




Academy of Hospital Administration, Kolkata Chapter

Hospital Architectural Planning and Designing – Part 1

Prof (Col) Dr R N Basu
Adviser, Quality and Academics
Hospital Planning and Management

1

CONTENTS

1. Community wide planning
2. Area-wide planning
3. Selection of site
4. Principles and Planning parameters of hospital building
5. Conceptual Designing
6. Working Drawing

2

CONTENTS

7. Tender and Bidding Documents
8. Legal Formalities
9. Equipment Installation
10. Commissioning
11. Shakedown Period
12. Bottleneck – scope for future expansion

3

Area-wide Planning

4

Introduction

- The goal of health service is to improve the health status of a given population
 - The service must safeguard equity and fairness of access
 - It should be responsive to the perceived health needs of the community
- It should achieve this goal through the provision of efficient and effective health service
 - The health service needs to take into account available resources and the available means and methods of health care

5

Introduction – Area Wide Planning

- Health service planning involves:
 - The process of aligning existing health service delivery arrangement
 - This alignment should take into account the changing patterns of need
 - This is required to make best use of available and future resources

6

Types of Health Service Planning

- Three main types:
 1. Planning for a particular geographical catchment area (Area-Wide Planning)
 - The area may vary widely
 - May be as large as the entire state, or
 - May be a district or even smaller

7

Types of Health Service Planning

2. Planning for a particular population group (Community-wide planning)
 - Relates to planning for a health issue or issues
 - E.g. Health care in "adibashi area"
3. Planning for a clinical service or stream
 - Specific service e.g. cardiac, renal
 - Stream e.g. medical , surgical etc

8

Types of Health Service Planning

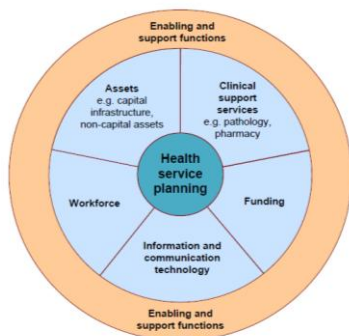
- Focus of these services could be one or more of the following key services:
 - Prevention, promotion and protection
 - Primary health care
 - Ambulatory care
 - Acute care
 - Sub-acute care
 - Mental health

9

Types of Health Service Planning

- It may be possible to implement the recommendations of planning using the existing resources
- More often, additional resources will be required
 - These resources are service enablers

10



Consideration of service enablers in health service planning

11

Area-wide Planning

- Medical care needs to be easily accessible to the individuals and thus to the community
- An easily accessible medical care can fulfill its basic tasks, i.e.,
 - Disease prevention
 - Early diagnosis
 - Restoration of health, and
 - Alleviation of disability effects

12

Area-wide Planning

- An area:
 - It is generally a politically delineated geographical area such as a district, a sub-division or may be an entire state
- In an area-wide planning, the groups and institutions within that area need to participate
- These groups and institutions should be coordinated into an organisational and functional system

13

Area-wide Planning

- This integration concept covers services considered both horizontally and vertically
- Horizontal services include:
 - Services by institutions delivering primary, secondary and tertiary care to the population of the defined area
- Vertical integration covers:
 - institutions from one level to another, e.g., national – regional – local
 - This is to discharge a definite, problem oriented function:
 - E.g. Control of communicable disease or provision of geriatric care

14

Principles of Area-wide Planning

- Area-wide planning should comprise all facilities required for a given geographical area
- It should also be coordinated with town and country planning
 - This is to ensure:
 - Rational allocation of facilities with regard to the size and character of the area and its geographical situation
 - Distance to and time needed to reach the facilities
 - Location of medical care facilities should take environmental conditions into consideration
 - This is for protection of both the facilities and the environment

15

Principles of Area-wide Planning

- Health services system comprises at least three levels of facilities:
 - Peripheral facilities delivering primary care
 - Intermediate facilities providing complex medical care in their own area
 - Central facilities rendering highly specialised services
- At a still higher level, all services need not be housed in the same building
 - The individual facilities even when under separate arrangement, are still functionally interrelated

16

Health Service Planning Process



Health service planning process

17

Factors to be considered in Area-wide Planning

- For Area-wide planning of health care, information that need to be collected to determine priorities are:
 - On available resources in the area
 - Main health problems, and
 - Geographical, socioeconomic, and administrative conditions
- The final aim should be the progressive setting up of a network of institutions
 - This is to permit comprehensive promotive, preventive, curative and rehabilitative medical care
- Three main factors to be considered:
 - Manpower available, utilisation of servicers and sociopolitical conditions

