BUILDING NATIONAL RURAL HEALTH DELIVERY SYSTEMS

ASPECTS OF DESIGN, CONSTRUCTION, MANAGEMENT, AND OPERATION

ASAG

COURTESY:
DIRECTORATE OF HEALTH SERVICES
GOVERNMENT OF MAHARASHTRA

AHMEDABAD STUDY ACTION GROUP, DALAL BLDG., BEHIND HOTEL CAPRI, RELIEF RD. AHMEDABAD - 1

COMMUNITY HEALTH CELL

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FOREWORD

At the time we were invited by the Directorate of Health Services, Government of Maharashtra, to explore the possibilities of making reductions in cost of rural hospitals and primary health centres, we were involved in studying the physical condition of the Lowest Income Decile (poorest 10%) children of 3600 families in 60 villages of Dholka Taluka, Ahmedabad District. This led to further studies and a proposal for "Comprehensive Assistance to Low Income Rural Mothers and Children".

It was an opportune contrast to examine from government level, the problems associated with developing national rural health improvement systems.

It appears that there is an irreconciliable difference in the role of government-provided medical services and in the role of community health services. Medico-legal cases, though few, cast their shadow, over the attitudes government doctors must take in dealing with communities and the general public.

Although definitely required, a good deal more thought is necessary regarding the modalities of Health Services expansion.

Jagdish Nazareth
April 4, 1985

CHAPTER I

Antecedents:

This note is based on:

a) Experiences gained by village level health surveys and action on the physical status of children from poor rural families in a block of 60 villages, in Dholka taluka, Ahmedabad district, Gujarat State.

b) Discussions and observations during two field trips in 8 districts of Mahatrashtra organised by the Directorate of Health Services, to dispensaries, primary health centres and rural hospitals in October 1983 and June 1984.

CHAPTER II

Perspectives:

At the time of Independence, all medical and health matters were regulated by the office of the Surgeon-General. Under him, there were Civil Hospitals at State and District levels. The function of the Civil Hospitals were related largely to the medical or curative aspect and the medico-legal aspect such as post-mortems, accidents, etc.

In the 1960s the Government of India and the State Governments began work on several preventive health measures such as: small-pox and malaria eradication, sanitation, and family planning. This led to the setting up of the Primary Health Centre network at block and tehsil-level. Because of the shortage of medically qualified personnel, many of these personnel were termed para-medical staff, because they held qualifications such as graduate degrees in Science. These para medical staff were subsequently placed under the District Health Officers (DHO), who were in turn, incorporated into the Zilla Parishad (ZP) structure.

In 1970, the Government decided to amalgamate medical and para-medical staff in Maharashtra. The Directorate of Health Services was created to deal with the task of preventive and medical services in rural areas. At the same time, other Directorates for Medical Education and Research, for Drug Control, and for Employees State Insurance Scheme medical services were hived off the Surgeon General's office. The large urban teaching were therefore placed outside the purview of the Directorate of Health Services.

During the 1970s the Government expanded the Primary Health Centre (PHC) network under the ZPs and DHOs. Each PHC catered to approximately one taluka, tehsil or block. Because of the inheritance of preventive traditions, the PHCs were expected to supervise village-level sub-centres and dispensaries, and periodically hold camps on various health matters.

The PHCs normally had 6 beds for in-door patients and an operation theatre. However, for reasons detailed subsequently, PHC doctors normally found it necessary to refer most cases of medical surgery to the district civil hospitals. The operation theatres were used for deliveries and family planning operations.

In the mid-70s, most PHCs received another building known as a Rural Family Welfare and Planning Centre. These RFWPCs also had operation theatres, which again, were used mainly for family planning operations.

In the 1980s it began to be felt that the emphasis on preventive health measures was working to the detriment of the medical aspects. For simple emergencies like appendectomies, pregnancy complications, premature babies and accident victims, the place of automatic referral was the district hospital.

Accordingly it was decided to insert a 3rd tier between the PHC and the district hospital, known as the rural hospital. The decision however is quite recent and many points of debate and discussion have emerged. This Note is an attempt to detail and synthesize the possibilities and implications arising out of this decision.

