

DEFINITIONS:

1. Hospital beds. A hospital bed is one regularly maintained and staffed for the accommodation and full-time care of a succession of in-patients, and is situated in wards or areas of the hospital in which continuous medical care for in-patients is provided. The total number of such beds constitutes the normally available bed complement of the hospital. This bed complement excludes the cots for normal, healthy, newborn babies in maternity wards but includes incubators and bassinets for premature babies.

2. Admissions. Admissions refer to the number per year of acceptances by a hospital of a patient who is to receive medical care while in residence therein and who is expected to remain for one or more nights. Normal, healthy, newborn babies should not be counted as in-patient admissions, but babies requiring special care should be included among the admissions.

3. Discharges and deaths. The annual number of discharges includes the number of patients who have left the hospital (cured, improved, etc.), the number who have transferred to another health or social institution, and the number who have died.

4. Bed-days or patient-days. "Bed-day" or "patient-day" is the unit of measure denoting the service rendered to one in-patient in the hospital census between one day and the succeeding one. Sometimes the day of admission and the day of discharge are counted as one day. In other cases, a full day is counted only when admission is before mid-day or discharge is after mid-day. Thus, the data given should be the annual total of the daily census of occupied in-patient beds throughout the reporting year. Patient-days should not include data for healthy, newborn infants.

In this section, the bed complement will be designated "B"; the annual number of admissions will be "A", which can be replaced by the sum of discharges and deaths ($D + d$); and the annual number of hospitalized patient days will be "H". The daily average of beds occupied (N) will be $H/365$.

Indices relating to the hospital

Average length of stay (L). This index indicates the average period in hospital (in days) per patient admitted. Ideally, this figure should be calculated as follows: cumulative number of bed-days of all discharged patients (including those dying in hospital) during one year divided by the number of discharged and dead patients. This calculation takes into account the bed-days of patients in the year (or years) previous to the one under consideration, but disregards the bed-days of patients who were still in hospital at the end of the year. It may be said, therefore, that the result of this method of calculation represents the true average length of stay per patient; and it is recommended that this method be used, at least in long-stay hospitals.

However, various countries or various institutions obtain the figure for the average length of stay in hospital in different ways. The following are some of the formulas currently in use:

(a) total number of bed-days in the year divided by the number of admissions in the same year: $L = H/A$

(b) total number of bed-days in the year divided by the number of discharges and deaths in the same year: $L = H/(D + d)$

(c) total number of bed-days in the year divided by half the sum of admissions and discharges (including deaths) in the same year:

$$L = H \times \frac{1}{\frac{1}{2}(A + D + d)} = 2 \times \frac{H}{A + D + d}$$

It will be noted that these three methods result in a figure representing the average length of stay per patient per year, which is not the same as the average period of stay per patient admitted. In hospitals in which the patient's stay is usually short, the two figures are practically identical, and either may be used; in hospitals in which patients stay for relatively long periods, or in cases in which changes in the bed complement have occurred during the year, the average length of stay is more correctly calculated by the first method described above.

A new method of assessing the length of stay in hospital derives from the distribution of patients by number of days spent from the day of admission. This can be done by counting, on a survey day taken at random, the number of days all the patients have spent since their admission. It is possible to obtain a graphic curve that expresses the number of patients in relation to the number of days spent between the admission day and the survey day. This curve shows a maximum that corresponds to a value that can be called "average time after admission". This value is practically identical to the average length of stay. It happens that the curve shows two maxima because the patients are composed of two groups, the acutely ill, with a short length of stay, and the long-term patients.

The great advantage of this method is that it is possible to select during a ward round with the clinician a homogenous group of patients and to disregard those who suffer from chronic disorders and those who are kept in hospital for social reasons. It is also possible to study separately one category of patient—those suffering from pleurisy, for instance—and to determine their average length of stay. To obtain a higher standard of accuracy the survey can be made at intervals.

Bed-occupancy rate (O). This figure expresses the average percentage occupancy of hospital beds. It is calculated by dividing the daily average number of beds occupied (obtained from the daily census of occupied beds) by the bed complement (nominal number of beds in the establishment) and multiplying by 100:

$$O = \frac{N}{B} \times 100 = \frac{H}{365+B} \times 100.$$

The bed-occupancy rate reflects the ratio between beds used and beds provided. Opinions differ regarding the wisdom of using this mode of presentation, and some would prefer to use as a denominator the actual number of beds used (including any additional beds) rather than the bed complement. On the other hand, it would appear preferable to use the bed complement as a denominator since a bed-occupancy rate of 100 or over would call the attention of

administrators to a disproportion between the number of beds provided and the number used. Furthermore, it sometimes happens that the need for additional beds is only seasonal in nature, in which case a month-by-month analysis would enable administrators to plan ahead for meeting this contingency. A persistently high occupancy rate all through the year would, on the other hand, call attention to a possible shortage of beds.

Occupancy rate should not be thought of solely as a measure of administrative efficiency. Although it is reasonable to expect that services ~~such~~ such as "cold" orthopaedic surgery, in which admissions can be controlled, should achieve high occupancy rates, such as 90%, there are other services, such as accident care and children's services, in which a fairly low occupancy rate is necessary, perhaps 75%, to ensure that emergency admission is always possible. Thus, the establishment of occupancy rate is an instrument of medical and social policy.

Turnover interval (T). The turnover interval expresses the average period, in days, that a bed remains empty, in other words, the average time elapsing between the discharge of one patient and the admission of the next. This figure is obtained by subtracting the actual number of hospitalization days from the potential number of hospitalization days in a year and dividing the result by the number of discharges (and deaths) in the same year:

$$T = \frac{B \times 365 - H}{D + d}$$

The turnover interval is zero when the bed-occupancy rate is 100 and becomes negative when the bed-occupancy rate is over 100. In order to be meaningful, the turnover interval should be calculated separately for the various types of hospital and, especially, for the various wards of the hospital. A very short or negative turnover interval points to a shortage of beds, whereas a long interval may indicate an excess of beds or a defective admission mechanism.

Indices relating to the population at risk

The object of calculating indices relative to the population at risk is to know to what extent the population utilizes the hospital services; therefore, it is necessary to know the number of people that this population comprises. This number can easily be found when two conditions are fulfilled: (a) the geographic area served by the hospital or group of hospitals is clearly defined and a regular census is made, as in the case of nations, or regions, or isolated areas; and (b) the hospital or group of hospitals is within reach of this population and the means of communication are fairly convenient and fast.

If these two conditions are not fulfilled, it is necessary to make a detailed statistical survey. If there is more than one hospital in the area, the analysis will show the distribution of patients among them. If part of a population cannot easily reach the hospital, the survey will give the gradient of the attraction of each hospital. The method for determining the population at risk is applied by the planning authorities; it will be discussed in the following chapter. The population at risk is designated "P"

Admission rate. The admission rate, which is also known as the hospital frequentation rate or hospital attendance rate and which is designated " F_h ", is usually expressed as the number of hospital admissions per 1000 of the population per year. Other units of population may be used, however: rate per person, rate per 100 persons etc.

In calculating admission rates, all admission, including readmissions for the same pathological condition, are counted. In the case of mental hospitals and other establishments in which the patients stay for a long time but may be allowed to leave the hospital for short or long period "on parole" or "on leave", an admission should be counted only if the patient has previously been discharged, not simply let out "on parole".

Admission rates are calculated both on the basis of total admissions to all hospitals, regardless of type, ownership, etc. (gross admission rates), and separately for the various types of hospital or hospital service (specific admission rates):

$$F_h = \frac{A}{P} \times 1000.$$

Hospitalization rate per person. This index expresses the volume of hospitalization in terms of number of hospitalization days per person per year. It is calculated by dividing the total number of hospitalization days in a year by the mean population in that year:

$$H_c = \frac{H}{P}$$

Bed occupancy ratio. The bed-occupancy ratio is the average daily number of persons hospitalized per unit of population (usually per 1000 population). It is obtained by dividing the average daily number of beds occupied (average daily census) by the mean population in the same year and multiplying by 1000. Alternatively, this ratio could be obtained by the product of the bed/population index ($I_{b/p}$, see below) and the bed-occupancy rate, divided by 100.

$$B_c = \frac{N}{P} \times 1000 = I_{b/p} \times \frac{O}{100}$$

Bed/population index. The bed/population index ($I_{b/p}$) is probably the commonest and most controversial figure used for the assessment of hospital utilization. It expresses the availability of hospital beds in terms of the number of beds per 1000 of the population. Sometimes this figure is expressed as the number of persons per bed.

The bed/ population index is obtained by dividing the bed complement by the mean population and multiplying by 1000:

$$I_{b/p} = \frac{B}{P} \times 1000.$$

Used alone, this figure cannot be considered as an index of hospital utilization, but simply as an indicator of the availability of beds, regardless of how they are utilized. On the other hand, as will be seen below, the availability of beds is perhaps the most important single factor in the determination of the hospital utilization in a country.

NIHAE (Tech Report No 24)

Quantitative Evaluation - Indices

Indices for In Patient Services (IIPS)&
Indices for out patient services (IOPS)IIPS

- a) Bed occupancy Rate
- b) Bed turn over Rate
- c) Turn over Interval
- d) Average length of stay
- e) Average daily census (of IP)

IOPS

- a) Daily average OPD attendance
- b) Average D.P attendance per patient
- c) Daily average OPD attendance per bed

Indices for qualitative Performance

1. Mortality Rates

- a) Gross = $\frac{\text{Total No. of } \supset \text{Deaths} \text{ during a particular period}}{\text{No. of discharges \& Deaths}} \times 100$
- b) Net = $\frac{\text{Total No. of deaths occurring after 48 hours or more after admission during any given period}}{\text{No. of discharges \& Deaths}} \times 100$

2. Autopsy Rate - Gross-Ratio $\frac{\text{All autopsies}}{\text{All Deaths}}$
- Net-Ratio $\frac{\text{All Autopsies}}{\text{All Deaths - Medicolegal cases}}$

Cost Indices: Certain minimum cost indices should be developed for the budgetting and control at the Institutional level. The Indices recommended are mainly the total expenditure classified under different heads such as -

~~Salaries~~ Salaries

Diets

Medicines

Instruments

Equipment

X-rays

Lab etc. to give the estimates of overall expenditure per inpatient and outpatient served. Whatever needed, the unit cost of services provided may also be worked out e.g. cost per x-ray exam, cost per lab test etc.

Medical Records Section (Must be under Statistical Division)

Staff based on bed-strength

	Number of beds			
	500	750	1000	1500
1. Med Record officer	1	1	1	1
2. Asst Medical Record officer	1	1	2	2
3. Sr Medical Record Technician	2	4	5	6
4. Jr Med Record Technician	4	6	7	10
5. Med Record Attendants	2	2	3	4
Central Admitting-cum-Enquiry and OPD Service				
1. Asst Med Record Officer	2	2	2	2
2. Sr Med Record Technician	5	5	6	6
3. Med Record Attendants	5	5	5	5

For qualifications and details see original report itself

REGIONAL PROGRAMME TO ERADICATE DISEASE X.

BRIEF: The government has decided to implement an urgent programme to eradicate disease X in your region. This is to be done by screening the population for the disease, vaccinating the uninfected and initiating treatment for the infected.

All resources are assumed to be available and the only activities you need to consider are listed in the table together with the time each one will take to perform, and additional notes. (Evidently this list is simplified for the purpose of the exercise and would be more detailed in practice. You are not required to elaborate it or to suggest changes.)

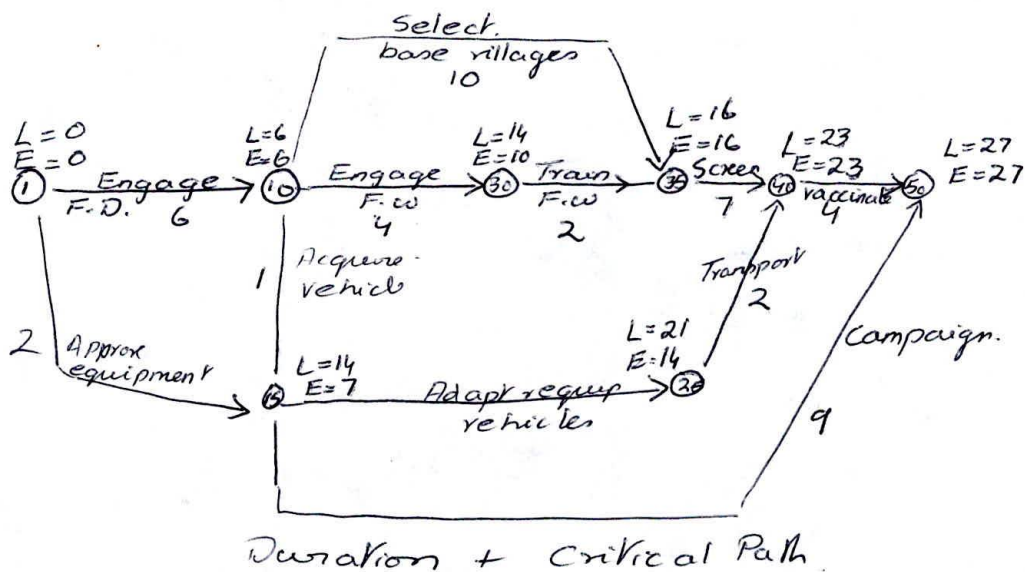
You are asked to organize the programme so as to complete it in the shortest possible time (given the duration of each activity).

Your report should:

- (a) Indicate the starting and finishing time of each activity (e.g. Start in week 9, Finish in week 11).
- (b) Advise on the minimum feasible duration of the programme (e.g. 35 weeks).
- (c) Indicate any activities where delay in completion would increase the minimum duration.

