compounds in concentrations that may have an adverse effect on

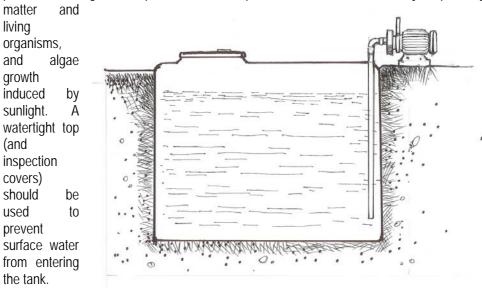




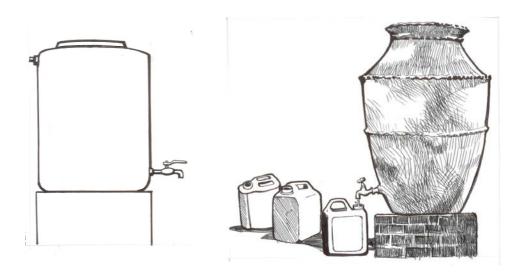
**Protected water source:** Protected water sources include household connections, public standpipes, boreholes, protected dug wells,

protected springs, and rainwater collections. Unprotected water sources are unprotected wells, unprotected springs, vendor-provided water and tanker truck-provided water.

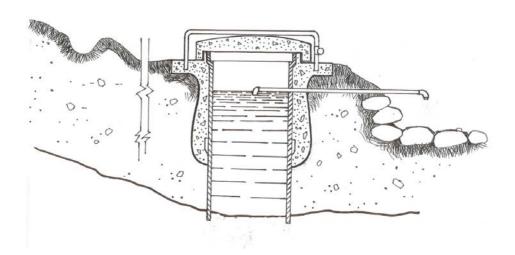
**Storage Tanks:** In above-ground tanks, quality control is easier to achieve as entry of groundwater and surface water is avoided. Underground tanks carry a greater risk of contamination, and if constructed, they should be on higher ground than the surrounding, watertight to eliminate possible entry of ground water, and should extend about 200mm to 300mm above the ground surface since most cracks occur near the top. They should be at least 15m away from installations like latrines. They should be covered and screened to prevent breeding of mosquitoes and other possible disease vectors, entry of polluting



Water can also be stored safely for short periods at a facility in temporary storage containers such as jerry cans and drums

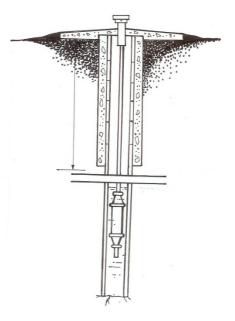


**Protected Spring:** springs that have a reliable flow can make ideal sources of water for a community water supply. No pumping is required to extract water from them and all that is usually necessary to obtain water of good quality is to collect it and protect it from pollution. This is usually done by building a protective box around the spring so that water flows out of the box into a pipe without ever being exposed to pollution outside.



Borehole: A borehole is a drilled shaft, up to 90 cms in diameter, through which water is

pumped from underground aquifers. Once a hole deeply penetrates the water-bearing stratum, small size pipes with screen or strainer attached are lowered into the hole. The pump is installed and the structure is completed by construction of an adequate platform and the provision of safe water drainage. The location of a borehole is of utmost importance as much depends upon the configuration of the soil and the proximity of possible source of pollution.



# Standard 1.6

# The waiting area is clean and protected

- 1.6.a The waiting area protects clients/patients from the sun, rain and extremes of temperatures
- 1.6.b There are designated separate male and female waiting areas and toilet/latrines
- 1.6.c The waiting area has chairs or other seating arrangements
- 1.6.d The floor is swept or mopped and the area is clean of debris/trash
- 1.6.e The walls and ceilings are intact with no broken masonry and are free from dirt and stains

The waiting area should be made as comfortable as possible as should not expose the clients/patients to extremes of temperature. They should not be made to suffer cold in winters. This requires adequate ventilation and installation of fans and heaters. The space should be well covered so that droughts of wind and rains does not affect the clients/patients.

Also the waiting place for male and female patients need to be segregated for to decrease barriers in accessing healthcare and to make them feel comfortable.

He place should have appropriate seating arrangement. Though benches and chairs are recommended, but in many places women are more comfortable with arrangements for sitting on floor on dari.

Cleanliness of the waiting area is very important as come patients may leave used discarded items, may spit, vomit or leave pieces of dirty cloth, pieces soiled with excreta of babies or wounds of others. They should be guided to use trash bins or toilets for proper disposal by the cleaner, who should remain vigilant throughout the day.

Masonry and ceilings should also be regularly inspected to keep a check on loose plasters and painters that could potentially give harm to the clients/patients.

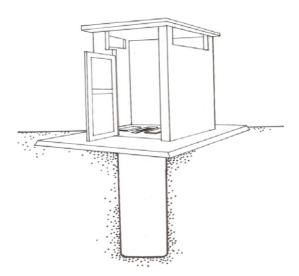
# Standard 1.7

# The facility has clean latrines or toilets

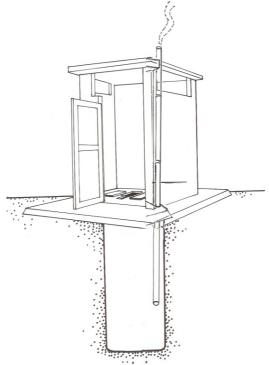
- 1.7.a Latrines or toilets exist within the facility or facility compound.
- 1.7.b Staff and clients/patients have access to separate latrines or toilets which are clearly signed and are lockable from the inside.
- 1.7.c The client/patient latrine or toilet is not locked from the outside.
- 1.7.d The toilet bowl is clean and empty and/or latrine slab is clean.
- 1.7.e Soap and water are available at the washing point near the toilet/latrine

The Incharge of the facility and PCMC should ensure presence of latrines. They should have an understanding about proper latrines, and make arrangements for its construction as feasible.

Simple Pit Latrine: This is the cheapest and most basic form latrine. It consists of a square, rectangular or circular pit dug into the ground, which is covered by a hygienic cover, slab or floor. This slab has a hole through which excreta fall into the pit. Depending on user preference, a seat or squat hole with footrests can be installed, and a lid should be supplied to cover the hole. The latrine is covered with a shelter and should be situated well away from water sources. They produce unpleasant smells and allow flies to breed easily, hence should be constructed as far in the compound as possible from the clinic.



Ventilated improved pit (VIP) and Reed's odourless earth closet (ROEC) latrines: Both of these are improved types of pit latrines which aim to remove smells and flies from the latrine using a vent pipe. They use similar technology, the main difference being that the pit of the ROEC is wholly offset from the slab and connected to a pit by a chute, whereas VIP pit is generally directly under the cover slab. These latrines share certain advantages: there are few problems with smell or flies; the slab, vent pipe and shelter are re-usable; and the excreta are isolated.



**Pour flush latrines:** Pour flush latrines use a pit for excreta disposal, but have a special pan which is cast in a cover slab and provides a water seal. This ensures that all the odors are kept in the pit, although sometimes a vent pipe is also fitted, these latrines require only 1-3 liters for each flush and are most appropriate where water is used for anal cleansing and where there is reasonably good level of water service.

**Septic tanks:** Septic tanks are watertight chambers sited below ground level. The solids settle out and break in the tank, whilst the effluent stays in the tank for a short while before overflowing into a sealed soakpit. Septic tanks must be emptied, usually mechanically, at regular intervals. Septic tanks allow safe disposal of wastewater, particularly in rural areas where wastewater is often discharged direct into rivers.

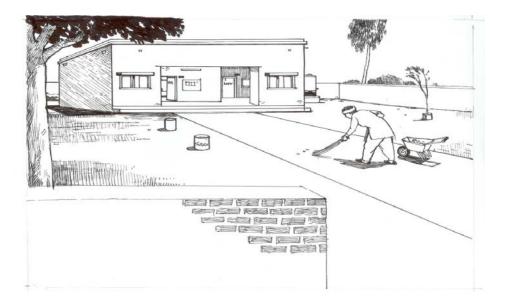
Septic tanks have the advantages of little maintenance, isolation of excreta, few problems with odor or flies and possible later connection to a sewerage system. Their disadvantages are the high cost of construction, recurrent mechanical emptying, the need for permeable soils so that soakpits can function properly, and the need for a piped water supply to the latrine.

# Standard 1.8

The facility compound is clean and uses a rubbish pit for disposal of refuse and medical waste

- 1.8.a The compound is free from litter such as plastic bags, refuse and medical waste
- 1.8.b There is a rubbish pit within the compound (possibly a garbage bin in urban settings)

The health facility compound should have garbage bins where clients/patients can dispose of the trash such as plastic bags and other refuse, however the disposal of medical waste is the responsibility of the health facility staff.



It is estimated that around 250,000 tonnes of medical waste is annually produced from all sorts of health care facilities in Pakistan that often lacks a proper waste-management system.

**Medical Waste:** Health-care activities, for instance, immunizations, diagnostic tests, medical treatments, and laboratory examinations protect and restore health and save lives. But these activities generate by-products and wastes. The term "Medical waste" entails all the waste generated by health-care establishments, research facilities, and laboratories. Medical waste at a primary care facility could be categorized as:

- Infectious waste: Infectious waste is suspected to contain pathogens (bacteria, viruses, parasites, or fungi) in sufficient concentration or quantity to cause disease in susceptible hosts. This category includes: cultures and stocks of infectious agents from laboratory work; waste from patients with infectious diseases (e.g. tissues, and materials or equipment that have been in contact with blood or other body fluids, excreta, dressings from infected wounds, clothes heavily soiled with human blood or other body fluids);
- Sharps: Sharps are items that could cause cuts or puncture wounds, including needles, hypodermic needles, blades, infusion sets, broken glass, and nails. Whether or not they are infected, such items are usually considered as highly hazardous health-care waste. They must be segregated, packed and handled specifically within the health care facility to ensure safety of the medical staff and then dumped in the waste pit.

Health-care workers are at greatest risk of serious virus infections such as HIV/AIDS and hepatitis B and C infection through injuries from contaminated sharps (largely hypodermic needles). Other hospital workers and wastemanagement operators outside health-care establishments are also at significant risk, as are individuals who scavenge on waste disposal sites.