CHAPTER III

The Need For Health Services at Village Level:

It would be interesting to itemise the normal need for health and medical services a village usually requires o on an ongoing basis:

- Ante-natal maternal medical examination and treatment
- Natal services
- Referral of complicated cases in delivery (emergencies)
- Treatment of post-natal complications (peritonitis-tetanus)
- Abortions and Medical Termination of Pregnancies
- Family planning operations: vasectomies, tubectomies, laparoscopy
- Neo-natal immunisation
- Paediatric illnesses
- Appendectomies
- Tubercolosis detection and control
- Worms infestation
- Agricultural accidents (particularly in tractorised and mechanised areas)
- Road accidents
- Snake and rabid animals (dogs, monkeys) bite
- Opthalmological troubles
- Post-mortems
- Fevers
- Burn cases

The occurrence of these events can be fairly reliably predicted by statistical analysis, except for the family planning operations which are part of the purposive or intentional programme of the Directorate of Health Services.

> However, it appears that in no PHC or Rural Hospital that we visited, was there any attempt to measure the need for medical and health services at the village, block or multi-block (rural hospital) level.
>
> Nor was there any systematic attempt being made to relate the provision of DHS medical services in the area, with the provision of medical services through other local, private, voluntary or otherwise organised institutions.

Thus the whole programme for delivery of health services appears at this point in time, to be proceeding without regular analysis of:

a) the need for medical and health services in the command area
b) The existing local supply of such services

The main driving force for the rural health delivery system appear to be targets derived from State level demographic data, being apportioned from above.

A point that 3 or 4 medically and surgically qualified doctors made at various rural hospitals was that nobody at higher levels of DHS seemed to be interested in the medical aspects of out-patient and in-patient care. All they wished to know was the Family Planning record.

> This point needs to be stressed because there appears to be a very major linkage between the number of deliveries and family planning operations.

The Rural Hospital and PHC doctors at a number of places told us that women who have just delivered their babies are the most highly self-motivated cases for Family Planning operations. And just after delivery is also the most convenient time- medically speaking- to undertake tubectomies.

There is reason to believe that in most PHCs and Rural Hospitals (RH) the lack of systemic interest in the welfare of pregnant mothers, the thoughtlessness of the facilities (or lack of facilities) provided, the near total absence of sanitation maintenance, is a great hindrance to the increase in the number of deliveries at the PHC or RH in comparison to what it could be. This in turn affects Family Planning performance.

The attitudinal gap is very major, very serious, and more thought must be given in DHS to foster and support a more need-responsive and patient-responsive approach to rural health. PHCs and RHs must be encouraged to draw up their own plans for provision of health and medical services and creation of facilities based on the need in the area and their own capabilities in attracting patients.

CHAPTER IV

The Concept of The Rural Hospital:

It may not be an exaggeration to say that the currently accepted concept of the role of a Rural Hospital has been based on the work of Drs. Raj and Mabel Arole at Jamkhed taluka in Maharashtra. This Rural Hospital functions as the base of an out-reaching health-cum-medical delivery system that combines preventive and curative operations, which tries as far as possible to upgrade a village's ability to look after its health problems on its own with a minimum amount of outside supply of routine professional services, facilities and medicines.

In the DHS concept, a 30 bed rural hospital is expected to cater to the referral needs of 3 or 4 PHCs for all but the most major medical emergencies. Thus an RH is expected to cater to a population of about 300,000, at present, and after system expansion for about 150,000. In several cases, PHCs are being up-graded to Rural Hospitals. In the process some relatively serious personnel problems are in the making.

- PHC staff are Zilla Parishad employees with touring duties in the villages.
- Rural Hospitals are expected to be headed by Class I medically and surgically qualified officers reporting to the Dy. Director of the concerned DHS circle. (There are 8 circles covering Maharashtra State.)
- If the Medical Superintendent of the Rural Hospital is asked to report to the Chief Executive Officer and District Health Officer of the Zilla Parishad, conflicts of professional standing are expected to arise.