Rules = i) Numbers in O must increase progressively but leave some numbers in between

Forward Pass
 ii) E = earliest L = Latest time without delaying project
 iii) Add up time in each pathway and at common points take the larger duration



Backward Pass

- i) From L at the other end minus duration of activity
- ii) At common points take lower numbers.
- iii) No Slack $E = L$
 - Any delay on no slack activities will delay entire project.
 Critical = no slack
 sub " = little slack

Critical Path - Engage F.D. → Select → Screen → Vaccinate.

REGIONAL PROGRAMME TO ERADICATE DISEASE X .

ACTIVITY	DURATION IN WEEKS	NOTES
① Engage field director	6	This is done by the Chief Medical Officer
② Approve equipment + supplies	2	This is done by the Chief Medical Officer
③ Recruit field workers	4	This is done by the Field director
④ Train field workers	2	The field workers are medical orderlies requiring only short training in screening techniques
⑤ Select population centres on which activities will be based	10	This is done by the field director who will decide on which centres of population he wishes to base his teams, after touring the region.
⑥ Acquire vehicles	1	This is done by the Field director. Ex army vehicles have been promised by the Ministry of Defence but the exact type will not be known until the negotiations are complete.
⑦ Adapt and equip vehicles	7	The vehicles will require modification and if they are of a suitable type will be equipped as mobile dispensaries.
⑧ Screen the population	7	This will be done by the field workers working from the centres of population selected. The techniques are well established and require no sophisticated equipment. The Department of Health already has transport for these workers.
⑨ Transport the vaccination and treatment teams to the selected population centres	2	This activity cannot begin until the vehicles acquired have been modified and equipped. The teams are permanent Health Department staff in addition to the field workers screening.
⑩ Vaccinate the uninfected and start treatment of the infected.	4	This activity will be undertaken by the vaccination and treatment teams and cannot begin until the screening teams have finished.
⑪ Publicity campaign	9	This activity is important to ensure maximum public cooperation but it cannot begin until equipment supplies are approved and vehicles have been acquired.

30/5/73

HEALTH ECONOMICSCost-effective Studies

1. Different care of one disease] Health Plan
2. Different care - different diseases]
3. Choosing among health and other objectives] Cabinet decision.

- Cost: i) Paying for resources - amount.
 ↓
 Effect ii) Whether resources are used effectively,
 iii) Whether efficiency can be improved by reallocation.
 iv) Techniques used or possible to use.
 v) Scale of operation.

costs figured from caring for ?100 or ?1000 patients.

$$\frac{\text{Total Cost}}{N} = \text{Average cost.}$$

To begin with costs high then it comes down as larger no. cared for (more effective and efficient) - then at a pt costs again rise because

- i) constraint on resources
 - ii) poor utilization of constructed centre.
- economic political.

Costs and problem of externalities.

- i) cost of primary effect.
- ii) costs of secondary impacts

↓
 Depends on extent of the realm of decision-making.

Outcomes:

1. Mortality rates
2. Morbidity rates
3. Relief from pain
4. " from disability
5. Happiness??
6. Suicide rates
7. Productivity rates
8. Population growth
9. GNP growth.

31/5/73

CPA or PERT

MP 7-6

Dr. Griffiths.

Critical Path Analysis or Programme evaluation review technique

- I - The concept of CPA
- II The Arrow diagram.
- III Project duration + the critical path.
- IV Bar charts.
- V - use of float.
- VI - Summary.

Why use this technique?

1. Economic benefit.
2. Planning becomes very effective.
3. can be taught to anybody.

Defn CPA is the organised application of systematic reasoning for planning, scheduling and controlling practical situations where many separate jobs which make up the ^{whole} project can happen simultaneously, almost " or in sequence, such that it is difficult intuitively to establish the relationship between the separate jobs.

'method' not only common sense'

Technique involves 3 phases

1. Planning - Defining, listing, put in sequence.
2. Scheduling - converts plan into a feasible programme - analyses plan using optimal resources in reqd. time.
3. Controlling - monitoring and correction of deviations from schedule.

Philosophy:
i) small subsections - part of whole
ii) Focus attention on critical path.

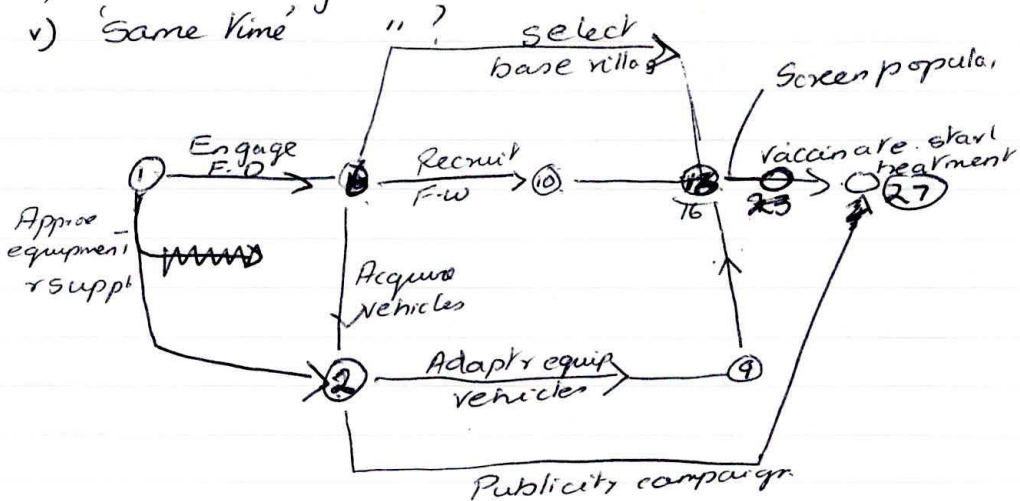
Example in Hand-out



→
4 wks

Each activity

- i) Start?
- ii) Finish?
- iii) Preceding activity?
- iv) succeeding " ?
- v) 'Same time' " ?

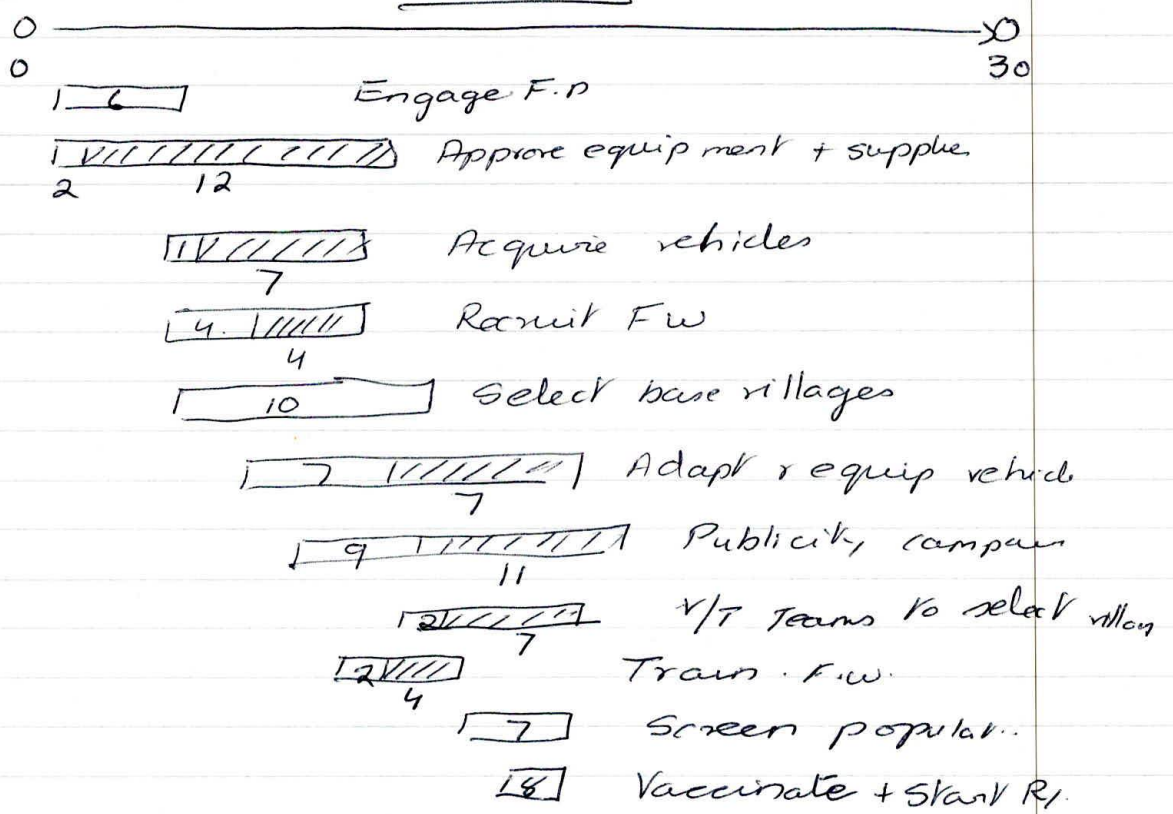


Estimate of time, cost.

$$\frac{1 \text{ optimistic} + 4 \text{ expected} + 1 \text{ pessimistic}}{6} = \text{Duration of Activity}$$

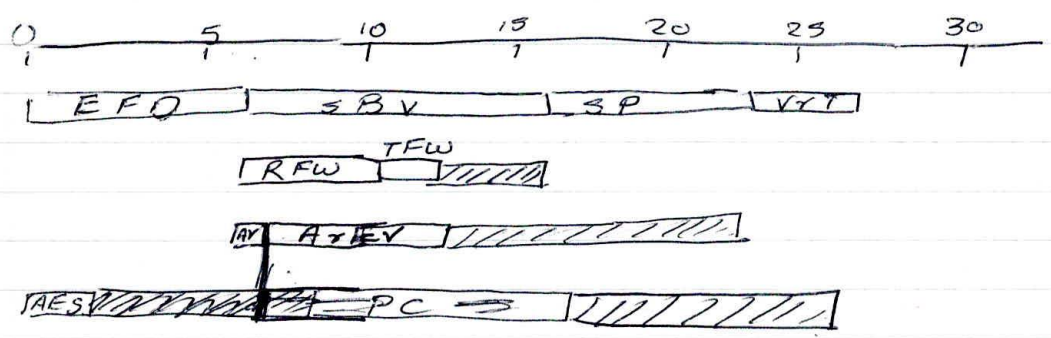
Total Float: Amount of time which each activity, can expand without lengthening the duration of the project.

BAR-CHART - GANTT CHART



Total Float = 52 (add up )

BAR & ARROW CHART - (BARROW) Sequenced Gantt chart

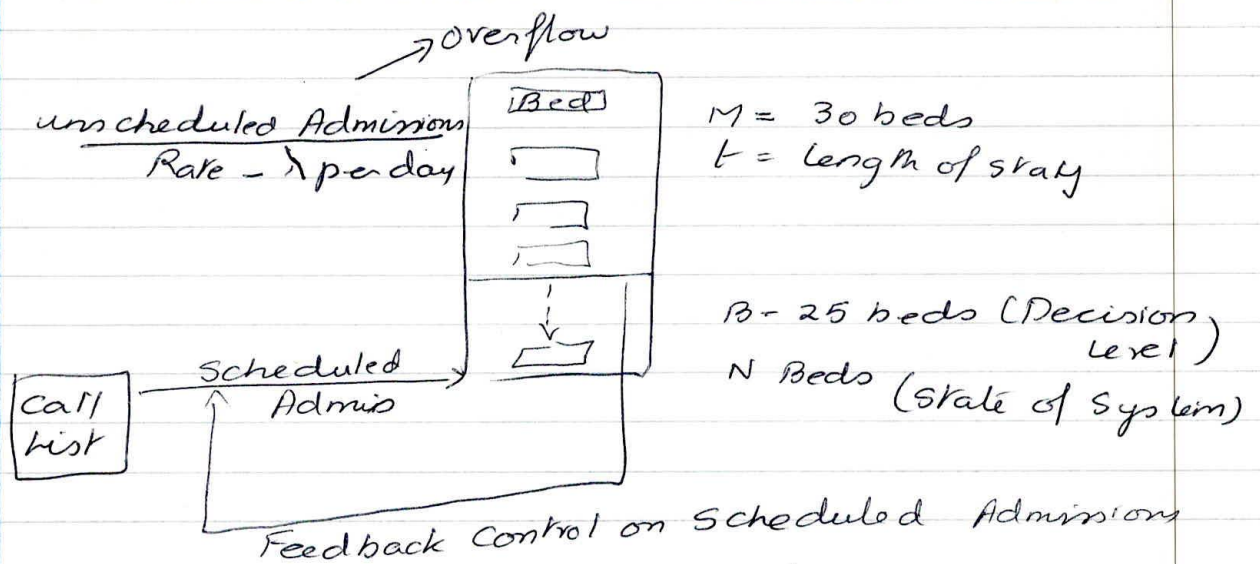


Principle of Float helps to define the limits within which you can plan programme

- time, cost etc
- juggling of resources within floats

PERT cost

Feed back control model of a hospital ward



OPERATIONS RESEARCH

Defn: It is the application of scientific methods to analyse the quantifiable aspects of any operational method so that its individual parts may be identified and systematically related to a mathematical or computer model. The model is then used to predict the reaction of the system to internal and external changes and these reactions may be tested against reality.

- To check between two different plans for the same operation.
 - Provide administrator and does not replace it.
 - Certain factors which cannot be quantified with any degree of accuracy and require managers judgement e.g. Political, social, cultural. - here cannot be put into a mathematical model but cannot also be overlooked because can be critical

Used in warfare: i) Depth changing
 ii) Bombing.
 iii) Industry.