The unsafe disposal of health-care waste (for example, contaminated syringes and needles) also poses public health risks. Contaminated needles and syringes represent a particular threat as the failure to dispose of them safely may lead to dangerous recycling and repackaging which lead to unsafe reuse. Contaminated injection equipment may be scavenged from waste areas and dumpsites and either be reused or sold to be used again. WHO estimated that, in 2000, contaminated injections with contaminated syringes caused 21 million hepatitis B virus (HBV) infections (32% of all new infections), two million hepatitis C virus (HCV) infections (40% of all new infections); and at least 260 000 HIV infections (5% of all new infections).

Where waste is dumped into areas without restricted access, children may come into contact with contaminated waste and play with used needles and syringes. Epidemiological studies indicate that a person who experiences one needle stick injury from a needle used on an infected source patient has risks of 30%, 1.8%, and 0.3% respectively of becoming infected with HBV, HCV and HIV.

- Pharmaceutical Waste: Pharmaceutical wastes can include expired, unused, spilt, and contaminated pharmaceutical products, drugs, vaccines, and sera that are no longer required and need to be disposed of appropriately. This category also includes discarded items used in the handling of pharmaceuticals, such as bottles or boxes with residues, gloves, masks, connecting tubing, drug vials, broken thermometer.
- Chemical Waste: Chemical waste consists of discarded solid, liquid, and gaseous chemicals, for example from diagnostic work, cleaning, housekeeping, and disinfecting procedures. Chemical waste from health care may be hazardous or nonhazardous; in the context of protecting health, it is considered to be hazardous if it has at least one of the following properties: (a) toxic, (b) corrosive (e.g. acids of pH < 2 and bases of pH > 12), (c) ßammable, (d) reactive (explosive, water-reactive, shock-sensitive), (e) genotoxic (e.g. cytostatic drugs). The types of hazardous chemicals used most commonly in maintenance

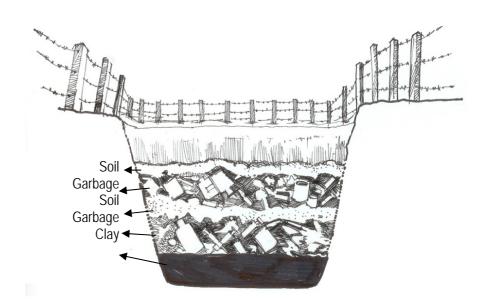
of health facility and the most likely to be found in waste are formaldehyde, solvents, organic chemicals (disinfecting and cleaning solutions such as phenol-based chemicals used for scrubbing floor, insecticides), inorganic chemicals (sulfuric acid, sodium hydroxide and ammonia solutions).

Primary healthcare facilities produce limited quantities of medical waste (mainly sharps, infectious waste and some pharmaceuticals, etc.). The management of medical waste requires increased attention and diligence to avoid the substantial disease burden associated with poor practice, including exposure to infectious agents and toxic substances. The facility incharge should provide guidance to all the staff for safely dealing with waste and properly disposing it. Incinerators provide an interim solution especially for developing countries where options for waste disposal such as autoclave, shredder or microwave are limited. But as incinerators are not available in most of the facilities, the suggested method is getting medical waste properly buried in a pit.

Construction of a waste pit: The choice of a site for waste pit is important i.e. minimum 50-100 meters away from any water source. The pit should be 2-5 meters deep and 1-2 meters wide depending upon the amount of waste the facility generates. The bottom layer of the pit is filled with clay and after each dumping of the waste load the waste should be cover with a 5-10 cm layer



of soil. The construction and maintenance of a waste-pit is very cheap and a properly constructed and maintained pit is functional for 4-5 years.



- 1.8.c The pit (bin) is not overflowing and is properly used, i.e. rubbish is not disposed of anywhere else.
- 1.8.d Medical waste is disposed of in a functional covered pit, e.g. not accessible for children and animals, within the compound

The management of the waste pit is important as a well-managed pit ensures the safety of the health facility staff and the community members. An appropriate site for the waste pit is within the compound limits and away from water reservoirs and should have restricted access for authorized personnel of the health facility. Children should be kept away from the vicinity of the waste-pit. The waste-pit should be fenced in such a manner that it restricts domestic animals and cattle. Overflowing pits attract the attention of animals as they would graze over there in search of food but properly managed pit eliminates such risks. Vectors such as rats, flies, and cockroaches, which feed or breed on organic waste, are well known to be the passive carriers of microbial pathogens; and an increase in their populations around the vicinity of the health facility should be taken as sign of mismanagement of waste disposal. Improperly managed waste pits also attracts drug addicts who come over in search of syringes.

# Standard 1.9

The staff work to written Operating Procedures for managing the Primary Care services, written guidelines for management of clients/patients and written guidelines for common illnesses

1.9.a Standard Operating Procedures are used for managing the facility, finances, equipment, cleaning procedures and stocks, e.g. equipment maintenance.

Standard Operating Procedures (SOPs) are used for managing a health facility for standardizing operations of different levels of facilities. The provincial Department of Health or EDO(H) set these for the province or district, respectively. The incharge of a facility should acquire these for managing various functions, if they are not available at the facility.

In case, these do not exist, then develop your own SOPs for the facility based on the quidelines given below.

#### SOPs for Managing the Facility

- Specify hours of operation, for example 8 am to 3 pm and define hours for activities, for example
  - Cleaning from 8.00 to 8.30 am,
  - General clinic from 9.00 to 1.30 with tea break from 11.00 to 11.15
  - All staff to complete their paperwork from 1.30 to 2.30
  - Staff meeting 2.30 to 3.00
  - Family Planning clinic on Tuesday and Saturday by LHV from 11.30 to 1.30
  - Outreach work by vaccinator from 9.30 to 1.30
- ii. Specify the process or protocol of tasks to be performed at the facility with responsibilities assigned to designations. For example:
  - How the cleaning should be done and by whom for each area.
  - How the patients will be received, registered and by whom
  - Where will patients wait for their turn and how they will called to see the medical provider, and who will make the call or usher them.
  - Who will attend to the female and male patients/clients. How much time will be given to a new patient and to a follow-up. Will there be preliminary check up by any paramedic before the doctor attends to the patient.

- In absence of MO, how the facility will be managed
- Who will dispense medicines and how they will be given out to patients, in paper bags or plastic packets.
- Who will conduct health education, for whom, how frequently, where and with materials.
- Who will be responsible for maintaining cold chain for vaccines, how it will be maintained during power failure
- How the reusable medical instruments will be cleaned and sterilized. What materials or chemicals will be used or should not be used.
- How the soiled items like bed linen will be collected, stored, washed and cleaned
- How the medical waste will be disposed, by whom, when and where

#### **SOPs for Managing Finances**

- i. Specify how staff will receive salaries: either directly into their bank account or will be from EDO(H) Office. If to be collected from EDO(H) Office, then would it be collected individually or by one person on behalf of every body and on which date. If it is to be collected by one person and then disbursed at the facility then designate the person. If staff has to go individually to EDO(H) Office for receiving their salaries then fixed dates and times so that functioning of facility is not much affected. For example, if doctor is going on first of the month, then the medical technician should go second of the month. Alternatively, both can go on the same day but when one returns to the facility then other could leave.
- ii. The health care facility is given petty cash of Rs...... times per year by EDO(H)/PPHCI. This is to be used for expenses on maintaining cleanliness and tea for staff. The expenditure details should be entered in a register by the Medical Technician/Dispenser while the money should be kept with him or the Medical Officer Incharge.
- iii. The parchi fee of Rs. 2 is collected from each client/patient daily and should be kept with the facility incharge and deposited in EDO(H) office to Treasury Officer every month. The facility incharge should remember that this will be audited through external auditors annually, by comparing it with entries in OPD registers. Similarly the fee for X-ray and blood test etc. at RHC should be kept with the facility incharge and deposited every month to the treasurer.

#### **SOPs for Managing Equipment**

The protocols for managing equipment has been described earlier in Standard 1.4

## **SOPs for Managing Stocks**

Stocks of consumable items are to be managed as they are used within a short time and their shortages occur if proper tracking is not done. These include medicines and supplies like disposable syringes, cotton wool, bandages, gloves, laboratory stains, stationery, etc. The four main procedures in the management of stocks are: (a) ordering, (b) Storing, (c) issuing, (d) controlling. The standard protocols to be followed for these processes are given below.

**Ordering:** To order stocks, list the requirement of each item based on the knowledge of past average use and complete the order form. The order could be for a month or a quarter depending on the policy set by EDO(H) office. Always remember that resources are limited, therefore, requirements must always be balanced against resources (allocations).

Storing Stocks: Stocks should be stored in two places, (a) main store or reserve store where stocks are kept but not used, and (b) the place of use, after issue. New items are delivered at the facility with a delivery note that should be placed in a file kept for this purpose. The receipt of each item should be entered in the "Stock Register for Medicine/Supplies, DHIS-17 (R). There is a separate page for each item stocked. Each time an item is received it is added to the total in stock. Each time an item is issued, it is subtracted from the total stock. The resulting number is the balance in stock. For example:

Name of	Article: Disposable Syr	inge	Jnit/Stren	gth	5 6	-			
Minimun	n Recommended Stock Level:	200		Take acı	tion for rep	lenishment if the m	inimum level	is reached)	
Date			Quantity	in Unit	s		Counter Sign	Remarks (Tick if balance '0')*	
	Received From / Issued to with Reference No.	Received	Issued	Discarded	Balance	Store Keeper Signature			
1	2	3	4	5	6	7	8	9	
1/1/08	Balance brought forward	_	_	_	40	m	fe		
3/1/08	EDO(H)	1000	_	5	1035	· M	ll	5 out of	noke
5/1/08	EDO(H) Dispensery	_	100	_	935	m	se		
4/2/08	Dispensery	_	100	_	835	~	be		
28/2/0	s Dispensery s Dispensery		140	_	695	0	ge		

Store keeper should sign each new entry and also get it countersigned by the facility incharge. The page for each item also mentions the minimum recommended stock level. If the item has reached that minimum level then action should be taken for replenishment.