18

Factors to be considered in Area-wide Planning

- **Health Manpower** - For functions to be performed, most important factor is availability of health manpower and their types
- **Utilization** - Decision on quantity, types and sizes of facility to be provided is based on an estimation of utilization by the population
 - Therefore these factors need to be investigated
- **Expectation of population** - Expectation and Demands of population must be taken into account at the planning stage

19

Factors to be considered in Area-wide Planning

- **Financial consideration** - Financial consideration influences utilization of medical care
 - Free medical care encourages higher utilization
 - This aspect should be taken into consideration for proposed sizes and types of facility and structure of health care network
 - Fee for delivery of medical care causes reluctance to seek such care
 - May lead to demands for essential care only especially curative care

20

Factors to be considered in Area-wide Planning

- **Geographical Accessibility of Service** – attention to this element will improve utilization of medical care
 - Essential aspects are:
 - Numbers,
 - Locations, and
 - Kinds of entry point into the system, and
 - The nature of routes leading to medical care at various levels along which the patient moves, by his own initiative or through referral

21

Factors to be considered in Area-wide Planning

- **Behaviour of medical and auxiliary personnel** – this has an important role with respect to the use made by patients
 - The attitude of the personnel may either encourage or discourage utilization
- **Public Administration** – In supporting the implementation of the plan, the public administration takes an active part

22

Factors to be considered in Area-wide Planning

- **Public Opinion** – Essential to take this factor into account
 - When the community has grown accustomed to the services, any change in the network of medical care is resisted
 - An advisory committee with community representation may help in resolving the issue before the plan is evolved
- **Socio-demographic factors** – Extensive use of these factors should be made in Area-wide planning
 - Important aspects that need to be considered are:
 - Population number by age, sex
 - Migration
 - Future changes in settlements or in family structure (coexistence with children, elderly people, employment of family members etc)

23

Factors to be considered in Area-wide Planning

- **Epidemiological data** – These data may be advantageously used for Area-wide planning of health services
 - Such data may include:
 - Infectious diseases
 - Diseases of social importance, such as:
 - Malaria
 - Tuberculosis
 - Sexually Transmitted Diseases
 - Malnutrition, or
 - Accidents

24

Factors to be considered in Area-wide Planning

- **Inventory of existing resources** – the plan should respect and make optimum use of existing resources
 - Simultaneous assessment of their utilization should also be made
 - This is required for linking the old and new, and
 - For modernising and expanding the facilities

25

Scope of Area-wide Planning

- Influences that have a bearing on the scope of Area-wide planning.
 - Some of these are:
 - The wishes of the community
 - The weight of social pressure
 - The views and opinions voiced by politicians, administrators, and members of the medical profession
- Differences in methods of financing medical care system are of crucial importance
 - This will influence the decision on the numbers and types of facilities to be included in the area wide planning
 - The effect of the plan could be considerably reduced if payment is made directly by the consumers without reimbursement

26

Community-wide Planning

27

What is a community?

- **COMMUNITY**
 - A community is a social unit of any size that shares common values, or
 - That is situated in a given geographical area (e.g., village or town)
 - It is a group of people that is connected by durable relations
 - It may extend beyond immediate geographical area
 - The community shares common intent, belief, resources, preferences, needs and risks
 - These values affect the identity of the community and their degree of cohesiveness

28

Community-wide Planning

- The concept of community wide planning is more or less similar as the area-wide planning
 - Instead of a geographical area, the focus of planning is a population group
 - Also in community wide planning, the planning objective may focus on a specific clinical service or stream
 - E.g. cardiac, renal, intensive care, paediatric or neonatal services
 - It may also involve services such as disaster management

29

Community Health Planning

- **Community health planning is**
 - A deliberate effort to involve the members of a community
 - The involvement of the community is through an open public process
 - The aim is to improve the health services pertaining to :
 - Availability
 - Accessibility, and
 - Quality

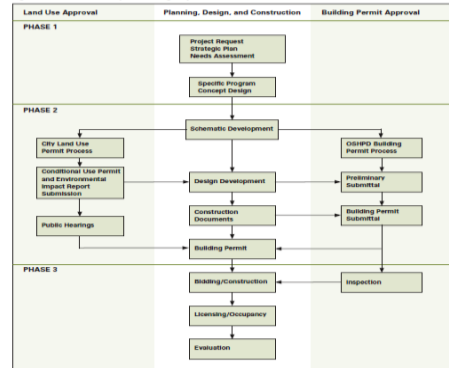
30

Community Health Planning

- The process involved are:
 - Identifying community needs
 - Assessing capacity to meet those needs
 - Allocating resources, and
 - Resolving conflicts

31

Figure 1: Elements of a Hospital Building Project



32

TO BE CONTINUED

Thank you

33