Basic Concepts

1. Identify parts and relate it to each other on a model.
2. Work out effectiveness
3. Decision making.
4. Experimentation

① MODEL - Simplified representation of an operation containing only "quantifiable" aspects which are of primary importance to the problem being studied.
 ② Effectiveness - Does model achieve objectives for which it was set up.
 2. Are any objectives - unrelated or changing.

③ Decision making - decide on which alternative to be taken and what effect of a decision

④ Experiment
 i) Set up to obtain information - to provide data reqd for model.
 ii) Set up to test the model / sample or apparently crazy - to see if

model does predict well even making extreme assumptions

Use of Operational research in Medicine

1. Very useful in planning of Health care projects

Problems

1. Needs much information - may be difficult to obtain
2. Too complicated to be handled by purely medical people.
3. Need a team to undertake operational research.
4. Can be very expensive

Weekly cost for in-patients - (1969)

Teaching London - £73

Teaching provincial - £65

Acute over 100 Beds £50

Acute 5-100 Beds £50

Convalescent hosp - £25.

Mental Hospital £19

Non medical causes for prolonged stay (Dutch study)

1. Bottle necks

Staff / facilities

Lab.

X-ray

Theatres

Therapy

2. Communications

- Lack of consultations

- Contact

- Decision

3. Factors outside hospital

- Needless admission

- Delay in transfer.

- Delay in discharge

Functional costing - evaluate cost of resources required to perform function and then work out total cost of particular programme.

Output budgeting: systematic budgeting of programme \bar{c} specified output.

Cost-effective analysis.

- i) maximum result \bar{c} given resources
- ii) Specified object to be reached \bar{c} least cost.

Int. J. of Epid. Vol I No 3 1972

Economics of treatment of varicose veins

Costs i) cost of service

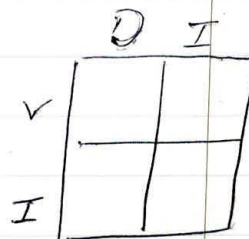
ii) overall costs no matter who has to bear it

Cost-benefit analysis

attempt to systematically ^{identifying and} evaluating the costs and the benefits of each activity to determine whether to undertake it or not. Penguin book - Layard

Costs

- i) Direct visible - cost of providing service
- ii) Indirect visible (cost of illness) ^{suffering}
- iii) Direct invisible (cost of nursing at home)
- iv) Indirect invisible ^{cost of loss of work}



- Values of
- i) women
 - ii) child's life
 - iii) old age.
 - iv) unemployment.

? whether to include only productive population.

Cost-benefit

Which costs?

on what basis of costing?

what benefits?

basis of costing benefits?

Cost effectiveness

PPBS - Planning, programming, budgeting systems

what to do - priorities	Resources and time scale is programmed	budget necessary for program	to monitor effect or efficiency of program
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Operational research → evaluate effectiveness of
a certain operation
and modify lines of flow

Operations research
|
mathematical
models

Sensitivity analysis:

- deciding which of all the factors taken into account have a critical effect on the efficiency.
- e.g. elephant through a door
- e.g. service at a petrol bank - relation to sales

certain resources or products e.g. chemical producing factory - adding to atmospheric pollution through effluents which the factory does not have to pay for.

Supply & Demand



Supplier - the more he gets for the product the more he makes

Buyer - the more he has to pay the less he will buy.

Gross Domestic Product

Gross National Product

Net national product = GNP - ^{or} Loss of capital goods (wearing out of machinery) etc.

= Incomes expenditure output.

Problems

- i) Repetitive addition of same factor
- ii) Transfer payments
- iii) Subsistence farming

- iv) Certain services now added to accounts which did not occur in previous accounts e.g. geriatric services, psychiatric services
- v) Exchange rates does not reflect buying power of currencies within the two countries

Inflation: "rising prices"

- i) 'creeping' inflation - slow increase
- ii) 'hyper' inflation - galloping
- iii) Demand-pull inflation - people asking for more than can be produced.
- iv) Cost-push inflation - wages rise more than productivity.
- v) 'bottle-neck' inflation - lag in the change between change in demand and the rise in price
eg - if people suddenly want motor-cycles instead of cars.

Resource-mix - combination of r used to produce an output.

e.g. 1 man + 1 horse + 1 cart } which is better
 2 man + 1 cart + 1 horse } technically or
 1 man + 1 boy + 1 cart. } economically
 =

- Do you need a thing done by a particular mix?
 ? Doctor to do it
 ? whether in hospital

Influenced by

- i) Expenses available
- ii) specialisation.
- iii) Scale - cost of providers
whether people can get to it.
size of catchment reqd to support service in
the first place.

Ref:

1. Bull. W.H.O - 1972, 47, 229-238
2. Int. J. of epid. Vol. 1. No 3 (1972) p 287
3. ^{The U.K. economy.} A manual of applied economics

Decision analysis - modelling of decision processes in order to clarify what exactly happens and improve upon it.

- what decision
- how often
- what for? why?
- cost of decision?
- value of improvement in decision making performance?
- how to get decision to people concerned.

Certain assumptions not always tenable

- i) If people concerned no everything, the work is better — not always so
- ii) If improved relations and interpersonal contacts - better work.

Decision making

1. Stating objective.
2. Isolate the relevant variables
3. Construct the relation between variables
4. Factors - controllable or uncontrollable
5. What will happen to uncontrollable factors
6. Change or stabilise variables - which are controllable
7. Within what limits can 'controllable's be controlled
8. Develop a strategy how to achieve this

Critical Path Analysis - systematic or logical analysis of practical situations where there are many separate jobs happening together, almost together or sequentially, and devising methods to do them effectively

- cost
- time
- resources

e.g. making cup of tea.

Costs: Important to know what is included under this blanket term.

- i) Average cost - $\frac{\text{Total cost}}{\text{No. of units}} = \text{cost of each unit}$
- ii) Marginal cost
- costs of decisions of increments of a facility or a service - adding one more service to a programme.
- iii) Fixed cost - cost which does not change within a fixed range (e.g. in Printing)
- iv) Budget cost - what cost to the service of buying a resource e.g. rents etc.
- v) Opportunity cost:
- vi) Social cost
cost people have to pay indirectly for getting

2/5/73

ECONOMICS OF HEALTH

Prof. B. Abel Smith

1. Choice of priority - Cost-benefit
2. Avoidance of waste in planning - Cost effectiveness

Developing Countries

1. Limited resources
2. Limited manpower
3. Limited taxable population. (Note: Taxes may itself create poorer conditions & ill health.)

1. Need to have health services by Govt.
2. Collective benefits from health services known.
3. People not able to decide on what health services reqd.

National Health Service →

1. Q system

Paradox: more healthy get better R, because can reach higher in the Q.

Developing countries

1. Q system
2. Urban development of health services far in advance of rural areas.
Privileged urban → Deprived Rural.
3. Development of Health Insurance → used only for development of high standard curative services for a small group who ^{are capable of} contributing to it.
- danger of making these schemes autonomous

Objective of health services:

1. Improve health or give people the security of health.

Political objectives

1. To bring about cohesion between different groups

by provision of health services irrespective of caste, creed or religion.

2. Spin-off effect - by showing the efficacy of science and change in a field.
 - Philosophy of change can sometimes become a philosophy of ejection of everything old which is commonly seen in many countries.

Economic objectives

1. Decreasing mortality
2. Improvement of school and work attendance
3. Improvement in education & production
4. Facilitation of Family planning.
5. Decreasing morbidity and rehabilitation costs.

PRIORITIES can be set only by

- i) Knowledge of effects of change due to various steps - improved housing
 - " sanitation
 - " nutrition
 - " health services
- ii) Short term and long term effects
- iii) Determine total effects by use of programmes with limited objectives

Rules - not always used by developing countries

1. Health programme must be financially feasible for total coverage of the country.

Economic Dilemma - The best way is not the only or the right way in a developing country

2. The strategy must be reproducible.

Problems

1. Priority on highly trained Medical manpower.

1. Shortage of drugs
 2. Equipment & out staff to repair.
 3. Building & out staff.
 4. Waste on foreign exchange on buying of drugs.
 5. Poor quality products dumped by developed countries
 6. Hospitals as hostels, hotels and feeding centres.
 7. Doctor migration.
 8. Poor accounting.
-

Benefits

1. Curative
2. Preventive
3. Zoonotic.

WHO booklet

Strategy of Cholera
Control.

1. Slight shortening of course.
2. & other measures to decrease cost of medical education.
2. Medical Assistants + Health Administrators.
3. Shorter course

25/4/73

HEALTH-ECONOMICS - IEconomist's study.

1. Production.
2. Distribution
3. Exchange
4. Consumption

They are concerned with:

1. Use of scarce resources to squeeze the maximum benefit out of them.
2. Deciding priorities and definite what to do and what not to do.
3. Evaluation.

Economic characteristics of a Health Centre:

- Rules of market do not apply to health but the following 8 characteristics are applicable.

1. Illness is uneven and unpredictable.

- person may or may not be able to pay for services when illness comes
- Incidence of disease in groups can be generally predicted and group service can be introduced either for the whole society (N.H.S) or for groups medicare, medicaid (U.S.A) by pooling group resources.

2. Health is a right in theory but cannot be purchased as a goods. and therefore in theory you should get what you need (social justice).

3. Though going to get health services is an individual decision the benefits of

of health accrue not only to the individual but to the society.

4. The consumer cannot find out what services he needs and evaluate what services he gets
5. Health services are a mixture of consumption and expenditure.
 - a plan for old people is not an investment.
 - a plan for young " is an investment
6. Health services is a labour intensive service - difficult to improve productivity with improving manpower, wage increases and overall costs.
7. Large parts of Health sector have not traditionally been profit making.
8. Medical services are produced jointly with research and education making assessment and planning very difficult.

What questions should providers of Health services be asking themselves

1. What priority does health have in relation to other sectors?
 - economists can help - statisticians.
 - decision more political or historical and not empirical.

- Problems:
1. No satisfactory measure of benefit - cost benefit analysis are not fool proof
 2. Contribution of a particular sector to a particular benefit is very difficult because they are multi-factorial. Health of a people can improve due to improved health services, nutrition, sanitation etc.
 3. Multiplicity of organisations that determine how much money should be spent on health

Health Expenditure

		% GNP 1968	Annual rate of increase % since 1961
Imp: Increase does not necessarily mean better services. May only mean more expenditure.	Canada	7.3	12
	USA	6.7	10
	Sweden	6.3	14
	France	4.9	13.
	UK	4.3	2.

Basic questions in a health sector:

- a) WHO - the target population?
- b) FOR WHAT condition?
- c) WHERE in what area?
- d) HOW - by what activities and organisation.
- e) WHEN - in what time period?
- f) LEVEL - standards of care?
- g) COST - in resources and opportunities foregone?
- h) WHY - what impact or effect?.

b) Example:

Priority calculations for three conditions
(Aragua Venezuela)

Condition	Magnitude M	Importance I	Vulnerability V	Relative Priority MxIxV
Prematurity	8.5	1.00	0.33	2.80
Influenza, Bronchitis, Pneumonia	4.4	0.97	0.33	1.40
CV Diseases	20.3	0.65	0.10	1.32

Magnitude: % of causes of death.

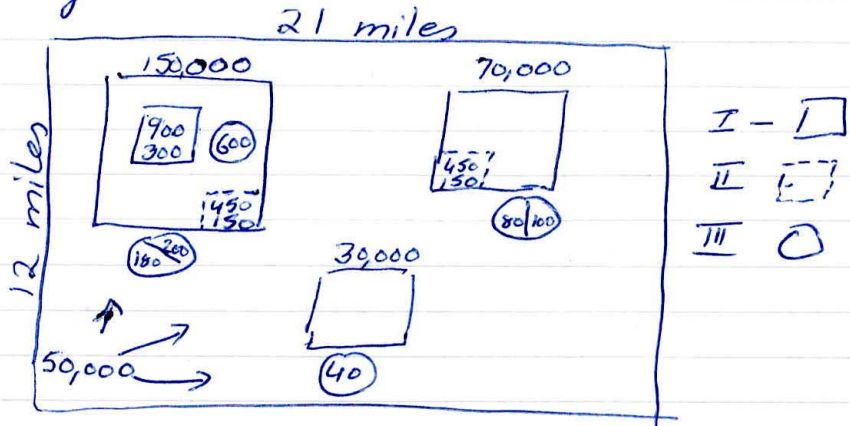
Importance - No. of deaths weighted for age at time of death.

Vulnerability - % of cure possible if tackled.

This procedure cannot always be applied but the fact remains that every time a decision is made it should be backed by some quantification.

a) Schematic Model of Alternative Hospital Strategies.

Need
900 Acute beds
300 Chronic Beds



Schematic Model of Alternative Hospital Strategies

Strategy	Ar. distance Patients home to hospital	Ar. distance travelled by visitors / Case	
		Short Term	Long Term
□	6	120	1360
◻	2	40	450
○	4	120	460

can be replaced by outpatient services

QUALITY OF CARE

1. Type of professional service — Economists
2. Type of hotel care, only interested
3. Personal care of personnel. in ①.

In medicine - quality control is conspicuous by its absence. - but need is greater because result is consignment of 'corpse' or 'disabled people'

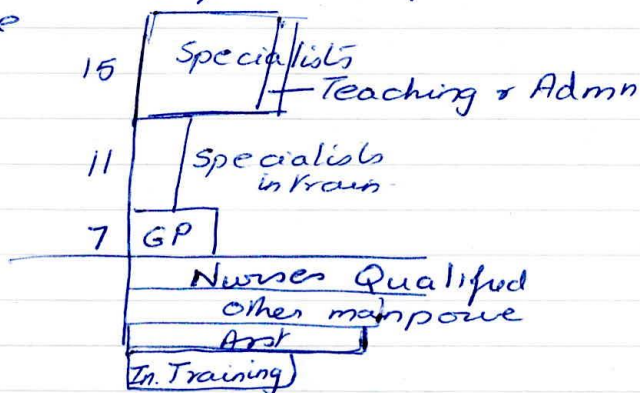
e.g. Days in Hospital for some common standard surgery.