#### **Cleaning Procedures**

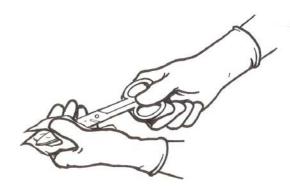
Usable medical equipments and other items get soiled with infected material. These need to be cleaned in a proper way. Responsible staff should put on cleaning gloves, apron, protective glasses, and masks (as required) before collection of soiled materials.

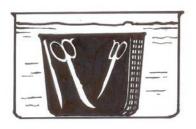
Collection of soiled reusable medical devices (such as instruments) is performed at the place where they have been used (e.g. dressing room, delivery room), immediately after use. The staff doing procedure should wipe the edges of instruments with a compress to remove blood and place them in designated perforated plastic basket. These should be placed in a container (covered with the lid) until the pre-disinfection procedure is performed.

Pre-disinfection must be performed as soon as possible (ideally immediately after the items have been collected). Pre-disinfection consists of eliminating, killing, or inhibiting most microorganisms present on soiled reusable devices through immersion in a 0.1% active chlorine solution. This solution is prepared by putting 1.67 g tablet of chlorine / litre of clean cold water .Ensure the tablet is completely dissolved before using the solution. Prepare and store the solution in a closed, opaque plastic container (non-metallic). Never mix with detergent. Before using the solution, stir the solution properly. Renew the chlorine solution between each pre-disinfection procedure (do not re-use the solution).

Transfer the perforated plastic container with soiled devices into the 0.1% active chlorine solution and immerse completely. Leave to soak for 15 minutes. Transfer the perforated plastic container with devices into the rinse basin and thoroughly rinse with clean water, at least 3 times (to avoid contact between chlorine residues and the detergent used for later cleaning). Place the devices on a clean tray. Do not dry.







The purpose of this step is to reduce the risk of contamination and thus providing some degree of protection for the staff when handling medical devices. Soaking in 0.1% active chlorine solution for 15 minutes is a compromise. It reduces the microbial load (and thus the risk of contamination) and offers a limited risk of corrosion to devices (chlorine is corrosive to

metallic instruments). Even after pre-disinfection, items cannot be considered HIV, HBV safe. Cleaning should ideally be performed immediately after pre-disinfection.

Cleaning consists of removing the organic and non-organic matter through the physicochemical action of a detergent combined with a mechanical brushing and rinsing action. This is an essential step as certain dead bacteria secrete pyrogenic endotoxins producing high fever, chills, hypertension. These endotoxins are heat stable toxins and can only be removed by the action of cleaning (steam sterilization has a poor effect on the removal of "pyrogenic endotoxins"). All items must be cleaned before being sterilized or "high" disinfected.

Cleaning of reusable medical devices is done by putting them in a basin. Add detergent (soap preferably liquid, washing powder or falling that 1.5% chlorhexidine + 15% cetrimide solution), mix with clean water, and completely immerse the devices. Carefully brush the instruments (especially the extremities, teeth, screws, joints, and the lumen) to completely remove all blood, body fluids, tissues and other foreign matter. Flush the narrow lumen of devices with a syringe. Open the instruments. Rinse thoroughly with clean water in the second basin (or under running water) to remove all detergent. Dry the devices with a

clean, "no-fluff" cloth/towel to prevent corrosion. Do not use gauze compresses as small cotton particles may adhere to the instruments and thus be left in human tissues. Place the devices on a clean surface covered with a clean drape. Change the drape daily. Provide a hook for drying rubber drain tubes.

Before collecting soiled linen, carefully check for gauzes, needles, etc., trapped in the linen to avoid accidental injuries. Fold the linen into a roll (the contaminated area must remain in the centre). Place the linen bundle in the soiled linen bin without shaking. In case of very soiled linen, allow the linen to soak for 30 minutes in clean cold water before immersing in chlorine solution as chlorine fixes blood and body fluids to linen. Transfer the soiled linen into the 0.1% active chlorine solution and immerse completely. Leave to soak for 15 minutes. Transfer the linen into the rinse basin and thoroughly rinse, at least 3 times, with clean water (to avoid contact between chlorine residues and the detergent used for later cleaning). Place the linen in a clean basin whilst awaiting the cleaning step. Cleaning of linen is done by immersing it in clean water mixed with detergent. If using powdered detergent, use hot water and mix well (to avoid non-dissolved powder being trapped in the linen). Brush and wash the linen. Then thoroughly rinse the linen with clean water in the second basin. Hang out to dry in a covered place (shelter).

Discard the soiled water into the waste water system. Rinse the outer surfaces of gloved hands under running water. Remove protective equipment, gloves and wash hands with soap and water. Clean protective equipment with soap and water daily (or more often of necessary). Hang on rack (nail) to drain and dry.

Drying is essential before sterilization. "Only what is dry can be correctly sterilized".

Do not mix reusable devices with medical waste (soiled dressings, sharps, catheters, etc.).

- 1.9.b National and Provincial Guidelines for the priority illnesses are available at the facility, form the basis of regular training for relevant staff and are followed in providing care to the patients/clients.
- 1.9.c Where National and Provincial Guidelines are not available they are developed and used by the Primary Care service.

Standardized medical care could only be provided if all primary health care facilities use

Standard Case Management (SCM) guidelines. Standard 2.9 (in volume 2) provides available National and Provincial Guidelines for the priority illnesses. The facility incharge should check with the staff providing clinical services about their training/orientation on these guidelines and arrange these, if required, through EDO(H) Office.



If, the guidelines are not available for some priority illness, then the incharge should develop it for use at the facility.

1.9.d Written guidelines for the management of clients/patients exist and are used, e.g. confidentiality, privacy, registration, recording and coding.

Confidentiality: Each staff member at a primary health care facility should strictly adhere to the confidentiality of a client's/patient's personal health information. Patients records should be maintained at the facility and confidentiality of information in the patient's record should be protected, for example HIV status of an individual should not be discussed and revealed to any community member. The information should only be released if the identified patient specifically authorizes the provider. There are some exceptions to this general rule and the health care provider should know these, for example:

- If a person is detected with any of the 18 notifiable diseases, then authorities are to be informed.
- If abuse or neglect of a child or a vulnerable adult is suspected, a report should be filed with the appropriate agency.
- If danger to life (such as suicide) is expected then take actions to protect patient's life even if identity is to be revealed.
- If patient threaten serious bodily harm to another, take necessary actions to protect that person even if identity of patient is revealed.
- If the patient is involved in a lawsuit, and a court requires submission of information or to testify
- If insurance is used to pay for the treatment, the client's insurance company may require information about the treatment for claims processing purposes or for utilization review.

In treatment involving children and their parents, access to information is an important and sometimes contentious topic. Particularly for older children, trust and privacy are crucial to treatment success. For example, adolescents with high risk behavior does not want their parents to know, but needs services, such as condoms, information about HIV and AIDS, treatment for STIs, etc. However, parents/guardians should be informed if the child is in danger or if he/she is endangering others. Here, it becomes important to discuss at EDO(H) level and agree on shared definition of dangerousness so that all are clear about what will be disclosed.

**Privacy:** Both visual and verbal privacy of the clients/patients should be maintained at the facility. All examinations that require lifting or removal of clothes should be done either behind screen or closed door. The conversation between the health care provider (such as doctor, LHV) and client/patient should not be audible to others, allowing the client/patient to express freely. This will not be applicable for infants, unless the accompanying parent desire.

Registration: This will be dealt in Volume 2 with Standard 2.4

**Recording:** There are various prescribed ways of maintaining records of the patients in a standardized way, and the facility could choose any of these considered feasible. One simple method is SOAP, which is described in volume 2 measurable criteria 2.8 (e & f)

If the information is recorded on Outdoor Patient Ticket, then it should be in duplicate for filing one copy in the record and giving other out to patient. Otherwise, a separate recording form will be required.

**Coding:** Codes are developed and used for registering clients/patients for specific purposes. For example:

- a private primary care facility may register self-paying clients and insured clients under different codes such as SP 00-63-98 or IC 00-63-98
- another facility may register clients by gender, e.g. M-00-43-98 for a male who is client number 4,398 or F-00-94-90 for a female client who happens to be 9,490 client at the facility.
- Some facility may register clients by the type of key service they seek such as ANC-00-63-98 for a woman seeking antenatal care or IM-00-08-54 for a child coming in for immunization.

Therefore, the facility incharge, in consultation with other staff must design a coding system for maintaining clients' records, if it is not prescribed by the EDO(H) Office. The system should be simple that facilitates them to retrieve records with ease.

## Standard 1.10

Primary care staff are available for service delivery during all official times.

## 1.10.a An updated roster is kept of who is on duty at what time.

A duty roster is a time plan for distributing work among staff members. For examples, for performing different types of duties during working hours such as going out with the EPI team; conducting health education sessions in communities by different staff; visiting schools for raising awareness of children about health; or on-call duties after working hours. The roster helps to:

- Distribute difficult or uninteresting work, and varied or interesting work
- Distribute work fairly and evenly after daily routine hours, e.g. night duty, weekend or holiday on-call duty.
- Divide extra duties among all staff.

Making rosters that are just to all staff members is important, otherwise it could lead to unhappiness and guarrels among them. To overcome this, take care that:

- The length of time of similar duty period must be the same for each staff, for example, if one doctor is out on field with EPI for 6 hours then other should not be assigned only 2 hours for the same duty.
- The number of persons working must divide evenly, for example, if there are 30 on-call shifts after working hours and there are three doctors in the facility, then all must be on call for 10 times. Also it should be seen that holidays and weekends are also distributed fairly.