- ° Rural Hospital staff drawn from the District Hospital staff have raised issues of working hours and touring duties which are subject to different regulations there. Will they remain State Government employees? or will they become ZP employees?
- ° Rural Hospital doctors say that touring duties for doctors interfere with 24 hour availability needed to deal with emergencies that are brought to the hospital.
- ° Rural Hospital doctors complain that they do not receive non-Practising Allowance like PHC doctors.

To persons from a voluntary agency these issues appear trivial compared to the needs of rural people. However, the fact that such issues arise and are discussed for much time and with great seriousness will provide some indicators of what is likely to happen to the health delivery system after it has been in operation for a few years. Will it be able to rise above personal injuries and animosities to really serve the rural people?

For example, most Rural Hospital doctors dread the prospects of having to work under the Zilla Parishads. Several PHC doctors have mentioned that:

- their vehicles are misused by Taluka Panchayat officials.
- their controlling officers are unduly sensitive to pressures from the Chief Executive Officers of the Zilla Parishads and the elected representatives. Cases of 5-6 transfers in as many years are quite high.
- they resent being put under the administrative control of the Block Development Officers who are usually less qualified than they are.

- their powers to spend money specially on maintenance and sanitation are so limited that they are forced to liaise repeatedly with the Building and Communications department of the Zilla Parishad to little avail.

Rural Hospital doctors feel that they will come under similar pressures. It would appear from the above that:

- the organisational concept of the Rural Hospital as the 3rd tier in a health delivery system, is not clear to the doctors and staff at the field-level.

- the management structure of the Rural Hospital and its linkages with the State Government's DHS on the one hand and the local body (ZP) on the other are in need of substantial revision and greater clarity.

- the need to insulate the RH - PHC - SC system from both the State Government and the local body structure in some ways is essential, to ensure stability to key medical staff and some measure of autonomy.

The doctors view point however must be balanced by what one may consider a people's view point based on our observations at various places:

- the levels of sanitation at all places was appalling. At one PHC turned RH the sewer pipes in the patients ward were burst and choked for over 6 months. The disposal of operation theatre and labour room wastes in almost every PHC and RH is the ground behind the ward. <u>It would not be incorrect to say that sanitary conditions are such as to be criminally negligent</u>.

- the lack of privacy for patients particularly in the Type Rural Hospital design is distressing.

- there was very little evidence both among doctors and nurses of sufficient interest or skill at developmental medicine. There was very little rapport between the doctors, nurses and their patients, except in some cases, on account of the personal qualities of the people concerned.

- there was lack of evidence of any kind of pride in institution building, among the doctors and nurses. If anybody spoke it was primarily about individual target fulfillment specially about Family Planning operations.

- there was some indications of doctors indulging in private practice.

In summary it may be said that it would be dangerous to leave rural health solely in the hands of doctors. But on the whole, we were extremely impressed by the motivation displayed by all cadres of the DHS staff, considering the personal difficulties they are being put to. The situation could be summed up as: "I care; but nobody else bothers, so what can be done." This feeling where <u>everyone</u> feels himself/herself to be part of an isolated minority that is powerless to function effectively with pride and high morale, must be tackled with greater emphasis on personnel management inputs.

At upper levels of DHS there was evidence of much sincerity, motivation and unremitting effort. But this was viewed with some cynicism and lack of enthusiasm at district level.

The relationship between the concept of the functions of a rural hospital and the design of its facilities is organic. The way a hospital is conceived to operate, the way it is built, and the way it works and is maintained are all integrated. The creation of a hospital is therefore something more than just slapping a few buildings together under a variety of State level schemes and programmes.

The amount of redundancy, the incompatibility of facilities, the lack of good design and attention to detail, the lack of a high morale, culture and identity have all contributed to a relatively high cost rural health delivery system.

We feel that it is imperative that the DHS introduce a procedure to relate the facility and manpower costs at PHCs and RHs to the through-put of in-patients and out-patients. We make this statement although we have been told that the effectiveness of a PHC and a RH is to be judged inversely to its OPD and in-patient load because it is also a preventive system. So a low OPD and in-patient rate can also be interpreted, under present conditions, to indicate the efficiency of the preventive measures being undertaken rather than the sloppiness or indifference of the staff concerned.