Operation	Liverpool	Uppsala	New England
Tr A's	4	4	2
Appendectomy	10	5	6
Cholecystectomy	20	11	14.
Haemorrhoidectomy	13	6	6
D & C	6	3	3
Hysterectomy	20	19	12
Lens extraction	18	20	7

b) Distribution by percentage of patients in different categories of care.

c) Manpower rates / 10,000

- Population and years of training by type



WHY - Impact or Effect

1. Death
2. Disease
3. Disability
4. Discomfort
5. Dissatisfaction.

Impact on

1. Disease - prevalence and incidence
2. Demographic — housing, employment
3. Socio economic →
4. Cost-benefit analysis. other service

Costs

1. Direct of services — ^{people paying} payment for personnel and equipment
2. Indirect due to sickness absence, loss of production (visible)
3. Indirect invisible — cost of pain, cost of avoiding grief — cost of deteriorating social, ethical or moral conditions

6/6/73

Dr Barton

"Objectives and Methods in Public Health Planning"

Goal: The ultimate aim or purpose for the planning

Objective: A point or state of affairs which one intends to reach in attempting to achieve the goal

Target: The figure that it is proposed to achieve as a result of the action that is contemplated. - Time and number

Method: An action or operation intended to take one towards an objective

MEP

Goal: Eradication of Malaria.

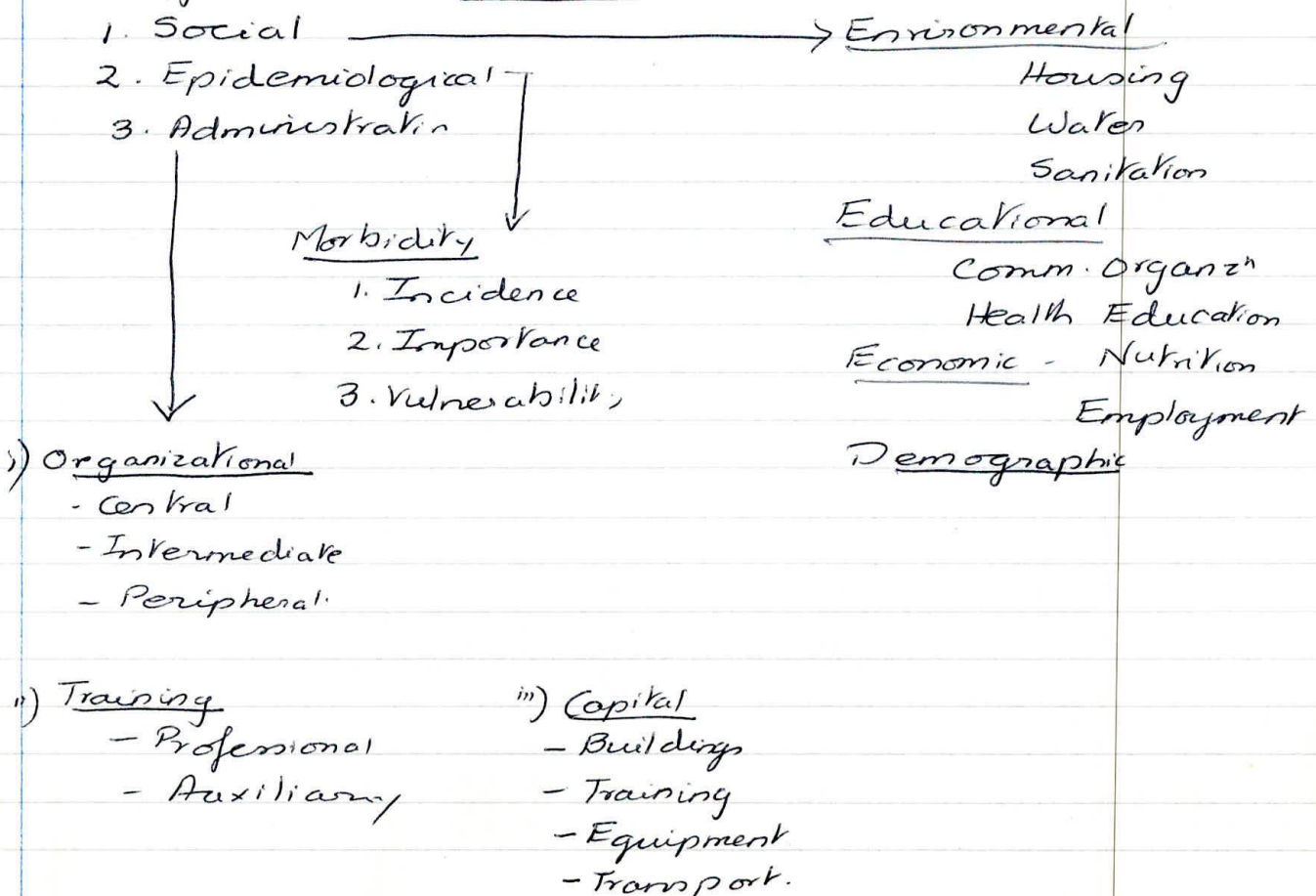
Objective: Interruption of transmission

- Targets:
- i) Annual decrease by 16% of previous year
 - ii) Inf. Parasite rate - zero

Goal - Measurement of certain Indices.

- e.g in MCH → IMR, 1-4 yr.
MMR.
Morbidity rates.
Nutritional status

Objectives in Public Health



Health Needs

A measure of what "good health" means with respect to a given population.

Health status

A measure of how well the needs are being met.

Measures of Health needs & status

(A) Diseases

1. Mortality - differential
2. Incidence Data (Morbidity).
 - Communicable
 - incommunicable
3. Prevalence Data
 - Treated prevalence
 - Un " "
 - From survey data
 - Absenteeism - schools, industries
4. Disability data

(B) Non-treatment related health needs

1. Environmental health services
 - Availability & Adequacy.
2. Personal preventive services
 - Immunization
3. Nutrition
4. Medical facilities

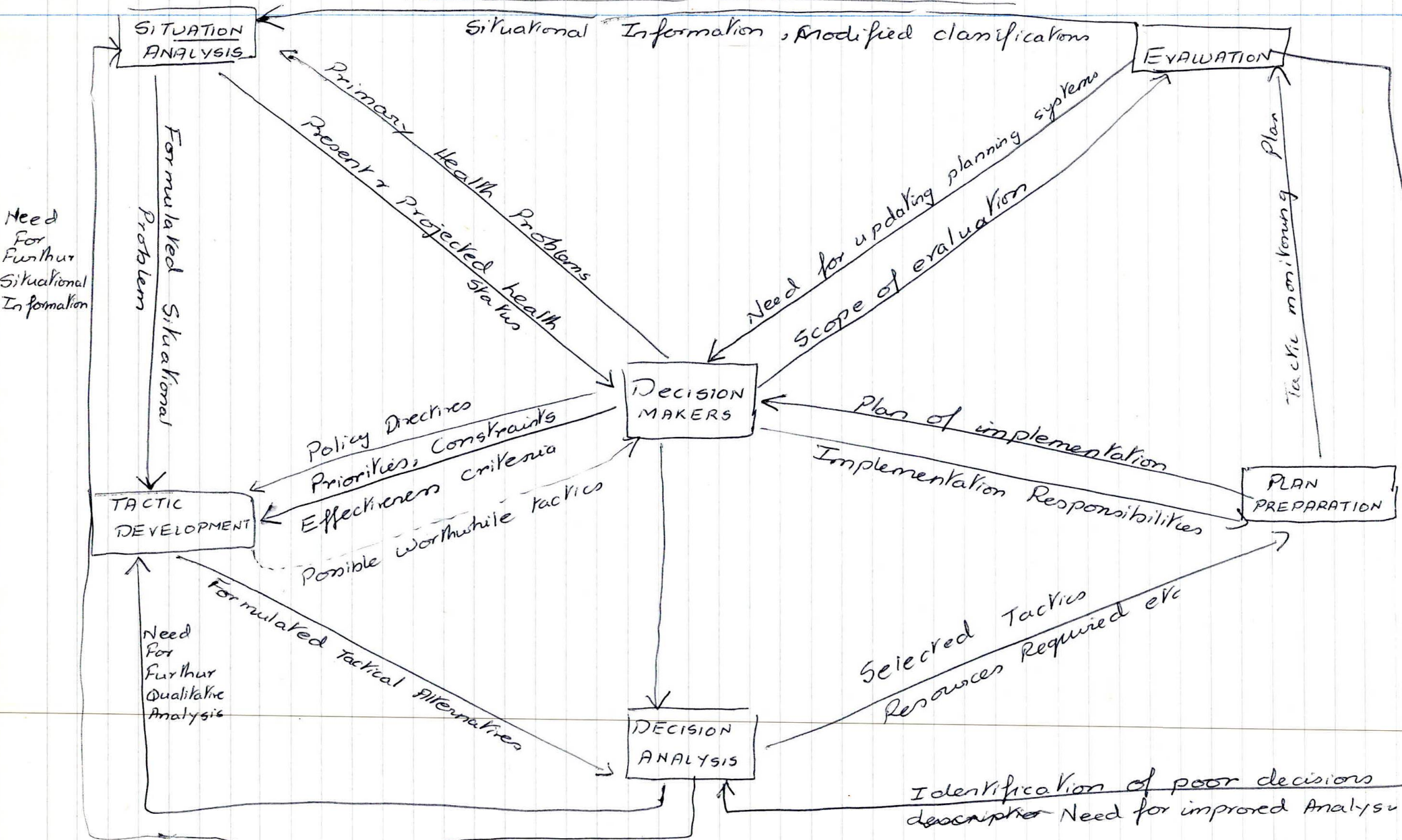
(C) Positive Health needs

- i) Indices of mal-performance
 - Delinquency
 - Addictions
 - Family Pathology
 - Psychiatric Health.

ii) Performance deficits

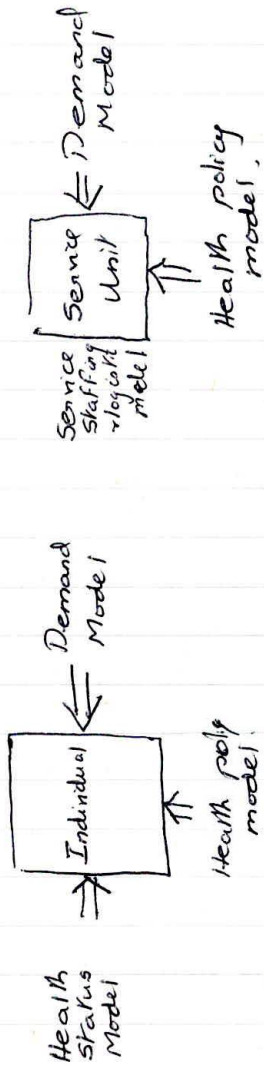
- Educational / Intellectual
- Employment
- Growth / Development differential

ELEMENTS OF SUPPORT FOR THE DECISION MAKERS



TACTIC DEVELOPMENT: MEDICAL CARE

Health Status



Plan

- Objective
- Assess situation
- Consider alternatives
- Make decision.

"There is an understandability of psychology of indispensability which is bred by professional education.

John. Browne

Where is the wisdom we have lost in knowledge.

T. S. Eliot.

-
- a) Delegation of performance to a lower one.
 - b) Substitution of jobs.
 - c) Provision of incentives
 - career structure with incentives
 - salary scales
 - opportunities for research.
 - special provisions for special duties
 - d) Provision of essential facilities and commodities.
-

5/6/73

PLANNING

MP 7.12

Dr. Barton

Factors

1. Needs after World War II ^{re}developments of health services.
 - ↓
2. Technological development and new findings of biomedical research.
 - ↓
3. Easing of tension between main power blocs.
 - less political motivation for giving of aid → reduction in aid.
4. 1st Development decade - UN - 1960's
 - All Western countries should give 1% GNP as aid.
5. Pearson Report - Partners in Development.
 - Showed that aid fell from 0.99% of GNP → 0.77%
 - Early 1960's - grants 60% → Late 60's investment - 60%
 - investment 40% Grants - 40%
6. Doubling of GNP in Developed countries
7. Population increase 2-3%
8. Manpower migration - Studies of O. Gish.
9. 2nd Development decade - UN 1970's
 - reduce population growth rates to 2.5%
 - Aid - 1% GNP
 - Economic growth rates fixed.

Factors which obstruct countries from implementing development plans

1. Political instability,
2. Economic uncertainty.
3. Political Will.
4. Administrative capacity (lack of it)

Constraints on Health Planning ??

Determinants of Health Service Policy

1. Political
2. Historical.
3. Cultural.
4. Economic.
5. Demographic
6. Epidemiological
7. Scientific (Knowledge available on those ^{med-} problems)
8. Technological (Performance capacity of staff & resources)

→ 1. Limited financial resources

Medical Care Complex

1. Personal component - People needing service
2. Professional " - People providing "
3. Social " - Private & public organizations for performing medical care functions

Elements of Good Medical Care

1. Accessibility - personal accessibility.
comprehensive services.
quantitative adequacy.
2. Continuity - personal centred care.
central source of care.
co-ordinated services.
3. Quality Professional competence.
Personal acceptability.
Qualitative adequacy.
4. Efficiency Equitable financing.
Adequate compensation.
Efficient administration.

2. Large overseas and domestic borrowing to meet developmental changes
3. Shortages in personnel and facilities.
4. Difficulty in recruiting due to competition.
5. Rate of growth of population and education leading to demands for health services
6. Need to strike balance between quality and quantity.

