The present study of the rural hospital system in the five districts of West Bengal has given us a fairly comprehensive idea about the types of rural morbidity and maternity situations requiring medical care service. It has also been found that the provision of small number of beds, distributed widely in primary and subsidiary health centres has not been economical nor administratively helpful. Yet the rural hospital system has proved its undoubted utility for the rural community as revealed by the interest shown and suggestions for improvement made by the rural people themselves.

The question, therefore arises how best the authorities can reorganize or improve the system to the best advantage of the people and at the same time financially economical and administratively convenient, to adopt. It may be said that wider distribution of hospital beds need more medical and nursing staff and associated ancillary personnel which are actually in very short supply. On the other hand if the beds are concentrated in some areas it may be possible to provide the necessary laboratory and diagnostic facilities and also specialists's services by arrangement, for better diagnosis and treatment. This may ultimately give better output and quality
of service than giving incomplete and unsatisfactory services nearer home of the people.

The study has also revealed that nearly 50 per cent of the illnesses for which the rural people availed of either OPD or in-door treatment, are preventable and the patients come to the hospital generally when the disease assumes serious nature. Thus considerably reduction in demand for bed can be effected if a better out-patient service can be organised. In addition to OPD and provision of beds in primary health centre, emphasis should be laid on preventive medicines (sanitation, control of epidemics, immunisation, health education etc.). According to Bridgman (1955) "in the under developed countries one of the basic functions of the rural hospital is to conduct out-patients' clinics. Curative and preventive works regularly overlap there to such an extent that the border line between the two which is always difficult to establish, disappears completely. This naturally leads us to regard the rural hospital as a means of spreading preventive medicine and the principles of health among the agricultural population". (See also Brockington, 1956).

Keeping the above points of view in mind the following recommendations may be made :-

1. Regionalisation of Hospital :
   (a) Primary Health Centres will be the basic units. The proposed number of beds will be not less than 30 and not
exceeding 50 according to the nature of demand already created in the locality. Each primary health centre may have 3 to 5 subsidiary health centres as necessary.

(b) The subsidiary health centres can have two emergency maternity beds mainly to cater for emergency maternity cases.

(c) For every five primary health centres there will be a Secondary Health Centre Hospital of 250 beds. The Sub-Divisional Headquarter Hospital may be converted into this secondary unit if it is convenient to do so.

(d) At the district Headquarter a Class-I type of hospital with a minimum of 500 beds may be provided. The links among these four types of hospitals are shown in diagram-1. (Page 227A)

The primary health centre hospital will be the first referral hospital of the subsidiary health centres. The sub-divisional hospital (Secondary Health Centre) will be the second referral hospital and the District Hospital will serve as the tertiary referral hospital.

Three essential conditions for the success of this system are (1) available road system, (2) regular ambulance system, (3) establishment of complete co-ordination between the four tier system described above.
SCHEMATIC DIAGRAM OF
THE REGIONAL SYSTEM OF RURAL HOSPITAL

DIAGRAM - I
2. **OPD Services**

In spite of the inadequate services now available in OPD, the number of patients daily attending the OPD's of both primary and subsidiary health centres is considerable. It is, therefore, suggested that OPD services should be universally organised in all health centres not necessarily provided with any hospital bed. Also, the services should be so improved by providing adequate quantity of drugs and adjunct staff (part-time medical officer from local medical practitioners) thus averting the necessity of hospital admission. This will ultimately prove to be more economical than providing a small number of beds in every subsidiary health centres.

3. **Number of Beds**

The bed population ratio (B/P) depends on several factors namely: (a) types of prevalent diseases, (b) seriousness of illness, (c) facilities of diagnosis, (d) available medicine, (e) length of stay, (f) economic condition of the patient, (g) treatment payable or free, (h) attitude of the people.

Mott and Roman in 1948 observed in New York that the average stay of patients in the lower income group was double that of well to do patients (16.3 days and 7.8 days respectively).
There are 1042 beds provided in the sixty hospitals placed in 34 primary and 26 subsidiary health centres. From consideration of all factors it seems that a 30-bedded composite unit consisting of 15 male and 15 female beds placed in primary health centres only, would be more suitable to deal with both the maternity and general patients from the points of view of both economy and available personnel. Out of the fifteen female beds, twelve will be allotted for maternity cases and 3 for general female cases. Those along with the 2 emergency beds in each of the subsidiary health centres will cover the needs of the beds both for the maternity services and general cases. The total number of beds works out to be $34 \times 30 = 1020$. With 2 emergency beds in each of the 26 subsidiary health centres, the bed numbers is raised to 1072 as against 1042 already provided.

