

Topic 11. How to organise and manage materials: Drugs, equipment and facilities?

A hand out from the project on “Integrated management of public health programmes at district level”

This project was developed by incorporating ideas, suggestions and contribution from an interactive participatory process of dialogue and consultation involving public health and multidisciplinary resource network drawn primarily from mainstream institutions and the civil society network in India.

A draft manual evolved covering the concepts and values Roles, Skills and Challenges and an Integrated Paradigm for the Public Health Management at District level. It also elaborates on, making a district diagnosis; organizing a health management information system; evolving a district plan; organizing an epidemiological surveillance system; responding to an epidemic and managing an outbreak; managing health programmes; managing human resources; organizing materials management; monitoring and evaluation; leading and building a health team; promoting, communicating and advocating for health; promoting and sustaining community partnerships; and building and sustaining partnerships with the educational sector; civil society, private sector and promoting an inter-sectoral collaboration.



**Developed by
Centre for Public Health and Equity, and its
associates, for the Society for Community Health
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Preface

This document is intended to serve as an evolving conceptual **framework for district level public health managers** in the health systems of the South East Asian countries. These managers, their knowledge, skills, attitudes, and openness to new challenges and new paradigms will remain one of the key determinants of the success of countries in reaching the “**Health For All**”(HFA) vision and the **Millennium Development Goals(MDG’s)**.

This document is a practical do it yourself workbook that draws upon some of the wealth of experience and resources in the past and present and tries to help district level managers address the complexities of today’s challenging global, national and local health situation and the emergence of new challenges and reemergence of older ones.

Readers are advised not to treat this document as a comprehensive manual but as **an evolving compilation of concepts in public health management**. This conceptual framework contains suggestions to tackle some of the problems, that the district level public health managers meet in their daily life as they lead, assess, respond, evaluate and learn from numerous health systems challenges. Where possible and feasible it directs the managers to other resources and materials that will provide them additional perspective and details (*see CD accompanying the manual*)

The authors/ facilitators have extensively worked in the community and have had decades of experience in supporting capacity building for public health/ community health in the main stream and civil society linked alternatives sector. They have also tried to draw upon the experience and the field-oriented perspectives of a network of public health capacity builders and trainers from the mainstream public health institutions and civil society training centers (*see list of contributors*).

This is **a work in progress**. The conceptual framework will, we expect, evolve into a guidebook that gets used and adapted by district level public health managers, trainers and supervisors of district level public health programmes. The document is expected to continue to evolve with the feedback from users making it more relevant, responsive, context specific and focused.

We see this document as the beginning of a new journey - **a journey of strengthening district level public health management**.

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11. How to organise materials management: Drugs, equipment and facilities

Drug Supply (medicines) and Logistics ^{1&2}

Drugs – estimates and supplies

Drugs or medicines are those that satisfy the health care needs of the majority of the population and they should, therefore, be available at all times in adequate amounts and in the required dosage forms. Drugs are a special resource that needs to be managed carefully. When drugs are out of stock patients are unlikely to visit health facilities, not even for preventive advice. All drugs can expire while some drugs (for instance vaccines) need special transport and storage conditions. Furthermore, drugs are much-wanted items that are sometimes misused or stolen. Anyone in the health service, including pharmacists, planners, storekeepers, prescribers, nurses and accountants, have to do with drugs or drug supply in one way or another. Therefore, the district health manager should follow the following four steps for effective drug management

A drug supply system

1. The components of drug system
2. Calculating the drug requirements
3. Ordering the drugs;
4. proper management of the drug store.

a) The components of drug system

- **Drug selection:** This considers issues of drugs in terms of the needs, requirements and the types as well as their costs. An essential drug list for different levels of health care, within a district should be evolved, preferably with standard treatment guidelines.
- **Drug procurement:** When procuring drugs the health manager needs to be conversant with the existing procurement system like the selective, open tender or direct procurement and have an evaluation system to guide on procurement procedures.
- **Drug distribution:** Under this component DHM (district health manager) needs to be aware of the centralized, decentralized distribution systems. One way of keeping track of drug movements and supply position is to use tools such as stock cards and delivery forms.
- **Rational drug use:** Drugs should be selected, procured and dispensed in order to be correctly used. A correct diagnosis, rational prescribing, correct dispensing of drugs and good patient compliance lead to their appropriate use.

b) Calculating drug requirements

There are two main methods of estimating the requirement of drugs.

- i. **The morbidity method:** which estimates the need for specific drugs based on the expected number of attendances, the incidence of common diseases and the standard treatment patterns for the diseases considered
- ii. **The adjusted consumption method:** which starts from existing consumption of drugs concerned and then assumes that the same amount is needed this time. The adjusted quantities of drugs used per standard facility are converted into standard quantities per 1000 treatment episodes and these are then used to estimate the drug quantities required for each facility of the type being considered.