Area of Study of Planning (2)

2. Changing needs in terms of
 - disease patterns.
 - vulnerable groups.
 - environmental patterns
 - economic development.
 - population movement.

3. Changing demands

(3)

- population growth
- age-specific distribution
- educational development.
- population movement.

4. Health Service Structure

(4)

- what does the existing structure offer?
- what does it do.
- what staff categories and total numbers are involved
- what budget provisions exist.
- what are the training programmes achieving.

5. Methodologies reqd for health Planning.

1. Methods for assessing needs of the population
2. Techniques for synthesising effective and feasible tactics.
3. Means for projecting the outcome of alternative courses of action.
4. Procedures for learning from past efforts and results - monitoring system.

Health Planning - experiences

- ① USA - No tax on health or welfare services
- health services bought in the open-market through private enterprise
 - No coordinated, govt health planning.
 - Development of insurance services

- ② U.K - Segmented organisation
- G.P. - Local services - Hospital Adm.
 - NHS is a programme plan and not a national plan and therefore all three compete for resources and man-power.
 - Move to integrate into regional plans.

- ③ India & Ceylon - Empirical planning
- seen in British colonies
 - Project planning
 - Depts of ministries - not coordinated.
 - Attempt in India to plan comprehensively very difficult because 17 countries

- ④ U.S.S.R
- System of "normative" planning
 - setting up of 'norms' regarding health service
 - norms - scientifically establish absolute quantity, but "standard" empirically, fixed quantity,
 - not based on constraint of resources or ceiling of expenditures
 - multipronged attack - 3 priorities in each project
 - National plan
 - ?? effect of political ideology.

$$K = \frac{A \times R \times P}{D \times 100}$$

$$\text{No. of Beds} = \frac{\text{Morbidity per } 1000 \times \text{Admissions \% age} \times \text{Mean no. of days per pt per bed}}{\text{Total no. of days bed use per annum}} \times 100$$

$$\text{e.g. Maternity Beds} = \frac{42 \times 100 \times 11.6}{300 \times 100}$$

same method for

- Beds per speciality
- Man power
- Environmental sanitation

⑤ Latin America CENDES SYSTEM

- United development programme for Latin American countries.
- Systematic studying of needs & resources by development of highly technical statistical system.
- Costing of methods in health planning to prevent death
- cost effectiveness in areas considered and priorities set - which area to tackle first.

Cendes methodology

Information required for Diagnosis

1. Disease ranking best effected by combining indices
i) incidence ii) importance iii) vulnerability.
age-specific effect on prospects of prevention & existent knowledge.
Community by deaths produced by that disease.

2. Inventory of RESOURCES
capital investment and operating cost

3. Inventory of activities carried out

Resources broken down into 3 categories.

Instruments
Tasks.
(Activity) Techniques

4. Allocation of resources

i) instrument ii) tasks iii) technique

5. Unit cost. - curative & preventive.

6. Population

age groups - distribution - density - increase

7. Environment Housing. Water supply, sewage service
refuse, food, vectors, schools, industries

Basis: Unit cost to prevent deaths due to a specific disease.

4/6/73

Health Administration -Dr. BartonStages in administrative process

1. Planning. - Things to be done
2. Organising. - Formal structure to operate plan
3. Staffing. Structure
4. Budgeting. For the plan to operate
5. Operating. Directing the plan - managing the staff.
6. Coordinating. - communicating with all related agencies.
7. Reporting. - Data collection relation to the operation.
8. Evaluating. - Reaching the data and replanning.

Management and Performance of affairsFunctions

1. Medical and Health Function of the Public Administration
2. Administration of Public Health Service

Health Administrator] - Defn - in handout
Health Planner]

Public administration

Legislative power rested in Parliament
 Executive " " in PM & cabinet
 Judicial " " in courts.

Levels - Central
 Regional
 Local.

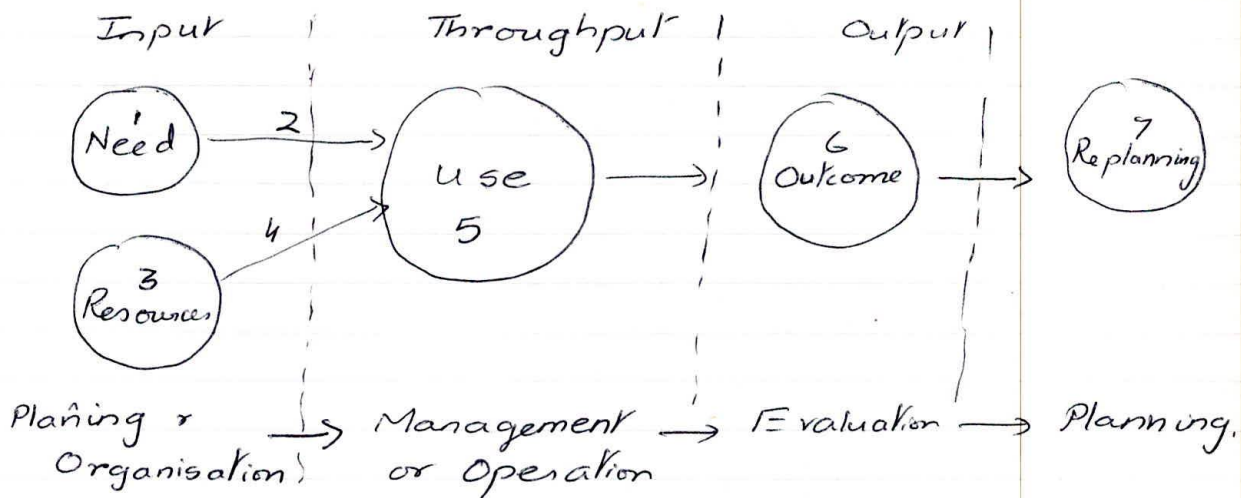
State has 3 groups {

- Citizen
- Politician
- Career official

Administrators must be very closely aware of the political trends in the country because it will affect his work at various levels.

- ̄ Citizens
1. Communication
 2. Consultation
 3. Participation.

Medical Care System Analysis



Need - Health status of community,

Translation - Need → use

Resources.

Activities of Personnel & facilities

Processes for provision of services - their use

Outcome of medical care - effectiveness and changes produced

Replanning.

Epidemiologist
Statistician:

Social Scientists

Economists

Health planners

Manpower surveys

Operations Research

Clinical & Medical management

Med. Statisticians
economists
Soc. Scientists

Health planners
Administration.

RESOURCES

- a) Facilities - Men, money, materials
- b) Administrative - organisational and legislative structures
- c) Official motivation and community participation.
- d) Health Services Structure
 - i) Curative - Types, numbers, Accessibility, & capacity
 - ii) Preventive - Horizontal and vertical programmes & type of units
- Concepts of what, where, when

Resource Assessment - Techniques involved.

- Review of existing statistics
 - Site visit (very imp - shd. not be overlooked)
 - Measurement of operation (work studies)
 - Survey techniques (interviews,
 - Policy evaluation
- Records ——— S ——— Total
Screening ——— Selective
Pilot

Categories of Health Services

- Personal Health Care
- Public Health Services.
- Teaching & Research.

Personal Health Care:

- Medical Care
 - inpatient
 - ambulatory
 - domiciliary
- Other personal Services
 - nutritional services
 - care of premature infants and handicapped
 - M.Ch & Fp
 - B.H.S.
 - Ind. h. S.
 - Immunization services
 - medical screening.
 - special clinics.

Public Health Services

- Environmental health services
- Supervisory & regulatory.
- Other services - statistics, lab services, Epid. service.

Budget Personal. H. Care - 80% In. patient care - 60%
 Public H. Services 20%

Challenge:

Administrator

1. Provide maximum return from minimum expenditure of resources
2. Search for balance between.
 - i) effectiveness and economy of funds and man-power
 - ii) mobile and statistics services
 - iii) national and local services.
 - iv) day to day medical care and research.

Planner

- i) justification
- ii) Alternative strategies.
- iii) Allocation of Resources.

Role of Medical Administrator.

1. Community Diagnosis
2. Planning & allocation of resources for clinical service
3. Organisation & management of population-based.
4. Coordination
5. Monitoring & evaluation
6. Developing the organisation of health services

17/5/73

ADMINISTRATION AND MANAGEMENT¹⁶Dr. Schram

Administrator - executes policy.

Manager - formulates and executes policy

Problems in Developing country

1. Complicated administrative machinery
 - many ministries
 - poor coordination
2. Govt salaries not very good
 - ∴ lack of interest in employees
 - double employment
 - lack of initiative
3. Shortage of skilled manpower - and competition for same with other jobs in private sector.
4. Lack of proper selection
 - poor examination
 - political decisions.
 - favouritism.
5. Administrative staff - cut off from public
 - status
 - 'bureaucracy' - officers answerable only to chief.
 - impersonal relationships.
 - rigid ranking.

In traditional society - administration through 'kinship'
6. Corruption and breakdown of rules and regulations

Ref:

- i) Management in Hospitals J. A. Spencer (Faber & Faber) 1967
- ii) Ergonomics for industry - booklets by Info Div., DSIR, State House, High Holborn, W.C.
- iii) Health care Administration - A managerial perspective - Samuel Leroy, N. Paul Lomba J. B. Lipincott Company 1972

Management Theories

1. Scientific Management:

F.W. Taylor - Time study experiments.

F. Gilbreth - Motion study experiments.

H.L. Gantt - Task + Bonus systems of payments

2. Administrative Management:

Departmentalization.

Coordination

Personnel.

Inventory Control.

Queuing problems.

Forecasting.

Budgeting. & cost accounting.

3. Human Relations Theory

Mary Follett - Motivation factors $\left\{ \begin{array}{l} \text{individual} \\ \text{group} \end{array} \right.$
- cooperative management

Elton Mayo - (Chicago, Western electric-Co.)
'Happy worker is a ^(Hawthorne) 'productive' worker'

4. Behavioural Science Theory:

Individual

Group.

behaviour of organisations

Breakdown of class barrier & improvement of efficiency

i) Canteens

ii) Adjustment of clocking in

iii) Salaries into banks - not wages on wage day.

iv) Education of workers.

5. Management Service

1939-45 - Optimal size of convoy.

Resource allocation.

Inventory control

Queuing.

Routing.

Replacement.

MODELS

Classification.

← least abstract

Most abstract →

Physical
Model

Graphic
Model

Schematic
Model

Analog
Models

Mathematical
Models

Physical Model

i) smaller or larger version of actual situation, centre, appliance etc.

Health centre model.

Small aeroplane.

Large heart model.

Graphic Model

i) organisational chart

Schematic - setting out of sequence of events in two dimensional model.

i) Flow process

ii) computer program

iii) PERT - Program Evaluation and Review Technique
optimistic time, pessimistic time.

iv) Analog computer

Maps - colours — physical.
— political.

v) Mathematical — Most abstract

a) Stochastic — chance

b) Deterministic — fixed.

Linear — straightforward TB control programme
Dynamic — Multi faceted - many stages.

SELECTION OF PERSONNEL

1. Vocational guidance. Ref: Ferguson - The Young
2. (Employers point of view) Wage earner

2. Vocational selection (employers pt of view)

i) Advertising

— adequate information — nature of the work.

— salary.

— right type of media.

ii) Application form:

Reason why?

iii) Tests.

iv) Interviews.

(a) Intelligence tests

— Binet-simon test - I.Q.

— Raven's progressive matrices

(b) Appitude tests

1. Linguistic.

2. Musical.

3. Academic.

4. Finger coordination

— spread of writing

— dotting tests

Students in PSM Class

1. Motivation for Medicine?

2. I.Q.

3. Appitude test.

5. Clerical group.

Too many cooks spoil the broth.

6. Mechanical

(c) Achievement Test

- Post
- Dictation Tests for typists
- Trade Tests

(d) Interest

- Patterns for likes and dislikes

Problems i) Understanding - language, meaning.

ii) Truthfulness.

↓ can be checked by special questions which are 'lie detectors'.

(e) Personality - get on with others

i) Woodsworth Temperament scale. 318 questions

ii) Thematic Apperception Test.

- scene - ask for explanation.

iii) Rorschach Test - ink blots.

(f) Interviews

- very subjective

- used in employment

counselling. — Listen and not advise.
grievances.

Promotion - merit rating.

Exit.

Principles

1. Preparation - clear objectives.

2. Methods - single/multiple.
- notes
- record
- standardised.
- guided?

3. Inform yourself or members about
- candidates
- job specification.

4. Privacy + comfort - For rapport

5. Respect.]
Listen
Encourage.]

6. Close definitely - inform candidate regarding
what to do next.

7. Evaluation

9/5/73

"GERIATRICS"Dr Schram

- U.K. - 55 million population - 7-10 million over retirement age (60-65↑)
- 70% living normally
 - 20-25% - Restricted activity,
 - 5-10% - House-bound and or confined to bed.
 - 1 million live alone.

In Africa-Asia - most old people live in extended families.

References:

1. Bennett F.J + Migalub-Mukibi (1967)
Soc. Sciences and Medicine 1, 97-115

Isolation in old age ← Attitude depends on society.

