

**І РОЗДІЛ****ТЕОРІЯ І ПРАКТИКА  
СОЦІАЛЬНОГО УПРАВЛІННЯ**

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Bucharest, Romania***ESSENTIAL FACTORS TO CONSIDER WHEN PLANNING A NEW HOSPITAL**

Hospitals are dynamic organizations and they have been changing in shape, size and functions to adopt themselves to the advancements in the medical field and socio-economic changes around them. When planning a new hospital, one should not concentrate on the architectural appearance, but on the quality of medical care and on generating spaces to allow a good medical practice.

Planning represents the most important aspect of establishing a hospital. If the plan is good, all may go well but if it is not thought out carefully, the work may never be completed. In planning, construction and equipping in a hospital, the patient is the central element and all services must be provided with a view towards best patient care. The planning of a new hospital or the expansion of an existing one starts with setting goals; without them, the organization cannot have direction. Other factors that should be taken into account are: the study of the population it proposes to serve, the geographical area, quality standards to be met, equipment to be provided and manpower to be recruited (1).

Hospitals are classified in three main categories (2)

- a) Tertiary care- they offer complex services, performing equipment, they treat patients with severe and atypical diseases
- b) Secondary care- the differentiation between secondary care and tertiary care is difficult to make
- c) Primary care- basic diagnostic services and minor surgical interventions; they treat people living in minor communities; in many developed countries they have been replaced with aerial emergency medical services or with domicile care

**I. Setting goals**

The objectives, clearly established, have to include the type of services to be provided (primary secondary tertiary care), the sophistication of the building plan and equipments the investments and expected returns. To rationally determine the above, it is essential to prepare a feasibility report based on a market survey. Based on observations from the market survey, a detailed project can be prepared. The project should contain (1, 3):

- recommendations concerning medical facilities (departments and equipments)
- manpower requirements (doctors, nurses etc and also the hospital's capacity to find and keep them). In urban areas, generally, finding medical staff should not be a problem. But if the project is based in non-urban areas this could cause a problem, as the salaries should be big enough to attract and motivate the necessary manpower.
- the financial expectations for the first 10 years of the operation
- implementation schedule for completing the project
- expansion possibilities

The Location should meet the following characteristics:

- The land size should be adequate for housing the institution and also have ample provision for future expansion.
- Good infrastructural facilities (water, power, transportation and communication available)

The Market Survey will contain some vital information (1,3,4):

- The character, needs and possibilities of the community which the hospital is going to serve. In order to do this, the existing medical facilities in the area should be studied as well (quality and number of hospitals, the areas of specialization, disease pattern, costs of investigation and treatment).
- The socio-economic characteristics of the community represent an essential factor in establishing the type of hospital to be planned. For instance, if the community is a wealthy one, one can plan a luxurious hospital, with last generation diagnostic and treatment equipment. But if the market does not allow the acquisition of expensive equipment (the population has low income), it is more acceptable to use traditional equipment.
- Information concerning the occupation and age distribution. If there is a large population with senior citizens, more geriatric services should be provided. If the region is industrial, the trauma department should be strengthened.
- Prediction of changes and their consequences

A hospital is a unique institution, as it treats life and death issues so there is a growing demand for devoted doctors, diagnostic and treatment facilities and quality medical care. So, besides the aspects mentioned above, there are other factors one should take into account when planning a new hospital:

Provision for disasters

In the regions where there is a history of natural disasters, planning should consider the need to protect the safety of the patients and the potential need for continuing services following a disaster.

Functional requirements

When construction is complete, the facility should satisfy the functional requirements for adequate classification: general hospital, tertiary care, single-specialty centre etc

Orientation

An important element not only for aesthetic reasons, but also for the potential to capture or avoid natural energy.

Environmental impact analysis

The building should not negatively affect the environment or the community that the hospital serves. Because health is a service industry, patients will look for quality services, translated by the comparison made between the medical services desired by the patient and those he receives. In appreciation the quality of the services it is very important to consider the patients' subjective opinions and the circumstances in which the health services are being provided (4). For instance the physical setting of the hospital must connote a clean and cheerful environment and the medical staff must be act professionally, responsibly and be empathic (1).

II. Financial planning

Modern hospitals require intensive financial investments, so the financial planning is crucial when building a new hospital. Financial needs should be well documented and anticipated, so that no surprises arise. This is why, when calculating funds, one should consider less optimistic situations, in which the income is lower or the expenses are higher than anticipated (1).

Financial needs are calculated considering the three main periods (3):

- gestation stage (covers the period from the beginning of the projects construction to the commencement of operations)

- operational stage (the period during which the firm produces and sells goods or services)
- expansion stage (the period during which the hospital adds additional capacity in terms of beds, equipment or new units)

The project proposal should contain information concerning the investment required by each stage of the project. During the gestation stage, funds are needed for:

- the cost of land and building
- promotional costs
- equipment and machinery
- salary expenses

During the operating period current assets are monitored on constant basis and investment is needed for keeping materials in stock, for granting credit to some patients or for paying some expenses in advance. The costs estimated for the expansion period are similar to those from the gestational one, but one should keep in mind the existing business and the financial risks.

The sources of finance can be (1,3):

- promoters who provide capital funds
- internal resources (if an existing institution wants to expand, the internal resources can be a source of finance)
- the state or local authorities can give substantial grants
- banks and financial institutions. These institutions demand a fixed rate, irrespective of the profits or losses made by the hospital. In times of financial crisis, this can aggravate the financial condition of the hospital, due to interest payments.