The principle underlined in this scheme of operation is that the primary health centres shall be treated as the last peripheral unit of the hospital system, catering for the entire area of the primary health centre.

In the circumstances stated above, the role of the subsidiary health centres will be as follows:

(i) To organise better medical care service through OPD and to send clinical samples for examination in primary health centre hospital.
(ii) To refer patients requiring admission to the primary health centre hospital. The necessary ambulance may be requisitioned from the primary health centre.

(iii) To organise maternity services by
(a) holding maternity clinics in the OPD;
(b) advocating domiciliary confinement by the trained dai;
(c) training local "dais" to practice in their respective areas;
(d) dealing with emergency cases in the emergency beds provided;
(e) referring difficult cases to the primary health centre hospital.

4. Preventive services:
Greater emphasis should be put to preventive work by regular (a) field work and improvement of sanitation, (b) health education, (c) holding immunisation clinics for children in the OPD.

5. Facilities to be provided in:
A. Subsidiary health centre -
(a) Provisions of rooms in the health centre-cum-hospital building.
1. 1 room for medical officer,
2. 1 room for clerk and office,
3. 1 room for field workers,
4. 1 store room.
5) 1 room for holding OPD,
6) 1 sitting room with male-female division and sanitary arrangement for out-patient department,
7) 1 dispensing room,
8) 1 dressing room,
9) 1 room containing two beds for emergency maternity cases,
10) 1 labour room,
11) 1 room for nurses,
12) 1 bath room,
13) 1 lavatory each for males and females.

(b) Appropriate number of residential quarters.
(c) Adequate water supply.
(d) Adequate lighting.

3. Primary health centre -

(a) Provision of rooms in the health centre-cum-hospital (see diagram-2 at page 231)

1) 1 room for the medical officer-in-charge,
2) 1 room for the other medical officers,
3) 1 room for the health centre office,
4) 1 room for family planning clinic,
5) 2 rooms for field workers,
   a) family planning, b) public health,
6) 1 store room,
7) 1 meeting room,
8) OPD should preferably be separated from the main building and contain 1 room to hold the clinic by 2 medical officers.
(i) 1 dressing-cum-operating room
(ii) 1 sitting room with male-female division and sanitary arrangement for waiting patients,
9) 1 laboratory room,
10) Hospital to be divided into two wings 1 male ward with 15 beds and 1 female ward with similar number of beds.
The wings will also contain the following rooms:
(i) 1 labour room,
(ii) 1 operation room,
(iii) 1 patient's examination-cum-dressing room,
(iv) 2 nurses' room-cum-pantry (one each on the male and female wings),
(v) 1 doctor's room,
(vi) 1 hospital record room,
(vii) 1 bath room each for male and female,
(viii) 2 privies for male and 2 for female patients,
(ix) 1 urinal for female and 1 for male,
(x) 1 room for linens and other equipments.
b) 1 kitchen - detached,
c) 1 ambulance with a garage,
d) 1 morgue,
e) 1 incinerator,
f) Appropriate number of staff quarters,
g) Adequate water supply,
h) Adequate lighting,
i) Provision of x-ray in certain centres where the demand has been already created.

3. **Staffing Pattern**:

a) For subsidiary health centre

Each subsidiary health centre will have the following staff:

1. One medical officer-in-charge,

2. 1 part-time medical officer from amongst the local practitioners to hold the out-door clinic together with the medical officer-in-charge,