1. Outliving relatives.
2. Disagreement - members of family, - senility, mental illness.
3. Chronic disease. - Leprosy.
4. Movement of young people due to urbanisation
5. Social reasons - traditional taboos, religious reasons

Solutions:

1. Residential or institutional care.
2. More suitable housing. - group housing
3. Home helps, meals on wheels. - specially designed for problems.
4. Health visitors - social workers, home nursing.
5. For medical problems - Geriatric wards.
6. Provision of specific medical care
 - i) Dental care
 - ii) Eye care
7. Social securities
 - i) - pensions
 - ii) medicare.
 - iii) Subsidised food, transport, entertainment.
8. Preparation of old-people for Retirement:

9. Public health problems

- i) Disinfection services. — untidy home, unwashed laundry
 - ii) Death in isolation.
-

" AUXILIARIES-

MP 7-16

4/5/73

Prof. Fendall

" Medical Care in Developing Countries "

The Common factors

1. Limited financial resources and low per-capita incomes
- under \$500
2. Inadequate Education systems - Poor trained manpower supplies
3. Excessive wasteful fertility patterns
4. Similar epidemiological disease pattern
5. Malnutrition
6. Strongly traditional and rural societies

Manpower Factors

1. No. of manpower in relation to population
2. Distribution in relation to "
3. Rate of increase of manpower
4. Cost of training manpower
5. Emigration.
6. Education in relation to needs
7. Manpower resources available and break up
into G.P., specialists.
8. Health team concepts - right units.

	Population	G.N.P.
D.	34%	87.5
L.D.	66%	12.5%

Population per health professional

	Physician	Nurses	Midwives	Dentists
World	2500	1000	6700	5700
Latin A.	1800			
Africa	1000			
Asia	5900			

Maldistribution of Personnel Resources

- Dissatisfaction \pm employment opportunities.
 - Desire to become specialist
- Elegantly trained doctor to inelegant situation
-

Doctor

1. Excellence of the service
 2. Vanguard of the social medicine
 3. Plumber and Engineer
-

Planning

1. Not right numbers but right usage.
2. Rematching of skills and functions.
3. Cost of Medical Care.
4. Requirements and Needs
absence of disease. Relief from undernutrition
relief from pain Control of CDR vector borne
help during pregnancy. Stabilised Fertility pattern ^{dise.}
5. Differentiate between minor and major illnesses.
6. Differences
Sophisticated and unsophisticated society.
7. Division of Care i) Primary Medical Care
ii) Referral Medical care.

Objectives of Training auxiliaries

1. Extending services to areas of greater need.
2. Permit proper utilization of trained staff.
3. Correction of malnutrition.
4. Allowing professionals to plan better services.
5. More hands rather than more heads.

E.g. Delivery of Maternal and child care services

- i) % of births in hospitals.
- ii) % of births in homes.
- iii) % of prenatal consultation.

Criteria

- i) Individual region
- ii) cultural
- iii) political
- iv) economic.
- v) Total needs.

Aphorism: local boy makes good.

Objectives

1. Trained hands
2. Disciplined medication of mind.
3. Not a modified medical education.
4. Training for needs - and related to facilities available.
5. Not substandard or abridged education.

Discard terms such as sub-professional
Para-medical - alongside or equal to
Auxiliary - to help or give succour to
Ancillary - semiskilled and unskilled workers
necessary for operations of services

e.g. Dental auxiliary

Need or training - by Primary Dental care and Referral Dental care

- by age of population - under 5's and over 45.

Every Subject in Teaching

Think → Primary? or Referral? care and teach accordingly.

e.g. Malaria

Jawndice

Typhoid.

Classfn of diseases

1. Symptomatic - headache, itch, stomach pain
2. Visible - Trauma, sore throat, skin disease
3. Common diseases of children.
4. Local entity disease - local names
5. Referral diseases

Philosophical outlook - & cultural background determines medical practices

1. Western - combative.
 2. Chinese - harmonise.
 3. African - Fear & Mystical.
-

- First Aid

- Emergency Medical care.

If auxiliary does not know what to do in an emergency - the ambulance becomes a hearse and the hospital a funeral pyre.

Training

- Realism of real situation.
- Acceptable
- Feasible
- Effective.
- $\frac{2}{3}$ rds of practice $\frac{1}{3}$ rd ~~theor~~ theory.
- simulated work environment

- Textbook

- Field practice should not be site of cheap labour.
- No Demonstration centre.

Keynotes

- Simplicity.
- Realism
- Adequacy.

Auxiliary comprehensive training school.

Examination - to determine their effectiveness in the field - not be literary exercise

Failures: Poor selection.

Poor supervision

Inadequate teaching.

Inadequate evaluation of teaching methods.

- Legislation
- Association - for group status.
- Auxiliary representation on governing councils.
- Organised within National Health Service structure.

- Satisfying full time career.
 - " on going professional training.
-

30/4/73

" REHABILITATION OF HANDICAPPED (CHILDREN AND OTHERS) "

WHY

1. Saving skilled man-power - by rehabilitation of disabled skilled worker.
2. In some jobs disability of one kind or another may even be an advantage - e.g. blindness or deafness would lessen distractions.
3. Rehabilitated handicapped usually work better - greater motivation.

How

1. Vocational Training centres.
2. Sheltered workshops.
3. Quota system in Industry with exceptions like mining, fishing etc.

ILO - Recommendation 99

1. Technical Cooperation.

- Advice.
- Fellowships.
- Equipment.

2. Vocational guidance services

- to determine extent of disability and type of work the disabled person can do. (orthopaedician, neurologist, social worker, labour officer etc).

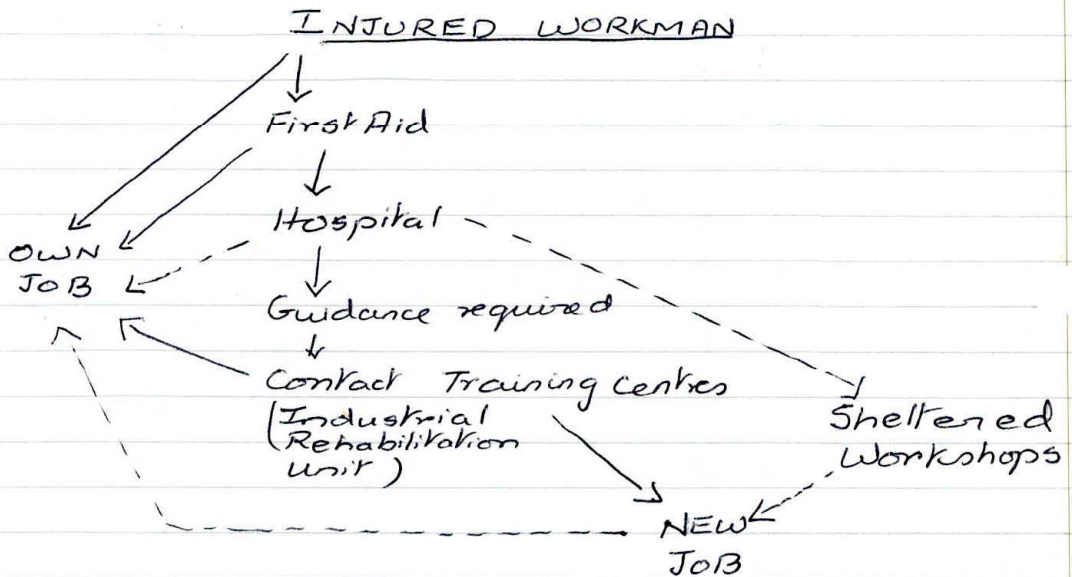
3. Vocational Training

- Training on modified machinery.

4. Selection

5. Sheltered workshop - can combine people with different disabilities.

Scheme of Rehabilitation



I.L.O

2) Publications i) International Labour Review.

3) Seminars and Courses.

4) Cooperation with other agencies

- Voluntary - private and international.
- WHO, UNICEF, UNESCO
- UK - Remploy factories

26/4/73

SCHOOL HEALTH SERVICES

- Group very easily accessible.
- Opportunity not yet fully utilised.

Important stages

1. Entry into school
2. Entry into secondary school.
3. School leavers.

Purpose ① Medical Examination of Children1. Preventive

- i) Immunization
- ii) Dental prophylaxis
- iii) Nutrition.

2. Curative.

- Simple ailments
- Dental
- Nutrition.

↓

Height./Weight
 Eyesight.
 Hearing.
 Deformities or defects
 Mental state and abilities
 Parasites, Anemia
 Chronic diseases - TB, Leprosy.

② Health Education.

- i) lectures & seminars - For parents & Teachers.
- ii) Course for Teachers.
- iii) Manual for Teachers
- iv) Health training in colleges of education.
- v) First aid - home nursing, home economics

Contents

1. Personal Hygiene
2. Nutrition.
3. Comm Dur
4. Road safety,

5. Drugs, Alcohol, Smoking. School Garden.
 6. Sex education
 to include VD and contraception.

- (3) Premises of School - siting.
 - water supply, ventilation
 - Sanitation size of class rooms
 - washing facilities, basins Building regulations
 - Latrine - 8% For girls + $10'$ per 100
 4% For Boys originals
 For boy Lighting
 Insulation.
 Heating.
 Chairs & desks.
 (16 sq')
 Play grounds.
 - cafeteria or dining room
 - school gardens
 - licensed food sellers.
 - mid-day Milk.

(5) Medical care and Treatment

- First Aid
- Referral to clinics
- School Health Record.

Film:
 Thursdays
 Children.

(6) Handicapped children

- Treatment and Rehabilitation.

1. Deaf.
2. Partially Deaf.
3. Blind.
4. Partially Blind.
5. Mental Handicaps., Educationally sub normal.
(IQ 50-70)
6. Epileptics
7. Speech Defects
8. Maladjusted. - approved schools.
9. 'Delicate' - diabetic, Asthma.
10. Physically handicapped - polio, spastic, congenital heart.

STUDENT HEALTH SERVICES

Key emphasis: Mental Health because of increased mental stress.

1. Mental Health - anxiety.
 - psychological illness
 - drugs, alcohol.
 - suicide.
2. Sex Education - VD, Contraception.
3. Communicable diseases
4. Immunizations - esp. Risk groups
5. Defects
6. Health of Teachers.
7. Health of administrative and management staff
esp. Food handlers in halls of Residence.

Ref: i) MAIR, A. (1968)

Student Health Services in Britain.

ii) NURELDIN (1964) - SHS in Sudan.

iii) B.M.J - Study on Glasgow University Students

Methodology

1. Routine Medical Exam.
2. Referral to specialists
3. Health Education.

4. Tutorial system.
 5. Seminars & symposia
 6. Preventive services
-

19/3/73

Seminar: International Aid

Dr. Fall

- Ref:
1. Bryant. Health and the Developing World.
 2. Medical Care in ^{the} Developing Countries
 3. Health manpower and medical auxiliary
 - 4.

Q -

1. What is a developing country?
2. Who should get aid?
3. How should aid be given? Money.
Materials
Training & education
4. Should strings be attached?
5. Should overseas volunteers be sent?
- 6.

Factors re: brain-drain
in India

Int. A.M.R

13000 = 10000

- B.P. Patel
- 50% not Govt -
 - No place in India, Distribution poor
 - orientation in Education.
 - Medical Pool

Amount of International Aid

1. Defence expd. 20 times aid to developing countries.
 2. 90% of aid - Bilateral and 10% Multilateral
 3. USA gives 60% of total International aid.
(through WHO etc)
- USSR gives $\frac{1}{10}$ th of US aid.

<u>Total official Aid</u>	(Millions Dollars)		
	1963%	1965%	1970%
USA	3755 (0.9)	3730 (0.7)	3050 (0.55)
France	851 (1.6)	757 (1.0)	950 (1.24)
U.K.	415 (0.6)	480 (0.5)	447 (1.00)
German	424 (0.6)	427 (0.5)	599 (0.76)
USSR	150 (300	350
Japan	140 (0.3)	244 (0.4)	456 (0.93)
Australia	96 (0.6)	121 (0.6)	202 (1.07)
Canada	98 (0.3)	120 (0.3)	346 (0.7)
Belgium	90 (0.8)	120 (0.9)	120 (1.17)

UK Aid Grants = 46%

Loans = 41%

USSR - Rate of Interest = 2.3% (among the lowest)

Bryant "Health and the Developing World"

Difficulties of Giving

1. Need For donor to realise

- i) Setting of problem.
 - ii) Culture and tradition
 - iii) Economic capability of recipient.
 - iv) Style of handling problems
 - v) Stage of development.
 - vi) Social and profession values in judging recommended solutions^{e.g.} attitude to compulsory service
 - vii) Feelings of urgency or priorities.
2. Need to determine strategic points of need.
ie field of assistance which will most likely influence the health of the nation.

Principles of Aid (From experience of donors)

1. Important to concentrate assistance in a limited number of institutions or projects.
2. Choose discrete and manageable areas of assistance.
3. Importance of continuity and reassessment.
4. Staff training for "
5. Close relationship \bar{c} local or national governments.
6. Large number of people ^{to be} covered by limited resources

Motivation

1. Philanthropic
2. Economic
3. Political
4. Religious

Gunnar Myrdal "The challenge of World Poverty"

Reasons given for Aid

??

1. Best interest of the country. (?? political or strategic)
2. Contributes to building a more stable and secure world.
3. Bribe or political pressure.
4. Economic subordination - Foreign aid not money but goods.
5. Humanitarian reason!

International Health Organizations.

1. UN - and specialised agencies.
2. Medical Missions
World Council of Churches.
Relief Agencies - Christian Medical Commission, General.
3. Red Cross, Red Crescent, Lion + Sun, Oxfam, Save the Children Fund, Bannado Homes.
4. National Aid
USAID, NORAD, DAN AID, Commonwealth.
5. Specific Disease Funds
e.g. TB, Polio, Blindness, IPPF, Cancer.
(chest disease, crippling diseases)
6. Industrial Foundations
Rockefeller, Ford.

RED CROSS

- Estd about 100 yrs ago - Durant Henn.
- For War wounded.
- Now diversified in action.
Blood Banks, First Aid Training, Refugee relief.

Industrial organisation Rockefeller - oil (ESSO) ^{std. oil}
(Tax evasion + Philanthropy) Ford. - car
Carnegie - Railway.