We believe that the Maharashtra Government should seriously consider a policy of rural health delivery that encourages organisations such as medical trusts, to undertake operation and maintenance of PHCs and Rural Hospitals, with financial assistance from the Government for construction and maintenance rather than the present policy of only Government services expansion. These institutions could be regulated by DHS. Today the average cost of servicing one OPD patient in a PHC is about Rs.15.00, not considering the drugs and medicines he/she reqeives.

CHAPTER V

Facilities for a Primary Health Centre:

A PHC presently serves a population of about 100,000. After the PHC structure is expanded the population served would drop to about 30,000 in tribal areas and 60,000 in non-tribal areas.

In the typical command area of a present PHC, one could therefore expect about 4000 pregnancies and correspondingly about 3600 births per year. Our observation is that good PHCs are covering between 10-15% of the possible deliveries in their command area. Perhaps the figure should be at least 40-50%.

A normal delivery for a rural mother requires as average of 3 in-patient days. If we expect a PHC to cater to 1800 births in a year it should have between 15-20 beds for maternity cases alone, with a corresponding nursing pattern.

Of course, for a variety of reasons only a few PHCs have reached a figure of this magnitude. We suggest that the PHC pattern must be made sufficiently flexible to expand properly working PHCs for maternity cases upto 15-20 beds.

If a PHC conducts about 20-30 deliveries per month they get about 15-20 tubectomy cases. Each tubectomy patient spends an average of 7-10 days in hospital. Hence it should be necessary to provide twice the number of maternity beds for female family planning operations.

If a PHC is expected to deal with deliveries, pregnancy terminations, tubectomies and other family planning operations on its own, without referral to rural hospitals except in major emergencies, then it is necessary to

consider the following:

- there must be an incubator for premature babies.
- there must be a septic ward, specially for deliveries that go bad at village level and come at the last minute to the PHC.
- Labour room and operation theatre facilities have to be substantially re-designed as there are many defects of design and construction which make caesarian operations hazardous.

However, if the PHC is not expected to deal with such matters routinely, then the corresponding facilities at the Rural Hospital have to be enhanced. The present RH Type design has no provision for incubators/septic wards.

In all cases we have found that the capacities of the sanitary blocks and sanitation systems were grossly inadequate for the load. Wherever the Medical Officer is good, there is a rapid increase in the patient load and the doctors and nurses accomodate the patients on the floor and verandah. But sanitation facilities are not similarly elastic and they rapidly go out of order. Then patients and their relatives - where there is not enough space outside - are found to use the grounds within the PHC compound under the cover of night. The problem is compounded by the shortage of water we observed at several PHCs.

CHAPTER VI

Facilities Required in a Rural Hospital:

If an RH is expected to cater to the referral needs of 4 PHCs and if it is expected to serve as the headquarters and supply base for preventive work in PHCs, sub-centres and villages then it must have the following facilities:

A. OPD Module:

1. Out Patinet's Waiting Area with Instructional Facilities.
2. Out-Patients segregated Toilet Blocks
3. Case Paper Unit
4. Male/General Examination Room
5. Female/Ante-Natal Examination Room
6. Paediatric/Immunisation Unit
7. Social Workers/Supplemental Nutrition Unit

B. Diagnostic Services Module:

1. Bio-medical statistics records section
2. Laboratory
3. X-Ray Facility
4. Tubercolosis Detection and Control Unit
5. Malaria/Filaria detection and control unit
6. Post-Mortem Room

C. Drugs and Dispensing Module:

1. Bulk Drugs Store
2. Surgicals Store
3. Sanitation Chemicals, Drugs, Poisons Store
4. Linen Storage and Fumigation Unit
5. Break-bulk, compounding and Dispensing Room
6. Injections and Dressings Unit
7. Store Records and Dispensing Issues Record Room
8. Cold Store: Blood/Plasma/Vaccines