3. 1 assistant nurse-cum-midwife,

4. 1 trained dai,

5. 1 health assistant,

6. 1 clerk,

7. 1 pharmacist

8. 2 to 3 general duty assistants,

9. 1 sweeper.
b) **Primary health centre**

1. 3 medical officers - one of the medical officers will be in charge and look after the hospital and administration, 1 for OPD cum preventive work, and 1 exclusively for family planning.
2. 1 part-time medical officer from local medical practitioners, to work in the OPD.
3. 1 public health nurse for field practice in MCH and school health work.
4. 6 nurses - 1 for the family planning, 1 for the OPD and 4 for the hospital.
5. 2 trained dais for domiciliary service.
6. 1 pharmacist.
7. 1 clerk-cum-store keeper.
8. 1 laboratory technician.
9. 1 social worker for family planning and other home visiting works.
10. 1 ambulance driver.
11. 1 cleaner-cum-stretcher bearer.
12. 10 G.D.A's (ward boy, cook, cook's assistant, office boy, gardener, gate keeper etc.).
13. 3 sweepers (for hospital, laboratory and OPD).
14. 1 sanitary inspector.
15. 2 health assistants.
16. 2 vaccinators.
6) **Sub-divisional and district hospitals**

At least 50-beds each in sub-divisional hospitals and 150-beds each in the district hospitals should be reserved for referral cases from primary health centre hospitals, and all special clinics and specialists services should be provided.

7. **Involvement of local private practitioners**

In only recent past, private practice mainly depended on communicable and preventable diseases; these being progressively controlled private practice is declining from year to year in this country. It may be soon necessary to give all country practitioners an access to the rural hospital and a chance of availing of out-patient consultation. "In this way a group practice office would be created where each physician would have his own consulting room and would be able to seek the advice of specialists from the towns while giving his patients the benefit of the hospital's technical equipments" (Bridgman 1951, 1952).

8. **Mobile units**

Two kinds of mobile units may be introduced namely,

(i) as an unit ancillary to subsidiary health centre OPD,

(ii) as a unit for specialist's service. The first one is to be used for distant areas difficult to cover by subsidiary health centre OPD's, provided there is communicating road. This unit will consist of one clinician from the subsidiary
health centre, one pharmacist-cum-dresser, one SMA and one driver. It may operate at the beginning 3 days a week. The other unit is meant for bringing the specialists to the primary health centres by turn or by arrangement from the sub-divisional hospitals.

9. Medical research in the rural field:

There is enough scope for carrying out some field research work, clinical-cum-epidemiological, in the primary health centre hospitals. Younger medical officer may conveniently utilise this scope for his doctorate work. In fact, a few of the staff have already made such studies.

10. Staff meeting:

A meeting room has been provided in the proposed set up of the primary health centre unit. In order to stimulate the habit of improving the clinical knowledge the medical officers may meet at intervals to discuss their own clinical problems in a meeting of the staff of the primary and subsidiary health centres. A bigger group may meet at the sub-divisional hospital or may invite the other colleagues by turn to a particular DHC hospital and a specialist from the sub-divisional hospital, to present and discuss cases and seek guidance from the specialist.
11. **Merging of the sanitary inspector's circle with the health centre unit**

It has been noted that dual service system in public health work is still operating in the rural areas side by side with the services provided by the health centre staff. It is high time that all should be brought under a unitary system under the health centre.

12. **Decentralisation of administration**

It has been observed that the administrative powers has been centralised on the CMOH, which has caused a great deal of inconvenience for the efficient running of the health centres and their hospitals. The supervising function may be decentralised and placed on the sub-divisional officers of health and the sub-treasury may be authorised to make payment of the bills sanctioned by the SDHO.

The local medical officers may also be given the permission to make local purchases up to a certain limit. The ultimate purpose should be to relegate the authority to the medical officer-in-charge of the primary health centre. It is proposed to give this authority to SDHO as the first step for decentralisation. The next step will be taken provided the first step proves successful.
13. **Recording System:**

As the recording and reporting system have not been fully standardised nor utilised, it is suggested that the system of health centre records and reports recommended by the Regional Seminar on Health Statistics held in New Delhi in October, 1967 under the auspices of the World Health Organisation, South-East-Asia, may be adopted.

14. **A Special Cell in the State Directorate of Health Services:**

In the State Health Department, a separate cell for the rural medical relief and public health should be established under a senior officer of the grade of Deputy Director of Health Services.

15. **Co-ordination:**

One of the main duties of the Deputy Director of Health Services (rural medical relief and public health) as proposed above, will be to achieve such operational relations among differentiated components of the hospital service in terms of shared objectives as will ensure their optimum functional role in the management of the hospital system in the rural areas. For instance, the cooperation and co-ordination of the P.W.D. is necessary to look after the buildings, water supply, communication, etc. (Grant, 1963).