Example: If on average ten adults per day are treated for malaria and the standard treatment for malaria in an adult is a total of 10 tablets (of 150 mg chloroquine base), you need for a three-month (90 days) period: $10 \text{ (patients)} \times 10 \text{ (tablets)} \times 90$, that is 9000 tablets of chloroquine for a three month period, or nine bottles of 1000 tablets. The district may need additional chloroquine for the treatment of children and for prophylactic use. Ensure that a suitable buffer amount is included to cover possible requirements of outbreaks and delays in supply

c) Ordering the drugs;

- i. In order to order and obtain drugs rationally standard and regularly updated drug lists should be prepared in accordance with standard treatment guidelines.
- ii. Deciding between drugs to be included in the list. Generic drugs rather than brand drugs from an essential drug list should be preferred. In the absence of generic drugs approved brands through rate contract supplies should be included. When quotations are sought it is important to keep in mind quality and not only make decision on cost factors.
- iii. The important questions to ask when working on a standard drug list are: What diseases and conditions are common in the district? What is the standard treatment for these diseases and conditions? Which drugs are available and affordable for these conditions? What is the effectiveness, convenience, toxicity and cost of these drugs?
- iv. Follow the procurement guideline such as types of tendering and placing orders and keep in mind the time required to procure them.
- v. Evaluate the technical requirement and price of drugs in an open and transparent manner

d) Proper management of a drug store.

- i. Store drugs in an orderly manner and record them in a stock ledger or use computer programs.
- ii. Drugs should be kept in a dry and cool and away from light.
- iii. Ensure that the tablets are in airtight packing tins or jars if supplied in bulk and clearly labeled with the product name, strength and date of expiry.
- iv. Strip packing and polythene packets are available today and greatly help efficient storage
- v. When storing and using drugs, remember FIFO and FEFO principles:

FIFO = First In First Out (First Use The Drug That First Went In The Cupboard)
Medications That Were Procured Earlier Should Be Utilised Before
Medications Procured Subsequently

FEFO = First Expire First Out (First Use The Drug That Will Expire First)

How to keep pulse on drug management at district level

- Have a stock control management system i.e stock books, order books, stock cards
- Follow minimum stock level by FIFO, FEFO when manual management is being followed. If the store management is computer based then an automatic warning system for replenishment of items can be generated if minimum stock levels are reached.
- Disposal of unused or date expired drugs; follow proper procedures at regular interval
- Promote ways and means to order and to prescribe generic drugs and promote rational use of medicines

Summary of drugs supply and management

- (1) Define common diseases for Health Care Package for each district or area using the following criteria :
- (2) Select the diseases using the following methods:
 - i. Study of existing records at district level and below
 - ii. Special survey reports if available
 - iii. Study of infrastructure including manpower, institution
 - iv. Study the delivery system
 - v. Pattern of local administration and community system
- (3) Estimate the drug requirements quantities required to be supplied at each level of the health care system.
- (4) Ensure uninterrupted, adequate and timely supply of essential drugs, other equipment and supplies
 - i. Strengthen procurement procedures for drug supply

- ii. Remove bottlenecks in the procurement, storage and supply of drugs
- iii. Ascertain drug needs for routine and complicated cases
- iv. Train district level officers and staff in the management of drug supply
- v. Send random samples of drugs for quality check up to approved laboratories
- vi. Regularly inspect peripheries for availability of essential medicines:

Drug audit

Ensure that a system of drug audit is developed for the district through the District Health Authority/Committee: Analyze systematically quality drugs procured, distributed and their utility at regular interval. Always promote rational use of medicines.

Regular and constant drug supplies; good drug audit and; and constant monitoring of drug related problems including quality and resistance is crucial for the success of a good public health management system.

Drugs – estimates and supplies

- (1) Define common disease for Health Care Package for each district or area using the following criteria :
 - i. Study of existing records at district level and below
 - ii. Special survey reports if available
 - iii. Study of infrastructure including manpower, institution
 - iv. Study the delivery system
 - v. Pattern of local administration and community system (select five to six common diseases)

- (2) Estimate the drug requirements based on 1 & 2 and the quantities required to be supplied at each level of the health care system.

- (3) Ensure uninterrupted, adequate and timely supply of essential drugs, other equipment and supplies
 - i. Strengthen procurement procedures for drug supply
 - ii. Remove bottlenecks in the procurement, storage and supply of drugs
 - iii. Ascertain drug needs for routine and complicated cases
 - iv. Train district level officers and staff in the management of drug supply
 - v. Send random samples of drugs for quality check up to approved laboratories
 - vi. Regularly inspect peripheries for availability of essential drugs

Managing of Equipments¹

Equipments are things, tools or machines needed for a purpose or activity. All health systems require different types of equipments which need regular maintenance, repair and replacement.