D. In-Patients Module:

1. Maternity Ward
2. Premature and Endangered Babies Ward
3. Female Family Planning Cases Ward
4. Septic Cases Ward (Female) (attached toilet bath)
5. Male General Ward
6. Male Infectious Diseases Ward (attached toilet bath)
7. Female Patients Toilet Block
8. Male Patients Toilet Block
9. In-Patients Relatives Male-Female Toilet Block
10. Bed-pan/kidney tray washing unit
11. Clothes washing and drying area
12. Babies Clothes/Nappies Washing/drying area
13. Relatives Sleeping Area
14. Cooking facility with Ration/Provision and Utensil Store and Firewood store (to be operated by a voluntary agency or charitable trust such as Lions Club)
15. All religion worship place
16. Infected clothes, bandages, cotton incinerator
17. Dump for used bottles, salines, drips, etc for recycling
18. Pharmacists Shop
19. Mattress Fumigation Unit

E. Operation Theatre and Labour Room Module:

1. Labour Preparation Room
2. Surgicals Sterilisation Room
3. Labour Room
4. Pre-Operative/Post Operative room
5. Operation Theatre
6. Incinerator for operation theatre, labour room and post-mortem wastes
7. Surgical cleaning facility

F. Staff Services Module:

1. Changing Room: Lockers: Toilets: Bath * Male/Female
2. Duty Room: Nurses
3. Duty Room: Medical Officers
4. Library
5. Tea-Club Room/Conference Room

G. *Health Extension Services Module:

1. Drawing-cum-setting up studio
2. Duplicating/Xeroxing room
3. Typing

H. Sanitation and Maintenance Engineering Unit:

1. Maintenance Materials Store
2. Sanitation Engineer's Office
3. Staff Room
4. Workshop for Light Repairs, Carpentry, Electrical, Mechanical

I. Administration Module:

*1. Health Services Operations Monitoring Room
2. Record Room
3. Clerical Room
4. Administrative Officers Room

* These facilities only if the rural hospital is considered a service facility for the rural hospital delivery system and not as a purely medical referral facility.

J. Vehicle Module:

1. Garage for Ambulance
2. Garage for Jeeps
3. Motorcycle/cycle Parking lot

K. Residential Module:

1. Medical Superintendent's Residence
2. Medical Officers Quarters
3. Staff Nurses Quarters
4. Class IV Employees Quarters

L. Offsites Module:

1. Water Supply
2. Sewerage
3. Electricals
4. Roads
5. Horticulture
6. Compound Wall

For each of the individual facilities in a given module it is possible to specify certain bases for capacity creation (e.g. in an OPD based on queuing theory) and certain linkages (e.g. variation in sewerage with intensity of OPD and IPD).

On the basis of such analysis it would be useful to specify the capacities of:

a) the initial or basic module
b) the incremental module

CHAPTER VII

Cost Analysis and Optimisation For a Rural Health Delivery System:

When we were invited by the Government of Maharashtra to visit Primary Health Centres and Rural Hospitals, our brief was to produce low-cost designs for PHCs and RHs - primarily the capital cost component.

However when we look at cost optimisation or cost minimisation a number of issues arise:

1. The overall objective might be framed as follows: "The greatest benefit to the most people at the minimum cost per patient."

2. This objective implies:
   - quantification of facilities and benefits to be given to people
   - estimation of throughput or capacity handling ability of the facility
   - appropriate design of a "line-balanced" facility without bottlenecks or unnecessary redundancy
   - suitable specification of building construction materials in relation to local availability
   - rapidity in system creation and deployment
   - maintenance and continuous incremental expansion of the system deployed

To explain these ideas, a few examples:

- a PHC or Rural Hospital must have a modular concept for its OPD. One examination room can cater to an OPD of about 1800 patients per month. For OPD of more than this, the examination rooms and related facilities such as:
    - case paper issue counters
    - injection and dressing room
    - drug dispensing counters
    - patients waiting areas
    - out-patients toilet block
    - immunisation unit
    - laboratory

  need to be correspondingly expanded in a modular fashion.

- the general location of a PHC or RH in relation to the villages of the command area, as well as the specific site location of the building in the particular village or town are of great importance in determining the size of the OPD and to some extent of the In-Patient load.

  For example one PHC was perched on top of a hill 300 feet above the village. It had a very low OPD and an even lower In-Patient, which may have resulted in a 20% capacity utilisation.