Ref:

1. Shaplen R (1964)
Toward the well Being of Mankind. Lond: Halkinson
2. International Health organisations.
Neville M. Goodman
Churchill Livingstone 1971 London

Rockefeller Foundation - Medical Activities

1901 - Rockefeller Inst. of Med. Research

1909 Sanitary Commission.

1913 - Rockefeller Foundation.

III

1954 (1) Hookworm in Southern States of USA
(Health Education and Latrine building
and Chemotherapy).

(2) Malaria in Brazil

- Study of Anopheles species

- Larvicidal measure

- DDT spraying.

1939 - Rockefeller Team - 2000 men to Brazil. — under Dr Soper

1940 - *A. gambiae* wiped out.

- Epidemic up the Nile Valley

(3) Typhus - After 1st world war

- Epidemic at Naples.

(4) War Relief

(5) T.B Control Teams in France and
Health Visiting.

(6) Yellow Fever - Gen ~~g~~ Gorgas - in Cuba
and Panama.

(7) Behavioural studies in Mar-Keisey
Report.

RED CROSS

Ref: Encounter c Henry Dunant - Bernard Gagnebin
by Georg. Geneva

Henry Dunant

8th May - 1828. Born in Geneva.

1859 - Solferino - battlefield - vision originated.

"Would it not be desirable for the princes of the art of warfare, from different nations, to take advantage of a special congress to formulate some international principle, with the sanction of an inviolable Convention, which, once accepted and ratified, might constitute a basis for societies for the relief of the wounded in the various countries of Europe?"

"A Memory of Solferino"
Printed first in Nov 1862 (Casell, London 1947)

Replies to book 1. Gen Dufour - C in C of Swiss Army - doubted whether society would function in peacetime 2. Florence Nightingale thought it could only be organised on a national scale.

9th Feb 1863 - International Committee for Relief of the Wounded.

President: Gen Dufour

Secretary: Henry Dunant

26th - 29th Oct 1863. Preparatory Conf in Geneva (14 nations) Adopted Red Cross symbol

8th - 22nd Aug 1864 - Geneva convention Adopted

Constituted charter of the International Red Cross

1867 - International Conference of Red Cross Societies in Paris

1899 - Wounded sailors and ships and personnel bringing them relief
- declared neutral at the Hague Conference

1907 - POW question discussed

1929 - P.O.W's protected

1867 - 25th Aug - Resigned from Geneva Comt
∴ of bankruptcy in private life.

1895 - Rediscovered by a Journalist at the Heiden District Hospital.

- Report on Founder of Red Cross created a World wide sensation.

1895 - Swiss - Binet Fendt Prize - author of Civic action most likely to promote Peace and Unity.

1897 - Moscow Prize for services rendered to suffering Humanity

1901 - Shared Nobel Peace Prize (First) & pacifist Frédéric Passy

1910 - 30th Oct - Died at Heiden at 82.

Left fortune to philanthropic societies in Switzerland and Norway

Rockefeller Foundation

1909 Roosevelt & Taft

Income Tax amendment (16th)

Bill to tax corporate net incomes.

29th June 1909 - John D. Rockefeller Sr created a Trust (son John D. Jr, son-in-law Harold McCormick and 10 Gates) shares of Standard Oil Company of New Jersey (50-ESSO)
"to promote the well being and to advance the civilization of the peoples of the US and its territories and possessions and of foreign lands in the acquisition and dissemination of knowledge, in the prevention and relief of suffering, and in the promotion of any and all of the elements of human progress."

1913 - New York State Legislature incorporated Foundation

"To promote the well being of mankind throughout the world."

1913 - 35 million

1914 - 55 "

By 1927 + 82 " Total = 182 million \$

1963 - 643 776 million \$

3 ways of Funding by Foundation

1. To educational and Scientific institutions for the development of their education and research programs and facilities and occasionally of their physical plants

2. to individuals in the form of study or research fellowships and travel grants
3. In support of foundation staff activities and staff offices abroad.

Ref: Towards the Well Being of Mankind.

Fifty years of The Rockefeller Foundation
by Robert Shaplen
Hutchinson of London (1964)

Fields of Activity (1968) Report

1. Conquest of Hunger
2. Problems of Population
3. University Development
 — Valle
 — Phillipines
 — East Africa
 — Ibadan
 — Bangkok - Thailand
4. Cultural Development
- music, theatre, dance, literature
5. Equal opportunity for all.
Negro colleges - ghetto schools and leadership
ghetto studies
6. Allied Interests
 Arboriculture
 Rural Health centres
 Environmental Sciences
 Aid to Univ. Abroad.
 International Understanding

India (1968)

1. All India Inst of Medical Sciences.
2. Indian Cancer Research Centre.
3. Indian Council of Medical Research
4. Indian International Centre.
5. Indian School of International Studies
6. Punjab Agricultural University.
7. Seth Gordhandas Sunderdas Medical College.
8. University of Delhi
 - Comparative studies of Western & Ind. Music
 - Advanced Library Training.
9. Ballabgarh Rural Health Centre.
10. Indian Agricultural Research Inst.
11. Virus Research Centre Poona

Misc - Fellowships
Visiting Faculty.
Scholarships
Travel Grants

12. Centre for Population Studies (Harvard)
for Studies in India.

12/3/73

W.H.O

History of Quarantine and International Health.
- Refer notes.

1851 - International exhibition of Arts in Paris
- lead to the International Sanitary Conference
1967 - 'Paris office' established.

1948 - 7th April - WHO - established.
Ist WHO Assembly - 54 countries.

Politics
1949 - USSR, Ukraine, - left WHO.
Bulgaria, Poland, Rumania, Czechoslovakia followed
few months later.

1957 - All communiform countries rejoined

1950 - Taiwan withdrew.

1955 - " readmitted.

1964 - S. Africa - voting rights withdrawn.

1966 - Portugal suspended.
Rhodesia.

1973 GDR - may get in this year.

1972 - China admitted. - Taiwan expelled.

Switzerland - Not a member of U.N but
a member of WHO.

Present membership = 133

Organization① WHO Assembly -

- All members represented.
- Meets once a year - in Geneva
- 3 delegates from each country - represent
their country (Minister of Health and other
competent people in the health field.
- Associate members represented but no vote

- Secretariat -
- Office staff for work of WHO - Administrative
- DG + 5 ADG
- Each ADG has number of technical division
- ADG - shadowing figure - not represented on organogram

1. Meet twice a year
2. Membership - 15 → 24 pending
Proposals 30
3. 1/3rd of membership renewed every year.
4. Members do not represent country but represent technical specialty and experience

Executive Board

- 1948 - 3.8 million dollars
- 1972 - 100 "
- USA - provides 31%
- USSR " 13%
- U. Germany 6.3%
- UK - 6%
- France - 5.4%
- Japan 3.4%
- Italy 3%
- Canada - 2.7%

Budget

1. Presented by Dir. Gen after approval by Exe. board.

- Non Govt organs also represented but no vote
- Discusses - i) Annual Programme
- ii) Budget.
- iii) Administrative Problems
- Technical Discussion like education, training
- PH problems in mental areas, therapeutic medicine
- National and international surveillance
- Also " Political problems - discussion.

Working Languages - English, French, (Arabic)
Staff - 3400 50% International
Geographical distribution of staff -
according to proportion of budget
contributed by particular country

Regions

1. Americas. P.A.H.O./W.H.O. - Washington.
2. W.H.O. - Europe Copenhagen
3. S.E. - Asia New Delhi
4. Eastern Mediterranean - Alexandria
5. Africa - Brazzaville
6. Western Pacific - Manila.

Regional office

Regional Director - | by Exec. Comt
Regional Committee - |

Expert Committee

- Permanent
- Meet regularly every 2-3 yr - depending on
subject discussed. e.g. Malaria TB leprosy
- TRS - Report.

Technical or scientific committees

PLANOPS

1. Specific request from country.
2. WHO assistance is always complementary
3. Govt share the cost and supply complementary
staff - who will carry on when the
assistance is over.

WHO

1. Strengthen National Health Service

- can never be a substitute

Additional Funds

1. MESA - Malawi eradication special accounts
93% USA.

2. Now changed to VHP - Voluntary funds
for Health Promotion.

UNICEF

- Set up an emergency fund for problems
of children after 2nd world war
- Assistance to Problems of MCH in developing
countries - Voluntary contributions

FAD - Rome.

ECOSOC - Economic and Social Council.

"WORLD HEALTH" - HOBSON

'The health standard of a nation is a fair gauge of its intelligence and its degree of social development.' - Emerson

- WHO Definition of Public Health.

- Romans - ideas on personal health and cleanliness
Aqueducts for pure water, baths.

- Greeks - Hippocrates - books Airs, Water and Places, Regimen

- stressed healthy environment and good habits

- Development of walled cities in Western Europe. - brought community diseases like cholera, typhoid TB, typhus, plague

- 1388 First Sanitary Act of Parliament (Britain)
prohibit pollution of rivers, ditches & open spaces

- 1601 Elizabethan Poor Law Act

- 1747 - James Lind - Scurvy & Fresh vegetables

1796 Edward Jenner - Smallpox ^{citrus fruit} vaccination

1800 → William Farr - Compiler of Statistics

Industrial Revolution

i) Urbanization.

ii) Refined diet

iii) Overcrowding

iv) Problem of sewage disposal → pollution of rivers

v) Atmospheric pollution.

- Ricketts - English disease

- 1832 - Great Cholera Epidemic

- 1842 Edwin Chadwick's Report on the Sanitary conditions of the Labouring population of Great Britain

1848 Public Health Act - state responsibility
for health of People

1816-1904 Sir John Simon

1875 Great Public Health Act - all aspects of
sanitation and control of physical environment

"International Health" - any or all of those activities for the prevention, diagnosis or treatment of diseases which require the combined consideration and action of more than one country.

International cooperation in health
Historical instances

1. Mecca Pilgrimage

- overcrowding, insanitary conditions
- cholera, plague, smallpox carriers
- affect countries through which they travel
 - often act as relay stations

1830 - consular bodies exercised sanitary control
Constantinople - Sup. board of Health
Sanitary, Maritime and Quarantine board of Egypt.

1892 - Convention in Venice.

1903, 1912. International Sanitary Conventions
1926

Pilgrimage Commission of International Health office
(Annual discussion) (Paris)

1951 - International Sanitary regulations.

1957 - Pilgrimage became free from special international health legislation

2. Deratting of Plague infected ships.

"Plague and quarantine commissions of the International office of Public Health"

3. Biological standardization

1924 - Health organization of League of Nations set up Permanent Commission on Biological Standardization. - Actual work entrusted to State serum Institute - Copenhagen
Nat. Inst for Med. Research - Hampstead (London)
Central Veterinary Lab - Weybridge

Now
WHO
Expert
Committee

4. Veneral disease among seamen.

1897 } International conf. on V.D.
1902 }

1919-20 - ILO (Genoa) special meeting
to specifically discuss above problem

- Permanent Committee of 'Paris office'

1924 - Brussels Agreement - respecting
facilities to be given to Merchant
Seamen for treatment of VD

Now controlled by

i) WHO - Expert Comt.

ii) ILO/WHO - Comt. on Hygiene of seafarers

- Also work on VD control among Rhine
river boatmen.

⑤ Displaced persons

1944 - 13 million displaced after war
voluntary, labourers, POW, Political detainees

1941 - Inter allied conference in
London to prevent this disaster

1943 - U.N. Relief and Rehabilitation
Administration

⑥ Malaria Eradication

i) Sardinia 1946-50

Joint project by Italian Govt and
Rockefeller foundation.

ii) Mauritius - 1946-1961 - 1965 (later part
WHO sponsored)
Team sent by Colonial In Medicine Comt.

Influences on International Health Work

1. Economic & Social factors

- Economic prosperity - interdependent throughout the world.

2. Political & ideological factors

- Germany & Japan
- USA's attitude to League
- Withdrawal of cominform countries for Typhoid
Whore

3. International Activity itself

Epidemics & the story of Quarantine

430 BC - Plague of Athens.

Decay of Roman Empire - Malaria.

2nd century - Smallpox

6th century - Bubonic plague.

Aztecs

American Indians } Smallpox.

Europe - Black death (14 - 17th century)

Wars

430 BC - Plague of Athens - finished Assyrians
Malaria prevented Carthaginians from
siege of Syracuse (Sicily)

Scurvy caused failure of VII Crusade of
Louis IX

Dysentery - in second expedition to Tunis of
1528 Typhus - French abandoned siege of
Naples.

Yellow fever decimated West Indian garrisons
Cromwells expedition to Jamaica

Yellow Fever - Failure of Maximilian's occupation of Mexico

Napoleon's two eastern campaigns ended in Plague at Acre
Typhus in Russia

IInd War - Admission rate in Burma
units in 1943 1200 per 1000 troops per annum

Abandonment on account of Yellow Fever of Panama Canal project of de Lesseps and its political effect in France

1919

Lenin - "Either socialism will defeat the bourgeoisie, or the bourgeoisie will defeat socialism" p. 27.

1918-19 - Influenza epidemic killed more than those who fell in the 1st World War

1. Cordon sanitaire as early as AD 630-35

2. Quarantine

Idea - Emp. Justinian 532 AD

Plague - ^{travellers} "Purified" in special places and given health certificates

1306 - Rhode Island group claimants to

1377 - Republic of Ragusa } first introdⁿ of

1403 - Venice - 40 day period (quarant^a)
based on Jesus & Moses - isolation incident

1423 - First Lazaretto - quarantine station set up at sea ports.

1585-1664-1710 - Quarantine Act.

1564 - Scottish regulation

1683 - French

Followed by 6 more Acts

14th-19th Century - All countries adopted controls.
1851-52 6th month Conf (International Sanitary)
12 states met in Paris.