A daily roster for each working day should be developed and kept. This will not only help the staff to plan their monthly activities in advance, but will also assist the supervisors and PCMC to assess the activities that are being carried out by the facility. An example is given below for a roster at a RHC

	RHC Nahaqi				
Daily Roster : Monday 14 January 2008					
S.No	Staff	Time			
1.	Dr. Latif Khan	atif Khan Attend patients			
		Complete paper work	1.30 - 2.30		
		Conduct daily staff meeting	2.30 - 3.00		
2.	Dr. Asadullah	Visit with polio team	8.30 – 3.00		
3. Dr. Zarina Azam Attend patient:		Attend patients	9.00 – 12.00		
		Family Planning Clinic	12.00 – 1.30		
		Complete paper work	1.30 - 2.30		
		Attend daily staff meeting	2.30 – 3.00		
		On call	3.00 – till		
			9.00 next		
			morning		
	1111/01 0				
4.	LHV Shagufta	Supervise cleaning of her room and lady			
	Jan	doctors room	0.00 10.00		
		Attend patients	9.00 – 12.00		
		Visit Girls School for Health Education	12.00 – 2.30		
		Attend daily staff meeting	2.30 – 3.00		
5.	Dispenser Shafi	Supervise Cleaning of Store and doctor's	8.30 – 9.00		
J.	Dispenser Shan	room	0.30 - 7.00		
		Dispense medicines	9.00 – 1.30		
		Complete paper work	1.30 -2.30		
		Attend daily staff meeting	2.30 - 3.00		
		7			
6.	Lab tech. Ahmad	Supervise cleaning of lab	8.30 - 9.00		
		Perform lab tests	9.00 – 11.30		
		Visit DHO Office for meeting of lab	11.30 - 3.30		
		technicians			
7.	X-ray Tech.	On training till 18 Jan	-		
	Zamir				
	Dontol Tools All	Currentee Cleaning of death-to-	0.20 0.00		
8.	Dental Tech. Ali	Supervise Cleaning of dentistry	8.30 – 9.00		
		Attend patients	9.00 – 1.30		
		Complete paper work	1.30 -2.30		
		Attend daily staff meeting	2.30 – 3.00		

These rosters should be filed daily at the end of the day in the designated folder and reviewed by the supervisor during their visit and by PCMC in each meeting.

## 1.10.b A qualified healthcare provider is available whenever the facility is open

At least one qualified practitioner should be present to attend to the patients. For example, if lady doctor is out on training then LHV should be present in the facility and should not schedule other activities like health education session in girls' school. Another example, if one male doctor has gone out on polio duty then other should not go out for training or schedule leave or any other activity outside

In smaller facilities like BHU, at least one of the three providers (doctor, LHV, medical technician/dispenser) should be available to treat patients.

### Standard 1.11

Staff are appointed, trained and evaluated in accordance with documented procedures, job descriptions and service needs.

1.11 a. Keep a check that staff appointments are made in line with the required qualification and experience for the job and the job description.

PCMC should keep a check that all staff appointments are in accordance with the job descriptions and the persons appointed have required qualifications and experience. Key positions at primary healthcare facility are given below, (their number vary by type of facility):

- Medical Officer
- Woman Medical Officer
- Lady Health Visitor (LHV)
- Health Technician (male)
- Health Technician (female)
- Dental Technician
- Dai
- Behishti
- Ward Orderly/ Ward Aya
- Chokidaar
- Vaccinator/EPI Technician

People work well together when they are clear of their roles and responsibilities. On assuming charge, the incharge of the facility must make sure that each member of the staff understands his/her job description and their role as a member of a health team. The incharge must make sure that the staff are properly trained for the assigned work and has the required equipment/supplies. The job descriptions for each of these positions are given below:

#### MEDICAL OFFICER INCHARGE RURAL HEALTH CENTER

#### Responsible to:

The medical Officer I/C Rural Health Centre will be incharge of the unit irrespective of his relative seniority to the Woman Medical Officer and will be answerable to DHO/ADHO for the following duties and any others that may be assigned by them.

#### **General Duties:**

- 1. Supervises the work of staff under his control and ensures that they have the proper skills, working knowledge and competency and are active in their tasks.
- 2. Resides on hospital premises to confirm his presence 24 hours when he is not on leave or on tour.
- Assigns duties to staff working in the unit and ensures that they perform duties in emergency hours regularly. Brings any neglect on their part to the notice of DHO/ADHO.
- 4. Maintains cleanliness of the facility and its residential area through appropriate staff members and ensures safety and proper care.
- 5. takes proper fire prevention steps at health facility.

#### Medical Duties:

- 1. Acts as Medical Attendant to Government servants according to Medical Attendance Rules. Recommends medical leave to sick Government servants according to the severity of the illness/disease.
- 2. Investigates and reports any outbreak of epidemics in the area served by R.H.C. to DHO/ADHO.
- 3. Visits Sub-Health Centres/BHUs under the jurisdiction of RHC once a week according to approved tour programme. Checks records, progress of the centre and examines incoming patients. In the afternoon, visits villages in the area of Sub-Health Centres/BHUs with sanitary staff to check sanitation conditions and provide health education.
- 4. Supervises prevention and control measures for communicable diseases and investigates any complaint or incidence of communicable disease in the unit area. Plans for ongoing or additional control measures as needed.
- 5. Conducts post-mortem and medicolegal examinations. Ensures that Medicolegal record is in safe custody and gives it to the police in a timely manner.
- 6. Supervises the activities of the Health Education Campaign in his active job to give lectures to villagers on topics such as immunization, personal hygiene, O.R.T., environmental sanitation, nutrition, communicable diseases control, malaria, etc. with the help of Health Technician, Sanitary staff and other field staff using health education media. Generates community participation and support in the Preventive Health Programmes.
- 7. Is responsible for proper care and treatment of sick and is present in dispensary during prescribed hours of attendance. Deals with emergency cases at any hour when not on tour or leave.
- 8. Performs certain operations himself with the assistance of 2<sup>nd</sup> Medical Officer or Women Medical Officer and entrusts certain operations to them.
- 9. Visits all patients in the hospital twice daily to:
  - a. Check their progress:
  - b. Ensure that they are receiving medicines properly;
  - c. Ensure that they are receiving a diet of good quality and quantity;
  - d. Ensure that investigations are carried out according to instructions and in a timely manner.
  - e. Ensures that wards and veranda are clean and there is no overcrowding of visitors and relatives.

10. Refers seriously ill or injured patients to the THQ Hospital after resuscitation.

#### Administrative Duties:

- 1. Ensures that all books, records and accounts prescribed by the rules are kept properly and up-to-date.
- 2. Grants casual leave p to four (4) days to staff working in the unit, except the Woman Medical Officer and 2<sup>nd</sup> Medical Officer.
- 3. Plans for expansion and development of the unit.
- 4. Acts as the channel for orders from supervisors to lower staff and communications from staff to supervisors.
- 5. Is responsible for the care of all machinery, equipment, furniture, instruments and chemicals and ensures that all are in working order.
- 6. Is responsible for observance of rules regarding the custody and disposal of poisonous and dangerous drugs.
- 7. Holds meetings with local councilors to establish cooperative working relationships and to plan a specific Health Campaign programme in the villages.
- 8. Conducts weekly staff meeting to review the progress of activities including health education.
- Checks stock register, cash register, O.P.D. register, abstract register, admission register and attendance register regularly to ensure that all entries made are correct. Maintains minor operations register, Medicolegal register and postmortem register himself.
- 10. Assesses requirements of centre for drugs, equipment, clothing, and linen etc., and arranges procurement.
- 11. Ensures that monthly, quarterly and annual reports are correct and are sent to DHO/ADHO office regularly.

#### Health Technician (Male/Female)

#### Responsible to:

The Health Technician (Male/Female) will work under the supervision of the Medical Officer I/C/Senior Health Technician and perform the following duties according to the duty roster and orders.

#### **General Duties:**

1. Both will assist and coordinate with other Health Workers (E.P.I., Malaria, Family Planning, etc.).

### Medical Duties:

- 1. <u>Both</u> will work primarily on outreach and field duty to:
  - a. Stimulate formation of a local health committee;
  - b. Plan and manage training of community Health Workers for identification of community Health problems such as unsafe water supply and excreta/refuse disposal, responding to these problems as required;
  - c. Promote Oral Rehydration Therapy through education, actual preparation and motivation of people for its use;
  - d. Give Health talks to the public on environmental sanitation, personal hygiene, family planning, child spacing, nutrition, weaning, breast

- feeding, mother and child health, O.R.T., malaria, communicable disease and infectious disease control, cup and spoon feeding, etc.;
- e. Plan and manage celebration of Health Day/Health week;
- f. Perform and supervise all activities of outreach teams under the Primary Health Care Component and ensure 100%immunization of eligible groups.
- 2. <u>Male Health Technician</u> will be the Incharge of B.H.U. when the services of the Medical Officer are not available and perform curative duties such as:
  - a. Treatment of common health problems (e.g. colds, flu, respiratory ailments, anemia, skin disorders malnutrition, worms, eye and ear infections, diarrhoea);
  - b. First aid treatment and resuscitation of emergency cases (e.g. burns, accidents, P.U.O., poisoning, dog and snake bites);
  - c. Referral of more serious ailments to established centers for diagnostic and treatment purposes.
- 3. <u>Female Health Technician</u> will educate females on subjects such as family planning, balanced diet, child spacing, breastbeeding, cup and spoon feeding, weaning, O.R.T., etc., and motivate them to have regular antenatal visits, safe childbirth in the hands of a midwife, post-natal care, cleanliness, etc.
- 4. <u>Female Health Technician will assist in training of Traditional Birth Attendants.</u>

#### 2<sup>nd</sup> MEDICAL OFFICER/WOMAN MEDICAL OFFICER RURAL HEALTH CENTRE

#### Responsible to:

The 2<sup>nd</sup> Medical Officer and Woman Medical Officer will perform the following duties and any others assigned by the Medical Officer Incharge to whom they are directly responsible.

#### **General Duties:**

- 1. Remains in hospital during duty hours and when on emergency duty.
- Resides on hospital premises if residential accommodations are provided in health facility.
- 3. Assists Medical Officer I/C in his duties
- 4. The 2<sup>nd</sup> Medical Officer will be incharge of the hospital in the absence of the Medical Officer Incharge
- 5. The Woman Medical Officer supervises the work of the Female Health Technician/L.H.V. and checks their records and progress regularly.

#### **Medical Duties:**

- 1. Attends O.P.D., examines patients and prescribes medicines to patients or refers them to the Medical Officer I/C for admission or additional advice.
- 2. Makes rounds of wards alone or with Medical Officer I/C and follows his instructions regarding patients care.
- 3. Assists Medical Officer I/C in operations and performs certain operations himself/herself if so entrusted.