- the In-Patient facilities are a very major component of the total PHC as well as Rural Hospital buildings cost. Yet several PHCs and RHs were hardly using 50% of the In-Patient capacities (measured in bed-days). Further inquiry showed that the capacity utilisation was low because of a number of other related factors which were bottlenecks. e.g. unusable operation theatres or insufficient labour room capacity, or lack of qualified doctors, or shortage of staff nurses.

- in several locations it is not feasible to use the proposed type plan for Rural Hospitals except at a very high cost in land development.

- in most upgraded medical centres there is a major problem of redundant facilities. We found very few of the Rural Family Planning Welfare Centre operation theatres being used because the PHCs already had an operation theatre.

- on the other hand we found operation theatre facilities being put to very sparing use because of lack of other balancing facilities and personnel.

  In one rural hospital because blood storage is not provided and because there are no facilities to cater to premature babies, many patients who could have been - and should have been treated - were referred to the district hospitals or to private doctors.

- in one very distant rural hospital location, we found that all the items of furniture (e.g. desks for medical officers) had been shipped in from Bombay. Perhaps the cost of transport itself would equal the cost of furniture.

- in the matter of common building materials such as bricks we found in some cases very long leads e.g. 70 kilometres although bricks (possibly not of similar quality) were being made within 5 kilometres.

- we found that the construction times for almost all PHCs and RHs were abnormally long. Part of the reason was the very long procedure of approval, which is reproduced in the next chapter of this note.

The cost of a building may be related to:

- cost of building materials (about 65% of total cost)
- cost of labour (about 25%)
- cost of supervision and management (about 10%)

However, because of an absence of an opportunity cost to time lost, several decisions that might have resulted in a building becoming useful a few years earlier than it actually took, were not taken.

- we found some lack of integration between the building design and the equipments ordered for a rural hospital

- we found that many operation theatres were defectively designed - to the point of criminal negligence. We found two operation theatres with no exhaust fan. We found all operation theatres with no air intake facilities. Thus, as soon as the exhaust fan begins operating in a substantially closed theatre a vaccuum is created which exerts a pressure on the door causing it to open inwards. The only air inlet in many cases was the gap between the door and floor. Air that is introduced in this manner is likely to have a high germ count. In some cases we found the operation theatre next to the general entrance to the facility, instead of being protected by a pre-operation preparation room.

- we found many operation theatres did not have separate and protected water supply.

- at one rural hospital we found the water supply to the in-patient ward entering a cement concrete ground level storage reservoir which was surrounded by leaking sewerage pipes and adjacent to the toilet block.

- at all places we found broken and unrepaired sanitation facilities. Even operation theatres had unsatisfactory levels of cleanliness.

Cost optimisation has therefore to be considered as follows:

1. Effectiveness of facilities to provide the services desired in the long term.

2. Throughput of
   - outpatients
   - in-patients
   - out-reach services in the command area

3. Contingency levels to be maintained for epidemics and emergencies.

4. Improvement in morbidity and mortality rates in the command area.

It is recommended that such detailed system studies be undertaken for a few PHCs and RHs in each DHS circle in order to arrive at appropriate methodologies for assessing the levels of services to be reached and the capital and recurring costs to be incurred.

CHAPTER VIII

Recommendations For RH/PHC Management Organisation:

PHCs and Rural Hospitals must be given the freedom to develop their own identities. These identities have to be developed:

A. Before the PHC/RH is constructed: by preparation of a full-scale Feasibility Report that will

- survey the need for health and medical services in the command area
- take into account private, voluntary and medical educational health facilities in the area
- identify the key tasks of the PHC/RH for the next 5-10 years

B. While the PHC/RH is being Constructed: by

- creating a PHC/RH Construction Committee with complete supervisory powers
- providing the PHC/RH Construction Committee with a Bank Account and a Letter of Credit for cost inflations on Capital Works as to ensure that the work is not delayed on account of cash-flow problems
- separating the budgets for building materials and for construction labour in both physical as well as value terms and separately monitoring them

- subjecting procured building materials to quality control checks, through empanelled architects, civil engineers and structural engineers

- specifically naming the architects, structural engineers and civil engineers who have been responsible for construction and design on a plaque in the building

- involving a local mason, plumber and carpenter in the labour contract, with an understanding that they will also do the maintenance later on, on a rate contract basis. This would create a stake in doing a good job and doing it at a low cost.