It is necessary to require assistance from a financial consultant for proper planning, managing and control of finances.

More precisely, the content of a project (a financial and technical feasibility report), should answer the following questions (3):

- a. Where will the hospital be located? What are the characteristics of the population that needs the service?
- b. What kind of services does the hospital want to offer and what specialties will it include?
- c. Who are the competitors in the region?
- d. What kind of technology will it use?
- e. What is the size of the project in terms of beds and capital investment?
- f. Is the manpower available locally?
- g. What is the cost of land and works in the area?
- h. Should the project be commissioned in phases or at one time?
- i. What is the pattern of costs or the services offered by existing hospitals?
- j. What is the cost structure (value of materials, salaries, supplies, administration etc...)
- k. What is the gestation period?
- l. How much time does it take to complete the project? (in most cases, the costs increase because of time overruns; so timing is very important in order to keep the project within the initial budget)
- m. Who will run the hospital? (in some cases, some doctors feel that a doctor can manage a hospital just as well as a professional running an industrial enterprise; so it must be decided who will take this responsibility- a doctor or a professional manager)
- n. What incentives can the local authorities offer? (local authorities may offer the hospital various benefits -grants- it provides services to poor patients)

### III. Information technology

As we can notice, the construction of a new hospital has to take into account different factors that can determine the success or the failure of the project. One of the important factors mentioned above is the quality of medical service in terms of diagnose and treatment. We live in

a society that changes rapidly and the technology met some remarkable progress during the last years. Nowadays, besides the doctor's expertise, there is also the possibility of a computer diagnosis.

The performances of experts systems in some domains can be impressive. Nevertheless, they lack the common sense and the capacity of taking decisions in atypical cases, as compared to human minds. This means that they cannot extend beyond the scope originally contemplated by their designers and they cannot recognize their own limitations (5).

However, the acquisition of performing equipments when opening a new hospital facility is very important because of their benefits (5):

- increased productivity: they can work faster than the human brain, fewer workers are needed, thus reducing the costs
- reduced downtime
- reduced rate of errors
- the expert system can capture the knowledge from a human expert in the form of database
- they can work any time and any day
- they make knowledge accessible to people who query the systems for advice
- flexibility
- information can be stocked and used later as well

Limitations of Expert System:

- expertise can be hard to extract from humans
- it is not creative, cannot adapt to new situations
- does not learn from experience
- expensive

Technology does not mean only developing new diagnosis machineries, but also the developing of new communication tools between the therapist and the patient. Telemedicine means offering medical services through interactive audiovisual media; more precisely the use of technology to provide medical care that does not require face-to-face contact between the doctor and the patient. The communication can be made over the phone, internet or it can be as complex as using satellite technology and videoconferencing equipment to conduct a real-time consultation between medical specialists in two different countries or even different continents.

The need of domicile care, as a result of ageing or the increase of the number of patients immobilized or of individuals with disabilities, together with the technological progression led to the expansion of telemedicine. The evolution of internet communication and the explosion of the number of internet users led to the use of this communication path in providing specialized services. Also, in order to guarantee the quality of the medical information found on the internet and because of the growing number of patients searching the internet for medical solutions to their problems, now there are professional portals, specialized in different medical fields that aim to facilitate access to correct and complete medical information.

The popularity of internet among patients increases the pressure on doctors. Nowadays patients are many times very well trained compared to previous generations and many of them prefer to be treated by therapist via internet. The relationship therapist-patient can be compromised in the case where the therapist does not share the patient's interest in using this technology. For instance, a research revealed the fact that 54% of patients would change their therapist if they could communicate via e-mail with another doctor (6)

Consequently, this aspect represents a challenge as well when managing a hospital. Computerized equipment represents without a doubt, an advantage in diagnosing patients and it increases the area covered by the medical service (telemedicine is benefic to isolated

populations, individuals that due to high transport costs and poor health cannot benefit from a face-to-face consultation).

#### IV. Leadership

In order for any kind of institution to function, a very important aspect is the one related to its management. Everything begins with leadership, and the performance cycle begins here. The leader has to grow the skills, attitudes and performances of the employees and to improve work systems. High-performance hospitals are values driven, one of them being customer satisfaction. In this environment, it becomes possible for people to develop and produce at their best (7).

One of the models that can be followed when managing a hospital is Gold Standard Management. According to this model, a high-performance hospital is possible only when the following elements are in place (7):

1. Uncommon leadership (leaders exist to mold the organization to fit what customers and associates require)
2. Values-driven performance (serves the market, but isn't driven by it; reduces barriers and increases speed)
3. Work environment based on the client satisfaction, focuses on training teams and rewards
4. Quality-controlled work systems
5. Customer-focused processes: meets/exceeds customer expectations, increases quality and decreases costs, provides delightful service experience
6. Future-focused strategies: financial vitality and expansion possibilities

The quality of medical services attracts new clients, increases the volume of activity with existing patients and it represents the entire ensemble of the relationships between the patients and the hospital; this quality is conditioned by the medical staff professionalism, their attitudes and behaviors towards patients' needs (4). Mayo Clinic's brand is represented by its staff, the main idea being that staff members strengthen or weaken the brand. Consequently, the Clinic has invested more in performing the service well rather than in advertising the service more, depending on positive patient and family experience to create favorable perceptions (8).

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