- 4. Performs emergency duty according to duty roster and admits seriously ill or injured patients. Writer history and examination notes and plans their treatment.
- 5. Conducts post-mortems and medicolegal examinations and gives reports to the Police in a timely manner.
- 6. <a href="mailto:2nd Medical Officer">2nd Medical Officer</a> visits Sub-Health Centers/B.H.U. in the catchment area of R.H.C. once a week. Check their progress, records, sanitation conditions, and examines incoming patients. Visits villages in the area in the afternoon with the Sanitary staff and other field staff to check sanitation conditions and provide health education.
- 7. 2<sup>nd</sup> Medical Officer visits villages in the jurisdiction of R.H.C. twice a week after his active job with Health Technician, sanitary and other field staff. Gives health talks to the people on topics such as immunization, O.R.T., malaria, communicable diseases control, personal hygiene, nutrition and environmental sanitation etc., with the coordination of the local councilors and elders of the locality.
- 8. <u>Woman Medical Officer gives</u> health talks to females at the hospital on E.P.I., breastfeeding, nutrition, weaning, cup and spoon feeding, personal hygiene, O.R.T., environmental sanitation, mother and child health.
- 9. Both will provide health care to all school children in the catchment area of the R.H.C., visiting schools twice a week.

#### Medical Officer I/C Basic Health Unit/Civil Dispensary

#### Responsible to:

The Medical Officer I/C Basic Health Unit/Civil Dispensary will be responsible for its smooth and efficient running and perform the following duties and any others assigned to him by the DHO/ADHO to whom he is directly responsible.

### General Duties:

- 1. Supervises the work of his staff and ensures that they have the proper skills, working knowledge and competency.
- 2. Prepares duty roster for routine and emergency duty and ensure that staff performs emergency duty regularly. Brings any neglect on their part to the notice of DHO/ADHO.
- 3. Is responsible for the cleanliness of the unit and its residential area.
- 4. Resides on hospital premises when accommodations are available and leaves written information of his whereabouts when he leaves the health unit.
- 5. Supervises Preventive Health Programmes in the area and generates community participation.
- 6. Reports any outbreak of epidemics in the area served by B.H.U./Civil Dispensary to the DHO/ADHO. Investigates such outbreaks and adopts control measures as required.

#### **Medical Duties:**

1. Remains present in dispensary during prescribed duty hours and examines patients, prescribes medication and performs minor surgery. Resuscitates serious patients and refers them to well-equipped units like R.H.C./T.H.Q./D.H.Q. Hospitals.



2. Gives health talks to patients at the hospital on different topics such as immunization, malaria, O.R.T., communicable diseases control, nutrition, environmental sanitation, etc.

#### Administrative Duties:

- 1. Ensures that all books, records and accounts prescribed by the rules are kept properly and up-to-date.
- 2. Acts as the channel for orders and communication from supervisors to the staff and from the staff to his superiors.
- 3. Grants up to four (4) days casual leave to staff working in the unit.
- 4. Is responsible for the care of all machinery, equipment, furniture, instruments and chemicals and ensures that all are in working order.
- 5. Ensures that all periodic, monthly, quarterly and annual reports are correct and sent to DHO/ADHO office regularly.

#### E.P.I Technician/Vaccinator

#### Responsible to:

The E.P.I. Technician/Vaccinator will perform the following duties and any others assigned to him by the Incharge of the Unit/FSV/DSV to whom he is directly responsible.

#### **General Duties:**

- 1. Performs his duties according to the duty roster and orders.
- 2. Keeps close watch on E.P.I. diseases and reports any incidence or complaint. Adopts control measures with the help of other F.P.I. staff
- 3. Keeps vaccines within required temperature range and ensures that they are used before expiry date.
- 4. Assists and cooperates with other health workers.

### Medical Duties (Preventive/Promotive):

- 1. Registers all newborns and children under one year of age and ensure that immunization is completed before reaching one year of age.
- 2. Performs vaccination of children and pregnant women in the center and also in the villages in his area.
- 3. Follows up on defaulters and completes their immunization course.
- 4. Motivates people during outreach vaccination visits the villages.

#### Administrative Duties:

- 1. Maintains stock register and accounting of vaccines, medicines and equipment.
- 2. Assesses monthly requirements of the centre and ensures that sufficient stocks of vaccines, medicines, etc., are always available.
- 3. Prepares outreach programme at the start of each month and displays it in the center. Sends a copy of it for information to FSMO/DSV through proper channels.



- 4. Maintains daily and permanent registers of the center and outreach activities and keeps then up-to-date.
- 5. Prepares monthly E.P.I. disease surveillance reports.
- 6. Sends monthly progress reports to the FSMO regularly through proper channels.
- 7. Displays charts, maps, graphs and tables in the center showing the area and monthly/annual progress reports of the center.

#### Compounder/Dispenser

#### Responsible to:

The Compounder/Dispenser will perform the following duties and any others assigned by

the Incharge of the Unit to whom he is directly responsible.

#### General Duties:

- Performs his duties according to the duty roster and orders.
- 2. Is responsible for the efficiency of the dispensary.
- 3. Prepares mixtures, lotions, ointments, powders and other medicines in accordance with prescriptions from Medical Officer using standard physical and chemical procedures.
- 4. Carries out emergency duty according to the duty roster.

#### Medical Duties:

- 1. Treats, common health problems such as colds, flu, anemia, worms and malaria. Stitches and dresses minor injuries, applies P.O.P. and gives I/D, S/C, I/M and I/V therapy as ordered by Incharge of the Unit or consultant.
- 2. Administers regular first aid treatment to emergency cases such as trauma, dog or snake bites, burns and head injuries. Refers serious cases to well-equipped unit, THQ/DHQ Hospital.
- 3. Provides adequate nursing care to admitted patients in the unit where no qualified nursing staff is available, such as passing of Ryles tubes, Flatus tube, cup feeding, dressing of beds and patients, prevention of bed sores, catheterisation, recording of pulse, temperature and respiration rates, preparation for diagnostic investigations (X-Ray or Lab), administering medicines and preoperative and post-operative care. Carries these duties out under the supervision of the Medical Officer or Senior Health Technician.

### **Administrative Duties:**

- 1. Maintains Medicines Store properly and up-to-date, using Bin cards. Maintains stock register up-to-date, checks all drugs monthly and brings expired drugs to the notice of competent authority for disposal and destruction.
- Maintains O.P.D. register, abstract register and daily register and in the absence of clerk maintains cash register, admission register, diet register, dispatch register, infectious disease surveillance register, and a quittance rolls register, etc., up-to-date.
- 3. Ensures regular submission of buildings and need for repairs.
- 4. Reports condition of buildings and need for repairs.

- Submits prompt reports on epidemic or disease outbreaks in the locality to DHO/ADHO.
- 6. Implements directions received from higher authorities, advisors or consultants.
- 7. Prepares annual indent for supplies of drugs, equipment, linen, etc.
- 8. Prepare statistical displays (synopsis, graphs, charts, tables) of all activities taking place in the unit and displays them prominently in the unit.
- 9. Obtains contingent items for the unit and maintains their records.
- 10. Accounts for and collects monthly emoluments of staff, T.A., D.A. and contingent bills from office of DHO/Agency Surgeons/Civil Surgeons, and disburses the same personally or through Incharge of the Unit.

#### Laboratory Technician

#### Responsible to:

The Laboratory Technician will perform the following duties and any others assigned by the Pathologist or Incharge of the Unit to whom he is directly responsible.

#### General Duties:

- 1. Performs his duties according to the duty roster and orders.
- Maintains cleanliness and orderliness of the Laboratory personally and through the other workers.
- 3. Remains on call when unit is single-handed.
- 4. Assists and cooperates with other health workers.



#### Medical (Technical) Duties:

- 1. Collects certain specimens personally from patients in wards/ICUs/CCUs and ambulant patients in special circumstances.
- 2. Checks specimens received from various units of the hospital and marks them to the concerned Laboratory Assistants or other staff and keeps records.
- Performs certain clinical, microscopic, biochemical and bacteriological tests himself such as L.F.Ts, serum cholesterol, uric acid, culture sensitivity, A.S.O. Titre, R.A. Factor, Coomb's test, Widal/Brucella test, Kahn's and V.D.R.L. test, A/G ratio, etc., prepares smears, and does embedding and staining of slides for Histopathology.
- 4. Prepares solution/reagent/stains for various biochemical and hematological tests.
- 5. Gives completed tests to the Pathologist for signature and verification and keeps the records up-to-date.

#### **Dental Technician**

#### Responsible to:

The Dental Technician will perform the following duties and any other assigned by the dental surgeon or Incharge of the Unit to whom he is directly responsible.

### General Duties:

- 1. Performs his duties according to the duty roster and orders.
- 2. Maintains cleanliness and orderliness of the unit through other health workers.
- 3. Keeps all dental equipment and instruments in sterilized and clean condition. Treats them with Vaseline and grease oil to prevent rust as necessary.
- 4. Assist and cooperate with other health workers.

### **Medical Duties:**

- Assists Dental Surgeon in prosthetics/orthodontics and maxillo facial techniques. Performs various minor and uncomplicated operations himself with the permission of the Dental Surgeon or during the absence of the Dental Surgeon.
- 2. Does acrylic porcelin crown bridge work and prepares dentures.
- 3. Mixes and fills treatment materials.



#### Administrative Duties:

- 1. Maintains stock register of equipment, instruments etc., and keeps O.P.D. register up-to-date.
- 2. Prepares annual indent and annual returns.
- 3. Prepares synopsis of work and displays it in the unit prominently.
- 1.11.b All staff are oriented to the primary care services and their specific positions through a documented induction programme.
- 1.11.c The induction programme includes:
  - i. The Service's mission, values, goals and relevant planned actions for the year
  - ii. Services provided
  - iii. Roles and responsibilities
  - iv. Relevant policies and procedures, including confidentiality
  - v. Use of equipment
  - vi. Safety
  - vii. Emergency preparedness
  - viii. Quality improvement

The facility incharge or PCMC should ensure that all new staff members joining their facility have received orientation in primary care services and also about their specific positions, which is essential to understand and deliver services effectively. Also, this

orientation should have been done through a well defined induction programme that includes above listed 8 areas.