This section provides a conceptual frame work to explain

- Procedures for management of equipment
- Maintaining an inventory
- Use of checklist for maintenance of equipment

Two main types of material equipment are known

- Expendable – which are used within a short time, eg syringes, lab stain, cotton etc
- Non expendable- which last for several years and needs care and maintenance, eg microscope, BP apparatus, weighing machine, furniture etc

The four main procedures used in the management of equipment are

- **Ordering**-ie obtaining the equipment from the shop, store etc
- **Storing**- ie recording, labeling, and holding equipment in a stock or store room
- **Issuing**- ie giving out recording issue, balance of remaining stock and receiving
- **Controlling and Maintaining life**- controlling expendable equipment maintain and repairing non-extendable equipment.

A good management takes care of the equipment by

- Instructing and motivating the staff to feel responsible for the equipment
- Ordering supplies when needed
- Storing supplies safely
- Controlling the use of supplies
- Ensuring routine maintenance of damage caused by normal use related wear and tear

Managing Facilities

A District Level Public Health Manager will have a large number of institutional facilities under his / her jurisdiction. This will include

- a District Public Health centre often separate from the district hospital
- a number of smaller sub-district hospitals in countries, where the district is a larger than average geographical entity;
- a number of health centres with varying numbers of sub-centres
- and a few other specialized or focused functional units including laboratories, stores, health education centres

- and offices for the district health team.

While management modules often focus on human resource management, materials management and financial management and also management of time, the challenge of 'facility management' is not often specifically outlined and most often just taken for granted.

While the maintenance and repair work of all the institutional facilities in a district may be supervised by the public works department and its maintenance unit, the district public health manager has certain important roles to play to ensure that these institutional facilities play their role in making patient care and community support relevant, quality conscious and efficient.

▪ **Mapping of service facilities**

All these facilities should be marked for easy reference on a district map.

▪ **Regular maintenance and repairs**

They should be assessed regularly by the public works department for maintenance, and repair of the basic civil works and electricity and plumbing and sewerage connections. A schedule for maintenance and repair is on a continuous and ongoing basis together with cyclic attention to major maintenance –say once in 5-7 years should be drawn up and meticulously followed.

▪ **Public Health facility standards**

In many countries, public health standards and norms are being evolved for sub-centres, health centres, dispense areas, sub-district and district hospitals and the district manager must ensure that these standards and norms are maintained or the facilities are gradually upgraded to reach these norms.

▪ **Environmental friendly structures**

The physical structures must be made more environmental friendly. With good supervision and regular dialogue with the public works department they can be made more healthy, eg.,

- adequate water supply and sanitation facilities must be available and accessible for both staff and patient;
- the buildings should be modified to prevent rain water stagnation and vector breeding due to inadequate architectural design
- and with a little imagination and some additional investment can be geared to rain water harvesting that can be important in 'water shortage' situation.
- Energy efficiency should be kept in mind

▪ **Nutrition / Dietetics components**

The facilities depending on their size and the patient / community load they experience, should also have provision for hygienic snacks and or meals for staff and patients and whenever possible in larger institutions especially hospitals the services of a nutritionist / dietician should be available to supervise these aspects.

- **Codes of practice or healthy design / healthy procedures**

New codes of practice are being evolved to ensure that hospitals and dispensaries are baby friendly, women friendly and disability friendly and it is important for the district manager to ensure that these norms are adhered to and facilities are so designed to make them acceptable in the context of these norms.

Many of these norms are also symbols of healthy practices or health promoting environments so meeting these norms are also an integral part of health promotion and healthy advocacy. Patients and their families experience these healthy norms, facilities and designs and families and communities learn from these experiences directly and indirectly.

- **Staff Quarters**

Staff quarters and residences and sometimes hostels for junior staff or field workers should also be included in the area of facility management. These facilities should also be well maintained, constantly reviewed and provided in adequate numbers to maintain staff morale and motivation.

- **Referral system complex**

A very important management challenge especially in the context of continuum of care and the management of different levels of health problems at different levels of the district health system is the need for a well developed and coordinated referral services system. Patients and members of the community must be advised in an efficient way to seek the right type of service at the right type of level with the referrals being efficiently managed and communicated along the system.

- **Communication facilities**

This referral system also calls for a coordinated health team for regular training programmes linked to various health programmes and also for continuing education and in-service training of staff and field workers. These facilities should be constantly reviewed, maintained and upgraded to meet the challenges of the training programme in terms of numbers and accessibility and supportive facilities and also in terms of updating in terms of communication facilities – including computer and digital technology and electronic projection facilities.

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Further Reading
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