C. <u>While the PHC/RH is in Operation</u>: by

- creating an autonomous Management Committee with local and outside members serving a term of 5 years. These members to have as far as possible suitable qualifications/experience

- empanelling private doctors and encouraging them to use under-utilised facilities such as operation theatres, X-Ray facilities, laboratories, on payment of a concessional rate. This money should be received by the Management Committee and 50% disbursed to the concerned hospital staff

- making one officer the Chief Executive of the Hospital/PHC, serving under the Management Committee, with powers to spend funds on sanitation and maintenance as required

- making one of the primary functions of the Chief Executive the responsibility for sanitary conditions

- instituting a system of Visitors in various medical, health disciplines (including sanitation) to inspect the hospital's various departments, examine the functioning and operation and report on the conditions prevailing to DHS.

- providing the Management Committee of a RH/PHC with the right to accept or reject staff proposed for permanent transfer. (Staff not being accepted on transfer should revert to a circle level pool for PHCs and State-level pool for RHs.)

- providing for incremental expansion of PHCs/RHs on a modular basis as they achieve full utilisation of out patient and in-patient throughput capacities. This expansion fund could be automatically linked to the funds collected from patients by an appropriate multiplier factor. E.g. Every Rs.1.00 collected from an in-patient above 70% capacity utilisation will entitle the PHC/RH to Rs.10.00 for capital expenditure on In-Patient facilities.

CHAPTER IX

Procedures and Recommendations for RH/PHC Design, Construction and Commissioning

Existing Procedure for Constructing a Primary Health Centre:

1. Proposals invided from Zilla Parishads for location of PHCs by DHS.

   - Resolution passed by General Body Meeting of the ZP

   - Sanction provided by the District Planning Board

2. Proposals are forwarded to the Secretary, Public Health Department by DHS. (No Preliminary Feasibility Report made at this stage by DHS.)

3. Secretary, PHD issues a Government Resolution (GR) for location of PHCs after taking Cabinet approval with concurrence of the Finance Department and Planning Department at the Mantralaya.

4. On receipt of the GR the Chief Executive Officer (CEO) in consultation with the District Health Office (DHO) fix site and location of the PHC and request District Collector for transfer of land or NA (non-agricultural) permission. The CEO of the ZP can purchase land on a resolution of the Health Committee. The State Government does not reimburse cost of land.

5. The DHO takes over land on behalf of the ZP.

6. CEO and DHO request the Executive Engineer to prepare plans and estimates.

7. The Executive Engineer requests the Deputy Executive Engineer to prepare Plans and Estimates.

8. Technical scrutiny is done by the Executive Engineer and the Plans and Estimates are sent to Government through the DHO and DHS.

9. Government (Secretary - PHD) issues a GR of Administrative Approval (AA) with the sanction of grants for Building Construction.

10. The DHS consolidates Government AAS for all PHCs and Rural Hospitals in a District and places the Grant at the disposal of the DHO.

11. The DHO in turn places the grant at the disposal of the Executive Engineer to be disbursed by the Chief Accounts and Financial officer (Thereafter the DHO has no control on the execution of construction works)

12. In case of escalation above 10% of the AA cost sanctioned the entire process has to be repeated.

13. The Executive Engineer is responsible for building, electrification, water supply, sewerage, fencing and approach roads. These are all part of the AA.

14. Agency bills for construction contracts are scrutinised against the Measurement Book maintained by the Jr. Engineer (at tehsil level) and checked by the Dy. Executive Engineer. Payment is made after the Executive Engineer forwards the Bills to the Chief Accounts and Finance Officer.

15. On completion, a certificate by the Executive Engineer is provided and the building is handed over to the DHO. (It may be observed that structural engineering and architectural supervision is done only on buildings costing more than Rs.50 lakhs.)

16. DHO may refuse to take possession but otherwise has no control on the release of the Building Completion Certificate.