1.11.d All staff have a copy of their job description that is kept current. The job description includes the responsibilities, accountabilities, tasks, performance measures and reporting relationships.

The current job descriptions (as presented above in Standard 1.11.a) do not include all of the above aspects. Hence, DoH in collaboration with EDO(H) Offices should work to develop more descriptive job descriptions covering all aspects of the required standards. These should then be circulated to all facilities and each staff member.

## 1.11.e All staff have a copy of their conditions of employment

Conditions of employment differ for different grades of employees (e.g. BPS -17 has different conditions than those working in BPS- 11) and also for the type of employment i.e. regular or contract employment. Each staff should have a copy of these with them. An example of conditions of employment for a medical officer on contract is given below:

#### Conditions of Employment for a Contract Medical Officer

- 1. The contract employment is for a period of One year in BPS-17 plus usual allowances.
- 2. Posting shall be for a specific health institution and shall be non-transferable for the contract period of One year. The appointment authority may or may not at the time of extension beyond One year decide to alter the posting to another station/health institution.
- 3. The continuation of contract service is subject to good performance and can be terminated without any notice. In case an employee is willing resign or the employer terminates the contract, one month's notice on the part of either party or payment of one month's salary in lieu thereof would be necessary.
- 4. The contract may be extended at the end of one year by the competent authority subject to good performance.
- 5. House rent allowance shall be admissible. However, residence shall be mandatory at the place of posting where available subject to deduction 5% of the start of the scale of BPS-17.
- 6. TA/DA shall be permissible at the prescribed rate subject to due authorization for travel by the competent authority.
- 7. The employee shall be entitled to medical treatment as under the NWFP Govt:servants (Medical Attendance Rules, 1959 for BPS-17 Officers.
- 8. i. Four days leave shall be admissible on full pay, for every calendar month on duty rendered and credited to the leave account. In case an employee remains absent he/she shall not be entitled to draw salary for the period of such absence.

- ii. One month's medical leave on full pay shall be permissible provided that the employee is hospitalized for this period. Hospitalization leave exceeding one month shall be treated as leave without pay for a period not exceeding 90 days.
- iii. Medical leave other than hospitalization leave shall not be allowed for a period exceeding four (04) days.
- 9. Where the employee remains absent without leave for a period of seven (07) days he/she shall be deemed to have violated the relevant contract provisions and shall stand terminated from the service.
- 10. The employee shall not be eligible for deputation, study leave, training/TMOship, etc. leave without pay for leave extra ordinary within or outside the country he/she shall have to resign for such purposes with a minimum of one month notice.
- 11. The employee shall be responsible for all utility bills and other charges of the residential accommodation as is applicable to grade 17 Medical Officer.
- 12. The employee shall not be required to contribute to the General Provident Fund.
- 13. This contract appointment is non-pensionable and without gratuity.
- 14. The employee shall have the benefit of age relaxation equal to the length of contract service rendered.
- 15. The contract employee shall be subject to all rules of Government pertaining to a Civil Servant in respect to efficiency and discipline, conduct, Liability to criminal proceeding, etc. and any special rules/instructions issued by the Health Department specific to the employee. For breach of discipline or unsatisfactory service the Health Department shall be competent to terminate the contract without notice or compensation.
- 16. The employee is not permitted to do private practice, open any clinic, private dispensary or have any interest in any such private facility. The appointing authority may however, on a general basis consider permission to allow private practice under institutionalized arrangement within the public facility after normal working hours. The terms and conditions for this purpose will be subject to separate notification.
- 17. No contract employee shall indulge in any trade, business or occupation or any activity which is prohibited for a regular Government Servant.
- 18. Spouse policy shall not be applicable to the contract employee.
- 19. Contract employee shall be subject to physical fitness and verification of antecedents as well as testimonials.
- 20. Stamp duty, if any, on this instrument shall be borne by the employee.
- 21. Non compliance of the terms and conditions would render the employee disqualified for employment not only under this agreement but other employment in the Health Department, Government of NWFP.

(As evident from above, some conditions are not well-defined or are not mentioned. For example, point 1 state "the contract employment is for a period of one year in BPS -17 plus usual allowances". A new appointee may not know the remuneration details of this grade, and the individual is not likely to be aware about "usual allowances". Second, the above 20 conditions of employment do not mention anything about the permissible leaves, such as earned, casual or medical leaves. The DoH in consultation with EDO(H) Offices should develop detailed conditions for employment for each cadre and each type of contract).

## 1.11.f Well maintained and secure staff housing with all utilities is provided as per staff terms and conditions.

Varying level of housing is sanctioned to staff according to their grade. Each staff should be provided housing unit according to the specified facilities and utilities for that grade employee. Every staff member should have details about the facilities available to him/her according to the grade. They should obtain the details from EDO(H) office

1.11.g Staff performance is evaluated annually with the staff member against their job description and agreed targets and is used to identify strengths, areas for improvement and training needs.

Each staff member at the facility should be evaluated annually by their supervisor. This evaluation should be done objective and frankly against their assigned jobs and agreed targets. It should identify strengths that the individual possess and also specify the weak areas requiring improvements and training. The appraisal should be shared with the employee and discussed. It should not only review past performance, but should also be used as a basis for making development and improvement plans and reaching agreement about what should be done in the future.

The five key elements of the performance appraisal are:

- Measurement assessing performance against agreed targets and objectives.
- Feedback providing information to the individual on their performance and progress.
- Positive reinforcement emphasizing what has been done well and making only constructive criticism about what might be improved.
- Exchange of views a frank exchange of views about what has happened, how
  appraise can improve his/her performance, the support they need from their
  managers to achieve this and their aspirations for their future.
- Agreement jointly coming to an understanding about what needs to be done to improve performance generally and overcome any issues raised in the course of the discussion

One approach is to ask appraisee to also do a self-assessment on a similar tool that is used by the supervisor. This process encourages staff to assess and analyze their own performance and helps to improve the quality of the appraisal discussion between him/her and the supervisor as individuals feel actively involved in the process. However, self assessment can only work if individuals have clear targets and standards against which to assess themselves. It can also only be effective in a climate of trust where individuals believe their appraisers will not take advantage of an open self-assessment.

Once the evaluation is completed by the supervisor, written comments of the appraise should be obtained on the appraisal form. The staff should be given the right to write his/her comments, even if he/she has major disagreement with the appraisal, but they should write the reasons for disagreement.

EDO(H) Office should provide these appraisal forms. In case, these are not developed, the following sample form could be used.

Supervisor's Narrative Summary

## **Annual Performance Evaluation Form**

The purpose of this appraisal form is to provide a written record of the staff member's performance. Supervisors are urged to be frank in their evaluation both for the benefit of the staff member and for the accuracy of this appraisal record. This appraisal will become a part of the staff member's personnel file.

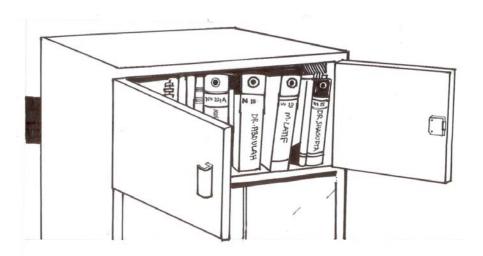
Name of staff rated	Job Title/G	Job Title/Grade		Facility/District		
Supervisor				Date of Appraisal		
List the principal task performed during the rating period						
a.						
b.						
C.						
d.						
e.						
f.						
g. h.						
''. 						
Service Delivery Performance (write NA if Not Fails to meet Meets normal Exceeds normal Greatly						
Applicable)	(Millo 10 th 110t	normal	requirements	requirements	exceeds	
		requirements			normal	
					requirements	
Rapport with patients/clients						
Case management according to	national/provincial			l 🗆		
guidelines						
Family planning service		<u> </u>				
Health education of patients/clients						
Health education sessions in cor	mmunity					
Vaccination/Immunization						
Microscopy						
Performance of lab tests	d					
Compliance with safety rules and						
Storage and dispensations of dru Contacts with community people				H		
Managerial Performance	·					
Effectiveness in organizing own	work		П	П		
Judgment	WOIK				片	
Decisiveness					H	
Ability to work with colleagues & supervisors						
Ability to instruct & train supervise						
Utilization of resources						
Other Skills & Performances						
Productivity						
Dependability						
Analytical ability						
Thoroughness & accuracy						
Initiative						
Creativity						
Oral Communication						
Written Communication						
Facing issues						
Overall Rating						
Unsatisfactory Satisfactory			Superior Outstandin		anding	

(Comment on the employee's performance, using examples to illustrate specific skills or failures to meet normal requirements. If overall rating is outstanding, superior or unsatisfactory, provide justification here. Add extra pages if needed)			
The state of the s	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Signature/Date		
Rated Employee's Statement			
Rated Employee's Statement			
I certify that my job responsibilities and this appraisal was discussed with me by my supervisor, and I have evaluation report.	ave received a copy of this		
evaluation report.			
	Signature/Date		
Reviewing Officer's Statement (e.g. EDO (H))			
	Signature/Date		

## 1.11.h Accurate and complete personnel records are kept at the facility

A record of information pertaining to a staff employee forms personal record. It includes employment and job related information, such as:

- employee's application for the job with relevant certificates, degrees, etc.
- offer letter
- acceptance letter/agreement/contract
- job description and performance expectations
- development records such as training
- performance records such as appraisals, counseling memos, disciplinary letters, special awards, or commendation letters
- promotion records
- Leave records
- emergency data



The record for each staff should be accurate, complete and kept at the facility.

1.11.i Staff receive ongoing in-service training relevant to their job and the healthcare service and in areas such as health and safety, quality improvement and client/patient rights.

These trainings should be arranged at DHDC or other relevant places.

## Standard 1.12

The health and safety of clients/patients, staff and visitors are protected.

## 1.12.a. The Service is designed to allow service delivery to be accessible and respect clients/patients need for privacy.

All health services should be designed so that people can understand them, contact them, get to them and use them.