16. **Keeping the Knowledge of the Medical Officer up to Date:**

a) A refresher course may be organised at the district head quarter to acquaint the rural medical officer with the latest developments in diagnosis and treatment.
b) Facilities for libraries and journals may be provided.

17. **Primary health centre as a training unit**:

Some primary health centre has assumed an additional responsibility of training medical students, interns and paramedical personnel.
Suggestions for the improvement of the existing health centre hospitals

1. **Approach:**

   Majority of the health centre hospitals were found unsuitable for approach due to bad road system. Since health centre is a part of community development project it is of primary importance to develop road system for all kinds of services and more so for proper transportation of patients.

2. **Buildings:**

   Attention should be given to modify the hospital buildings to give proper sanitation and protection against heat, rain and weather conditions. Since dug well system is not working satisfactorily, all latrines should be connected to regular septic tank system. The compound should be enclosed by a boundary wall for the safety of the patients as well as staff of the health centre.

3. **Lighting:**

   Efforts should be made to provide electric connection to as many health centres as possible, for improving the lighting of the hospitals.

4. **Water supply:**

   The existing tube wells should be replaced by deep tube wells and water raised to over-head tanks for piped supply. This improvement may be done gradually.
The shortage of medical personnel can be taken care by maintaining the hospitals in primary health centres only, according to the scheme suggested earlier. As to the questions of attracting medical graduates for rural service, the following suggestions may be made:

a) Rural service is to be made compulsory for 3 years for all new entrants to the health service.

b) Improvement of hospital service by providing diagnostic facilities, adequate medicine, equipments and specialists' guidance.

c) Facilities to carry out research studies.

d) Facilities for clinical meeting.

e) Sufficient compensatory allowance for rural service.

f) Although controversial, considering all points of view the doctors placed particularly in subsidiary health centres may be allowed limited private practice during specified hours and for attending night calls on concessional fee. This is advocated following the discussion with the people many of whom wanted physician's help particularly in cases when patients could not be removed to the hospitals. The idea is, whether paid or unpaid, it is the purpose of a socialistic government to give service to the people. It's denial has been strongly felt by the people living in the interior villages where no other scientific medical assistance was available.
6. **Other Facilities**:

a) **Laboratory** - Laboratory technician, microscope and other equipments necessary to carry out laboratory tests for urine, stool and blood, must be provided in all primary health centres. From the subsidiary health centres materials will be sent for necessary laboratory tests to their respective primary health centres.

b) **Ambulance** - All primary health centres should be provided with an ambulance and a garbage and the vehicle must be maintained properly.

c) **OPD** - Services in OPD can be improved by providing an additional part-time medical officer in all OPD's and laboratory and diagnostic facilities in all primary health centres, and by supplying adequate quantity of medicines (general & special). Laboratory service for the subsidiary health centres may be arranged through the primary health centres. As waiting room has not been provided for OPD patients, this may be done as soon as possible.

d) **Improvement of the service** -

(i) From the study of the various conditions for which the rural people sought admissions in the various hospitals it is evident that greater emphasis should be laid on maternity and child-health (M.C.H.) services.
(ii) The public health services should be better organised under the responsibility of one medical officer.

(iii) The medical officer for family planning should be exclusively for this work and no other medical officer should be involved.

7. Improvement of recording system:

The recording as observed in the health centres is incomplete and imperfectly maintained. As suggested earlier all health centres should adopt the recording system as recommended by the Regional Seminar on Health Statistics held in New Delhi in October, 1967 under the auspices of the WHO regional office, South-East Asia.

8. Dayoff for Medical Officer:

Besides the medical officer and pharmacist all other staff of the health centre were found to get a dayoff in a week. It is desirable that the medical officer and the pharmacist should also get a dayoff like other staff.

9. Decentralisation of Administration:

The arrangement of concentrating the administrative authority to chief medical officer of health far away from the health centres, has not worked well. It is suggested that decentralisation of administration of health centres should be done for better management of the rural health care services.

The suggestions given above may not be uniformly applicable to all health centres but may be varied to suit the population served and the local conditions.