17. Running-in of a new building is done out of the statutory 3% maintenance grant placed at the disposal of the Executive Engineer of the Zilla Parishad for all buildings in his care.

(There is no control on the use of the maintenance grant sanctioned for the PHC being actually used for this purpose. The Executive Engineer uses the entire grant according to his own priorities.)

Comments on this Procedure:

1. It will be apparent that no where in this procedure is a Preliminary Feasibility Project Report prepared for construction of a PHC or a RH making an integrated evaluation of site, communications, medical problems to be tackled, etc.

2. Departmental execution of PHC/RH buildings by the Executive Engineer of the District Panchayat is not desirable.

3. A possible alternative procedure could be as follows:

(a) an apex State Level Hospital Construction and

Capital Maintenance Organisation should consolidate, approve and provide plans, designs, structural engineering and estimates.

(b) at circle-level (8 circles) there should be appointed a PHC/RH Architect and Structural Engineering Firm on a long-term basis which would provide detailed supervision for construction and future expansions. They should be charged with long-term storage of construction drawings of each building.

Design proposals to originate at circle level and receive approval at State-level.

(c) at district level DHO and Executive Engineer should be part of a Hospital Building Supervision committee which will fix turnkey construction engineers and contractors for sub-centres, PHCs and RHs as per Design and Plans prepared by the Circle Architect and Structural Engineers.

(d) Departmental execution by Dy Executive Engineer at Taluka level should only be resorted to in case of failure of contractor.

(e) At RH and subordinate PHC level a committee to supervise and make payments to engineers and contractors according to progress of work. This committee to include as chairman, the Doctor in charge of the RH.

The RH/PHC Doctor-in-charge to draw up the Preliminary Feasibility Report that provides the design brief to the Circle Architects and Structural Engineers.

Suggested Procedure for Construction of RHs/PHCs:

1. Doctor in charge of RH and subordinate PHCs and SCs to draw up the Preliminary Feasibility Report for each facility providing:

   a) Projection of OPD
   b) Projection of Maternity Admissions
   c) Projection of FP cases
   d) Projection of other in-patient admissions
   e) Projection rural health care services. e.g. immunisations, tubercolosis detection and control, etc.

   A budget of Rs.20,000 for PHCs and Rs.60,000 for RHs may be made for preparation of such Reports.

2. Capacity of various Modules to be fixed by the Circle Architects/Engineers based on approved PFR estimates. Sanitary capacities to be specifically oversized.

3. Plans and Designs and Estimates prepared by Circle Architects/Engineers to be approved at State-Level by the Hospital Designs and Construction Approvals Organisation for RHs/PHCs.

4. Approved Plans and Designs to be forwarded to DHO and EE of concerned District for Supervision of Construction and fixing of Construction Engineers and Contractors.

6. 10% Cost Overruns to be sanctioned by District Construction Supervision Committee. 20% cost overruns by Circle and upto 40% cost overruns by State-level Hospital Designs and Construction approvals Organisation.

   Construction schedules need to be strictly monitored at the Circle level and expedited if necessary.

Suggested Procedure for Maintenance, Upgrading, Expansion:

1. The Maintenance Budget of a PHC should be fixed at 8% of Capital Cost. For a RH it should be 10% of Capital Cost.

2. The Maintenance Budget to be distributed as follows:

	for PHCs	for RHs
a) With Circle Office	1%	1.5%
b) With Dist. Committee	1.5%	2.0%
c) With RH/PHC Committee	3.5%	6.5%
	6.0%	10.0%

3. Certain segments of expenditure should be reserved as follows:

	To RH/PHC	To Dist.	To Circle
a) Sanitary Maintenance	100%	-	-
b) Building Repairs	60%	40%	-
c) Electricals	20%	80%	-
d) Hospital Equipment	10%	30%	70%
e) Furniture	100%	-	-
f) Horticulture	80%	10%	10%

These allocations are arbitrary and illustrative of what actually may be necessary, after proper analysis is done of maintenance needs.

4. The accumulation of Repairs and Maintenance grant allotments at the Circle level will ensure that the maintenance funds are spent on hospitals needing substantial maintenance every few years.