Staff need to be aware of the potential barriers which might prevent community people from accessing services. Accessible service delivery includes:

- opening times of facility
- availability of female provider for female clients/patients
- separate areas for females and males
- privacy and confidentiality
- continuity of care
- availability of support from staff

Opening times of facility are fixed in public sector and are beyond control of the facility incharge, while they could be varied in private sector.

All primary care facilities (except dispensaries) have allocation of female health care providers. Their appointments should be ensured by PCMC.

Cultural practices inhibits women from using facility if they do not have areas separated for them. Therefore, the incharge should give due importance that women have allocated space for them in waiting and other areas.

Privacy and confidentiality has been dealt in Volume 2 Standard 2.7

Continuity of care is important and consists of at least five continuity dimensions: chronological, geographical, interdisciplinary, interpersonal, and informational.

A supportive attitude from staff is very important as it encourages people to ask for what they need, while a negative or unhelpful response could make them less confident in asking for help and less able to understand their treatment. A positive attitude contributes to the quality of the service user experience and builds confidence and credibility.

## 1.12.b The Service is inspected annually by the Works and Services Department and declared safe.

## 1.12.c A current Safety Certificate has been issued and is displayed in the facility.

The officer incharge should insure that the facility is inspected annually by the Works and Services Department and declared safe. The safety certificate issued by them should be displayed in the facility. If any repairs are advised, they should immediately be brought to the attention of EDO(H)

## 1.12.d Chemicals, drugs and equipment are stored safely.

Chemical and drugs received need to be recorded in a stock ledger and stored in a secured way on shelves in a clean, dry, well ventilated and cool place. All chemicals and

drugs should be clearly and properly labeled and the expiry date should always be present on the container. Expiry date is based on the average rate of deterioration of the drug product under standard conditions of temperature, humidity, and light. Hence these are applicable only if specified storage requirements are satisfied. Temperate climatic conditions generally satisfy these requirements, but in tropical climates, where high humidity and high temperatures prevail, problems may arise. Both elevated temperature and high humidity can lead to increased rates of drug decomposition and,



consequently, a reduction in the shelf lives of drug products.

The consequence of treating patients with partially degraded drugs is probably a reduction in therapeutic response, which may be difficult to recognize or quantify. However, if degradation is significant, it can have serious consequences, such as use of inactive chloroquine or penicillin that would cause resistance or treatment failure. Degraded drugs have also been reported to cause harm. Therefore, the conditions of temperature, humidity and light should be considered for storage of drugs and chemicals.

Equipments also need to be stored safely in shelves, cupboards or store rooms. It should be ensured that they are clean and inspected on a regular schedule. This helps to avoid rust and corrosion.

- 1.12.e Risks and hazards are identified and eliminated, isolated or minimized as appropriate.
- 1.12.f Guidelines exist for major risks and hazards and are known to the staff.
- 1.12.g Incidents, accidents and near misses are reported and analyzed to identify causes and the analysis is used to improve systems and processes, e.g. needle stick injuries

Risks and hazards are present in provision of health care. The health providers may perform tasks that are associated with higher levels of risk for themselves or for the clients. Although these tasks are essential part of patient care, the providers must be aware of their responsibility and accountability. The way to embrace this responsibility and accountability is to understand, identify, isolate risks and hazards involved in different processes/activities, and then minimize or eliminate them. By adopting the principles of risk management, health care providers can act proactively to ensure they provide a quality service with minimal risks.

Risks and hazards are minimized by adopting defined procedures for various activities where major risks are involved. Each facility should prepare a list of all possible major risks and hazards in consultation with staff and inform them about measures to prevent or minimize them. Many of these have been dealt with while discussing measurable criteria for different Standards. Some of the examples are use of protective equipment by the providers for their protection, cleaning and sterilization of instruments for safety of patients, aseptic cleaning of wounds to avoid facility induced infections, proper disposal of medical wastes, immunization of staff against Hepatitis B, etc.

Incidents, accidents and near misses do occur despite measures taken for their prevention. These should be immediately reported to the facility in charge rather than hiding them. Each incident, accident and near misses should be thoroughly discussed and analyzed to identify the reason for its occurrence. This should help to improve and strengthen system and process to avoid or minimize future occurrences.

1.12.h Staff are provided with and use protective equipment, e.g. gloves, aprons, masks.

Different protective equipments are required by staff in different sections of a primary health care facility to minimize risks and hazards to them. These are listed below and should be provided to the respective staff for their protection:

	OPD	Laboratory	Waste zone	
Gown	if risk of splashing	yes	-	
Clean Shoes	yes	yes	-	
Rubber boots	for cleaners	for cleaners	yes	
Rubber cleaning gloves	for cleaners	for cleaners	yes	
Overalls	-	-	yes	
Plastic apron	if risk of splashing	-	when handling chlorine solution	
Surgical mask	If risk of splashing	-	when handling chlorine solution	
Protective glasses	-	if risk of splashing	-	
Examination gloves	according to the care	-	-	
Surgical gloves	according to the care	-	-	



# 1.12.i Staff are trained in fire safety and other emergencies and drills are practiced regularly.

Staff should be trained in use of flammable substances and fire fighting methodology.

Every staff member should know:

- how to raise the alarm if they discover a fire
- how to escape
- how to contact the fire brigade
- how to use the fire fighting equipment
- how and where to evacuate the building
- where to assemble and who to report

An escape plan can help every staff member to get out of a burning facility. Hence, facility should make a escape plan that also describes important safety tips. For example:

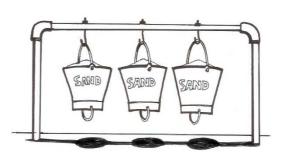
- Smoke from a fire can make it hard to see where things are, so it's important to remember the different ways out of the facility. Staff should know how to get to the exit safely from their room.
- If they are in a room with the door closed when the fire breaks out, they need to take a few extra steps: (a) Check to see if there's heat or smoke coming in the cracks around the door. If smoke is coming under the door they should not open the door! If there is no smoke touch the door. If the door is hot or very warm they should not open the door! If there is no smoke and the door is



not hot - then use fingers to lightly touch doorknob. If the doorknob is hot or very warm they should not open the door! If the doorknob feels cool. and smoke is seen around the door, they can open the door very carefully and slowly. When the door opened, and if a

burst of heat, or smoke pours into the room, quickly shut the door and make sure it is really closed. If there's no smoke or heat when the door is opened, they should quickly go towards the escape route exit.

If one see's smoke in the facility, as one makes way to the exit, stay low to the ground. In a fire, smoke and poisonous air hurt more people than the actual flames do. One breathe less smoke if one stays close to the ground.



Drop to the floor and crawl on your hands and knees below the smoke.

 It's normal to worry about important papers, etc., but if there is a fire, one should leave them behind. The most important thing is that the person get out safely.

Necessary, functional fire fighting equipment should be available in all facilities. The facility should practice the fire drill at least once a year and it is good practice not to announce the drill to get a realistic idea of how effective is the training and fire fighting actions and plans.

Everyone should participate in the drill and all staff members should be familiar with the escape plan and personal actions.

Similarly, plans for handling other possible emergencies to be made and drills are conducted.

1.12.j Staff health is protected by the provision of immunization for infections such as Hepatitis A and B and influenza.

All staff should receive these injections according to the protocol defined by the EDO(H) Office.

## Standard 1.13

Client/patient feedback is collected and used to improve services

- 1.13.a Clients/patients have access to a culturally appropriate feedback mechanism, e.g. suggestion box, questionnaires, regular interviews with clients by an independent person.
- 1.13.b Data collected on client/patient satisfaction with services and treatment is analyzed and used to improve services

Client/patients feedback should be valued, as this helps us to improve services. The facility should have mechanisms to obtain feedback on an on-going basis. The feedback mechanisms should be culturally appropriate and feasible. These could include:

- Suggestion box at the facility that may be used by the literate clients.
- Questionnaires in very simple language distributed among the visiting clients, with request for return. Response rate will vary depending the way questions are framed, the way importance of feedback is explained, and availability of a literate person to the respondent.
- Periodic interviews with clients



Funds will be required to hire people for conducting periodic interviews and their analysis or analysis of questionnaires. PCMC should raise funds for these activities or seek voluntary assistance from university students or other educated people in the community. Below is an example of clients/patients feedback obtained through interview of 300 clients/patients who attended the PHC facility in first quarter of 2008 (Jan-Nov 2008)

## **Example of Patient Feedback Scores**

Activity	Respondents	Respondent Responses in %			
		Excellent	Good	Fair	Poor
Registration process	300	4	64	20	12
Comfort level at waiting	300	0	17	49	34
area					
Interaction with doctor	190	12	71	11	6
Interaction with LHV	110	5	63	24	8
Explanation about using	300	2	55	21	22
medicines					
Overall attitude of staff	300	18	44	33	5
Family Planning service	45	10	74	6	10
Immunization service	160	23	62	14	1
Toilet facilities	300	0	12	51	37
Cleanliness of facility	300	0	56	34	10
Delivery services	40	0	0	25	75

All patients/clients feedback should be analyzed in the staff meeting and by the PCMC. Reasons for poor scores need to be understood by gaining qualitative information. For these, group discussions should be held in the community, both with women and men, to gain insights about the observations expressed by data and appropriate measures should be taken to immediately address the issues.

## Standard 1.14

Clients/Patients have the right to complain about services and treatment and their complaints are investigated in a fair and timely manner.

- 1.14.a Clients/patients are informed of their right to express their concerns or complain either verbally or in writing
- 1.14.b A documented process which is fair and timely is used for collecting, reporting and investigating complaints.
- 1.14.c Clients/patients are informed of the progress of the investigation at regular intervals and are informed of the outcome.

Every primary care facility should inform the clients/patients about their right to complain and the complaint handling procedures. Various ways should be adopted, for examples:

- Display the message clearly in the local language at a prominent place in the facility such as registration desk, waiting area, main entrance.
- PCMC could request local radios in the district to spread this message as a public service
- Appoint volunteers or activists from the community to raise this awareness.
- LHWs should be encouraged to carry this message to homes.





To become a quality driven center, a facility should encourage the clients and their family members to freely raise and discuss their views, concerns or complaints with the concerned staff. These dialogues help and serve as opportunities for improvement. Besides this, a documented process should be defined for receiving and handling complaints against the functioning of the facility and practice of its staff, which should be credible and transparent for users. This mechanism should be used fairly and timely for collecting, reporting and investigating complaints. To ensure that measures for patient complaint system are effective and efficient, they should be well-targeted and focused to address the problems identified.

The complaints against service providers that carry client's perspective should be handled first by the facility incharge or PCMC, and the verdicts of inquiries should not be biased in favor of the facility staff. If professional misconduct or negligence is involved then it should be forwarded to the professional regulatory bodies at the district or provincial level. If the issue is larger such as maladministration in public services, then the complaint should be forwarded to appropriate level at district or provincial level. The Court of Law should deal with the issue of damages and compensation.

It is also important that clients/patients are informed of the level at which their complaint can be handled. They should be kept informed about progress of the investigation at regular intervals, in case these are prolonged, and also of the outcome. This will help to build the credibility of the facility.

### Standard 1.15

The Service identifies opportunities to continuously improve its processes and services, makes improvements and evaluates their effectiveness.

- 1.15.a Performance indicators for priority diseases and key processes are measured, reported and used for continuous improvement.
- 1.15.b Performance data from activities such as audits, complaints, incident reports, satisfaction surveys and risk assessments are collected, analysed and used to identify improvement opportunities.
- 1.15.c Improvements are planned, appropriate action is taken, the effectiveness of the action is evaluated and the results are feedback to staff and clients/patients.
- 1.15.d All relevant legal requirements are identified and compliance is monitored.

Data generated from the various programs, initiatives and activities of the facility should be carefully reviewed in staff and PCMC meetings to identify the shortcomings and barriers to services.

**Performance Indicators:** These are representations (quantitative or qualitative) of the state or outcomes of a program, initiative or activities at a facility and compare actual condition with a set of reference condition. Hence, they measure the distance between the current situation and desired situation (target) and provide a manageable way of measuring performance. The performance indicators for priority diseases and key processes should be measured, reviewed and efforts made to improve them. A regular tracking will show the trend of performance.

**Priority Diseases:** These are determined by the provincial Department of Health (DoH), EDO(H) or by the facility itself. Many of the priority diseases are reported in monthly HMIS report (DHIS- 21 (MR))

**Audits**: Clients/patients medical record should be subjected to medical review by peers and this should be initiated by EDO(H) Office for all facilities, at least once a year. Deficits in quality of medical care can be detected by study of medical records (mostly randomly

selected) using national/provincial guidelines for management of cases or established standard case management protocols as the criteria. This helps to bring in quality assurance in clinical care.



Complaints and Incidents Reports: Standard 1.13 and 1.14 dealt with it in detail.

Satisfaction surveys: Standard 1.13 dealt with satisfaction surveys.

**Risk Assessments:** All health care providers should perform a risk assessment focusing on the protection of staff and the environment. This should specially be done regarding the management of clinical waste-its segregation, storage, collection, transport, treatment and disposal

The above mentioned data should be carefully analyzed and the findings identifying deficiencies should not be taken negatively but seen as opportunities to improve processes and services for better outcomes. These should lead to well-directed actions. In due course, the effectiveness of the actions taken should be evaluated and the results are shared not only with the facility staff and EDO(H) Office, but also with community people. PCMC must devise mechanisms for this sharing, as credibility of the facility and its staff increases among the community people when they learn about the efforts made and successes achieved for improving services for them.

## **Bibliography**

Arjumand And Associates & National AIDS Control Programme. 2003. *Identification And Mapping Of High Risk Groups In 10 Cities*. Islamabad.

Basic Health Services Cell, Government of Pakistan. 1992. *Nutrition Training for Primary Health Care Workers*. Pakistan Child Survival Project. Islamabad.

Children's Hospital & Research Center Oakland. *Emergency Department Patient Referral Form.* California.

David Morley & Margaret Woodland. 1979. *See How They Grow*. The Macmillan Press Ltd. London.

David Werner. 1985. Where There Is No Doctor. The Hesperian Foundation. California.

Directorate of Clinical Training, Ministry of Population. *Trainer's Guide – FWW Basic Training Course.* Islamabad.

Directorate of Malaria Control, Ministry of Health, Pakistan. *Malaria Case Management Training Manual*. Islamabad.

Expanded Programme on Immunization, National Institute of Health, Ministry of Health, Government of Pakistan. 2005. *Hifazati Teeka jaat – Amli Tameen: Vaccine Dainay Walay Karkonaney Sehat Kay liay Aik Rahnuma Kitabcha.* Islamabad

GTZ, Health Regulatory Authority – NWFP, DoH – NWFP, EPOS Health Consultants. 2007. *Primary Health Care Standards in NWFP*. Peshawar.

http://www.wwfpak.org/factsheets hwf.php

http://www.arthurrankhouse.nhs.uk

http://www.theportlandhospital.com

http://www.legco.gov.hk

http://www.apait.org/apait/resources/riskmanagement/cinf.htm

http://www.sandiego.gov/fireandems/safety/justkids.shtml

http://www.oregon.gov/DHS/ph/safekids/firesafety.shtml

http://www.theannals.com/cgi/content/full/38/7/1310

http://patientfeedback.hfea.gov.uk/feedback

http://dmu.trc.upenn.edu/patientfeedback/Handouts Resources/Manuals/PF%20Manual 1.0.pdf

http://www.bhs.umn.edu/feedback/patientfeedback.htm

http://www.usfca.edu/hr/pdf/Supervisor-Staff%20Guidelines.pdf

http://www.worcestershirehealth.nhs.uk/RBPCT\_Library/Carol\_Powell/Evaluation%20for%2006-07.xls

http://www.princeton.edu/hr/policies/conditions/perfappc.doc

http://www.unicef.org/infobycountry/pakistan pakistan statistics.html

Imtiaz Kamal. 2007. *Top to Toe Examination – First Antenatal Care Visit.* PAIMAN Project. Islamabad.

Jack Reynolds et al. 1994. *Primary Health Care Management Advancement Programme – Better Management 100 Tips – Managers Guide.* The Aga Khan University, Aga Khan Foundation, Aga Khan Health Services, University Research Corporation-Center for Human Services.

Lawrence M. Tierney, Stephen J. McPhee & Maxine A. Papadakis. 1997. Current Medical Diagnosis and Treatment. Appleton & Lange. Connecticut.

Ministry of Health, Government of Pakistan. 2003. *National Essential Drugs List of Pakistan*. Islamabad.

Ministry of Health, Government of Pakistan. *Standard Treatment Guidelines for Diarrhoea*. Islamabad

National AIDS Control Programme & UNAIDS. *HIV Voluntary Counselling And Testing (VCT) – Guidelines For Pakistan*. Islamabad.

National AIDS Control Programme, Ministry of Health – Pakistan, World Health Organization, NORAD. *Prevention and Control of Sexually Transmitted Diseases – National STD Case Management Guidelines Pakistan.* Islamabad.

National Institute of Health, Ministry of Health, Government of Pakistan. 2006. *Disease Early Warning System (DEWS). Case Definitions, Management & Prevention of Infectious Diseases*. Islamabad.

National Tuberculosis Control Programme, Ministry of Health, Government of Pakistan. 2003. *National Guidelines for Tuberculosis Control in Pakistan*. Islamabad.

National Tuberculosis Control Programme, Ministry of Health, Government of Pakistan. *Guidelines for Diagnosis & Management Of Tuberculosis – for Physicians & General Practitioners.* Islamabad.

Robert A. Hatcher et al. 2001. *The Essentials of Contraceptive Technology – A Handbook for Clinic Staff.* Population Information Program, Center for Communication Programs, The Johns Hopkins University School of Public Health. Baltimore.

Syed Mohammad Israr. 1994. *Village Health Committees in Family Health Project.* Department of Community Health Sciences, Aga Khan University, Karachi.

The Nemours Foundation. 2007. What To Do In A Fire.

World Health Organization. 1980. *On Being In Charge – A guide for middle-level management in primary health care*. Geneva.

World Health Organization. 1987. *The Community Health Worker- Guidelines for training, Guidelines for adaptation.* Geneva.

World Health Organization. 1989. *Preventing And Controlling Iron Defeciency Anemia Through Primary Health Care – A Guide For Health Administrators and Programme Managers*. Geneva.

World Health Organization. 1992. *Diarrhoea Management Training Course - Participant Manual*. Programme for the Control of Acute Respiratory Infections. Geneva.

World Health Organization. 1992. *Outpatient Management of Young Children with ARI: A Four-Day Clinical Course. Participant Manual.* Programme for Control of Diarrhoeal Diseases, Geneva.

World Health Organization. 1993. *Advising Mothers on Management of Diarrhoea In The Home – A Guide For Health Workers*. Diarrhoeal Disease Control (CDD) Programme. Geneva.

World Health Organization. 1993. *Guide to Chemotherapy and Chemoprophylaxis In Bacterial Infections*. Regional Office for the Eastern Mediterranean. Alexandria.

World Health Organization, Eastern Mediterranean Regional Office. 1993. *Guidelines on Sanitation for Small Communities – Appropriate Technologies for Use by Middle-level Technicians In Countries Of The Eastern Mediterranean Region Of World Health Organization.* Center for Environmental health Activities, Amman.

World Health Organization, Eastern Mediterranean Regional Office. 1993. *Guidelines on Technologies For Water Supply In Small Communities*. Center for Environmental health Activities, Amman.

World Health Organization, Eastern Mediterranean Regional Office. 1993. *The Management of Emergencies by the Primary Health Care Physician.* Chapman & Hall. London.

World Health Organization. 1998. *Safe vaccine handling, cold chain and immunizations*. A manual for the Newly Independent States. Global Programme for Vaccines and Immunization, Expanded Programme on Immunization. Produced in collaboration with Basics, USAID and UNICEF. Geneva.

World Health Organization. 2004. Fact Sheet No 281- Health-care waste management: To reduce the burden of disease, health-care waste needs sound management, including alternatives to incineration. Geneva.

World Health Organization. 2005. *Management of Solid Health Care Waste at Primary Health Care Centers – A decision Making Guide.* Geneva.

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