Convention of 11 Articles and 137 Regulations
1859 - Second International Sanitary Conf.
5 months 11 countries

1865 3rd Conf. Constantinople. In addition
4 committees discussed ① Origins of Cholera

② Methods of spread ③ Prevention ④ Route of
1874 4th Conf. Vienna - proposed 1865 pandemic
Int. Commission on epidemiology

1881 5th Washington - Notification recommended.

1885 6th Rome - "cholera" recommendation

1892. 7th Venice. "Mecca Pilgrimage"

1893. 8th Dresden. "Cholera"

1894 9th Paris. "Cholera" & "Pilgrimage"

1897 10th Venice - "Plague of Bombay discussed"

1903 11th - Paris. "Plague" & "Cholera"

1904 International Office of Public Hygiene
in Paris ^{extra} created. (Rome Agreement Dec 1907)

1902. Pan American Sanitary Bureau. Washington

1912. 12th Paris - Yellow Fever included

1926 13th Paris Typhus & Smallpox

1933. Int. San. Conv. for Aerial Navigation
at Hague.

1944 International Health San. Conventions
Drawing up at Montreal (UNRRA sponsorship)

1946-1951 - Formally accepted by 4th assembly WHO

1952 - Entry into force of WHO Int. San. Reg.

1969 - Typhus, relapsing fever, influenza, polio
malaria, put under international surveillance.

1971 → Quarantine measures against astronauts
→ Revised Regulation

Paris office" History.

- 1907-14 Mecca pilgrimage & new railways
(bypassing Elton)
Derailing of ships at ports
Cholera spreading to Europe
(Russia, Germany, Austria, Hungary
& Italy)
- 1914-19. Outbreak of war
- 1919-39 Creation of League of Nations
and its Health Organisation.
- possibility of fusion.
Failure in Dec 1920
- 1926 Epidemic notification
- 1933 Aerial Navigation (San. Conv.)
1924. Brunel's Agreement (Y.D. in Seamen)
- 1930 Antidiphtheric serum
- 1925, 31 Opium & Narcotic conventions
- 1934 Convention against Dengue fever
- 25 diseases and subjects dealing
w/ P.H. on agenda over 20 yrs.
including disinfection, water supplies,
ships hygiene, periodic med. examn,
hospitals, cancer, goitre, and many
other tropical diseases
- 1939-46 - IInd world war
- 1946 - World Health conf. in New York.
60 states signed protocol agreeing.
WHO take over of Paris office
- 1946-50 - Transfer or interim period.
Epidemiological notification → 1946 taken
over
1948 → library.
- 1949 - Rome agreement denounced.
- 1950 - Office liquidated
-

League of Nations - Health Organisation. (History) 1921-46

End of 1st World War - League of Nations created. (1920)

July 1919 - Informal conf to discuss post war plans for international health.
(London) British, French, US, Paris office representatives & Red Cross societies
Relief → Red cross action
Public Health & International → office Relations

Paris office to be taken over.

1921 - Americans & French refused to join or allow Paris office take over

1923 - Mixed commission set up to ensure against overlapping with both institutions

Activities

(1) Epidemiology, epidemic intelligence and the epidemic commission.

i) Epidemic intelligence service.

ii) Weekly epidemiological Record (1925)

iii) Bimonthly, & Annual " reports.

(2) Technical Studies For international standardization of information.

24 Commissions, and Reporting committees

Biological Stdsⁿ, Malaria, Cancer, Leprosy

Syphilis, TB, VD, Plague, Sleeping Sickness

Heart disease, Opium, Chinese Drugs, Fumigation

of ships, MCH, Health of children of school

age & adolescents, health centres, Health insurance.

Teaching of Medicine, Physical Education et

Malaria - Commission
Field trials
courses in malariology

Cancer - Commission. For investigating
causes in UK, Holland, Italy
- Standardising the recording of results

Leprosy - Commission. of rad. treatment of cancer of CX
- International centre - at Rio de Janeiro

Rabies - Conference

Unification of pharmacopias

③ Other Work

1. Nutrition - Commission
Technical studies & surveys
2. Housing Commission
Field work.
3. Physical Education
4. Rural Hygiene - Madrid Conf 1931.
Studies in the field.
5. Pan African Health Conferences
1932 Cape Town
1935 Johannesburg
6. Direct Assistance to Gorts. - Greece.
Bolivia, China - direct help.
7. Education - study tours & exchanges
for P.H. officers
- International Health Year Book
- Conf on PG in Public health.
8. Central epidemic intelligence Bureau.
(Far East) in Singapore in Mar 1925
9. Cooperation with other organisations,
ILO, Rockefeller Foundation

Jan 1946 First UN Assembly approved
transfer of functions to WHO

UNRRA History

- 1941 Allied Conference - London
Establishment of Inter-allied Post War
Relief Committee
- 1943 - UN Relief & Rehab Admn estd. (Nov) (Washington)
Health Division created (December)
- 1944 - European Regional office in London (Feb)
Exp. Comt on Quarantine (May)
" " Health of displaced persons (Nov)
- 1945 Signature at Washington of Revised
Int. San. Conventions by 17 Govs
- 1946 - Decision to terminate UNRRA.
- 1947 Health Activities ended and
transferred to WHO Interim Commission
and IRO.

9/3/73

National Health Services1. OMAN

- Missionaries brought Western Medicine 19th Century.
- 1958 - Health Service development organization \approx UK assistance
- 1972 - Health Ministry established. Hospitals and health centres added to existing numbers.

Set up of Ministry -

② U.S.S.R

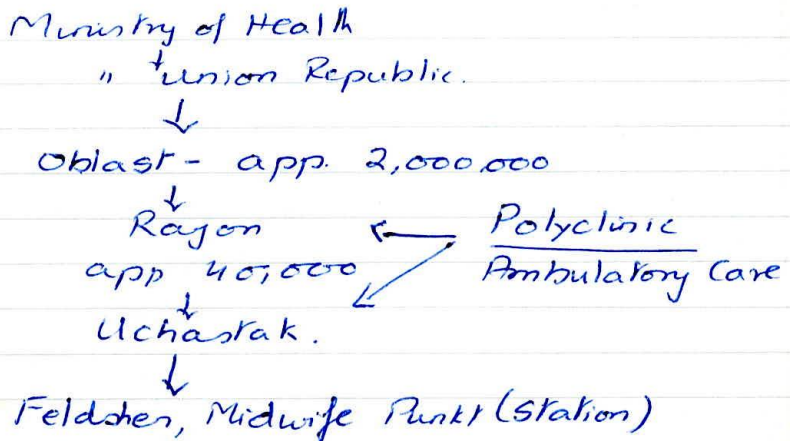
MBBS Course 10 + 6 + 1
 No. of Doctors 1913 - 23,000
 1971 630,000

$6\frac{1}{2}$ Hr Duty = 3 Hr Clinics $\frac{1}{2}$ Hr Health Education
 3 Hr Home calls

Para medical personnel.

1. Nurses
2. Feldshers

GP = 'Uchastak' Physician

Setup

③ CHINA

Main Aim: To cover Rural areas mainly.

1949 - Health Service pattern organised.

- Set up - starting from Peoples Communes.
- stress on Health Education.
- Health system based on political philosophy.
- Rural area received most health care.

④ USA

Total Health Cost / person 1970

\$ 310 / person / yr.

% GNP Health Costs - 6.8%

% Expenditure Public / Private

Private Direct - 38%

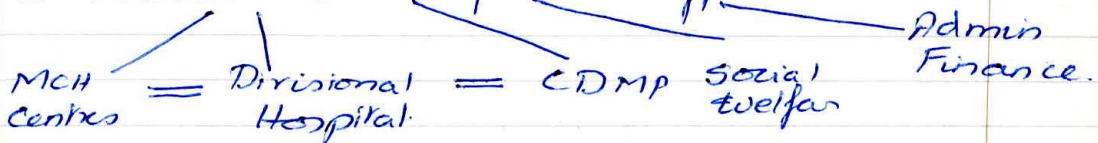
Insurance - 24

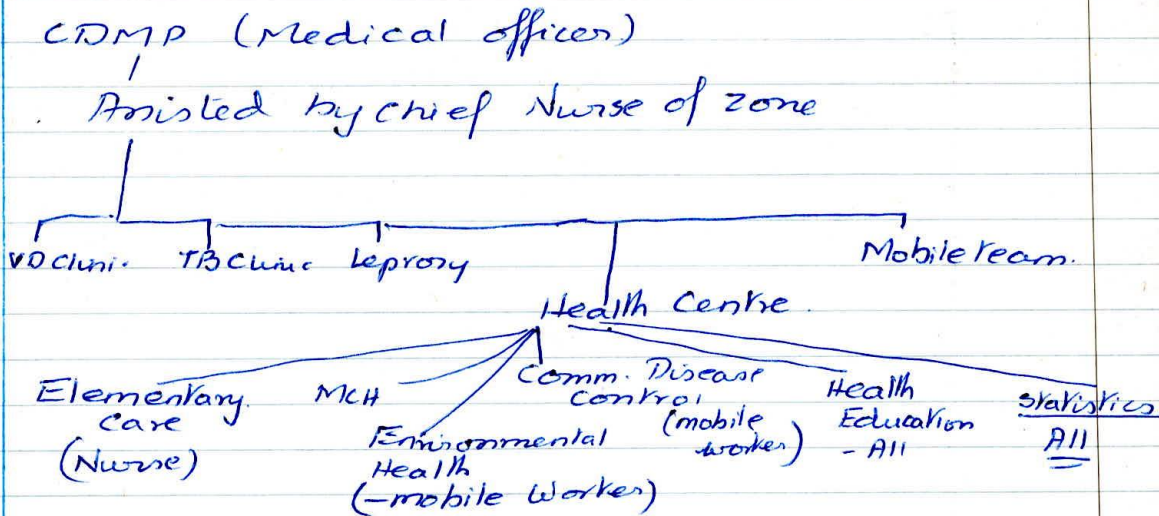
Public 36%

Doctor / population 1:400 — 1:1350

⑤ CAMEROONS

- Political formation - English Speaking
French " Territoires
- Population - 4 million.
- Ministry of Health and Social Services
- Provincial chief Med. Office.





Pro Pharmacy - For each health centre where cheap, subsidised, medicines sold at a pharmacy attached to the health centre (eg upto $\frac{1}{10}$ of usual cost)

Medical School - Called Centre for Health Services and sanitation.

- Bilingual teaching

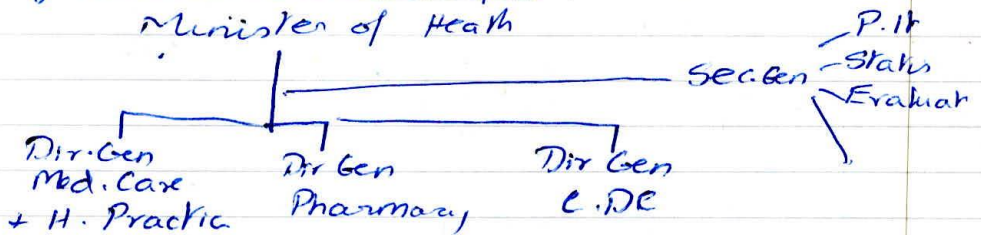
⑥ INDONESIA

1. Population - 120 million

2. Communal composition

Muslims	- 80%
Protestan	10%
Catholics	} 10%
Buddhists	
Others	

3. Organisational Set up



Organisation Level

		organisation of staff and
Central	Dept of Health	0 SL - 100%
Intermedic	Prov. H. Serv.	50% OSL 50% BHS
Local	Regency or Municipal	25% OSL 75% BHS
District	Health centre	100% BHS.

Health Expd Per capita = R 86.46.

\$1 = R 415

Populations (millions)

U.S.A.	210.
U.K.	60
Australia.	
Germany.	50
Norway.	4
Iraq.	8
Oman	1
Argentina.	23.
Indonesia	120
Jordan.	
Singapore.	
Ceylon	13
Phillippines	37
Nigeria	60
New Guinea.	2.5
Cameroon.	6
Sierra Leone.	3
Solomon Islands	160,000
Kenya	<u>12</u>

Philippines

- Population Density - 175 / sq. km
 - Characteristic problems of a developing country.
 - Health Service system - based on US pattern capitalist system - medical services available to all - but better services require money.
-

Review

Health Pattern of a country depends on

1. Historical
 2. Political
 3. Economic
 4. Social
 5. Medical Problems
-

Ref: International Medical Care: Fry + Farndale
↓
Oxford Med. Tech. Publications (1972)

Blocks

1. West European System - Hospitals by Local authorities - not very well coordinated. Part independent.
2. Gaps & Duplications - (Latin America)

6/3/73BRIEF HISTORY OF INTERNATIONAL HEALTHReference:

1. World Health : Brockington. F
2. World Health & History : Hobson. W.
3. International Health Organizations : Goodman

① "International Health" - any or all of those activities for the prevention, diagnosis or treatment of diseases which require the combined consideration and action of more than one country.

The most important factor that lead to international collaboration in health and in fact even to a national public health service has been.

Fear of Epidemic Spread or Contagion

- ② The development of the concept of Public Health itself has been a long and gradual process.
1. Survival of the fittest. (In the beginning)
 2. Rural, agricultural societies or nomadic life - only personal health important.
 3. Development of walled cities. lead to early recognition of the problems of community diseases and environmental sanitation.
 4. From personalised medical care by doctors - tend towards public health measures taken by government or ruling system.
- Hastened by Industrial Revolution → Urbanization

Typhus from Spain → New World. ^{East} Cholera - from East
 Smallpox & Measles → Across Ocean.
 'nearly decimate Red Indians'
 e.g. Syphilis from New World?

5. Gradual realization that epidemics which could spread within a country could also spread to other countries with which trade had begun, and vice-versa.
6. Early strict regulations and rules regarding measures to be taken on ships returning from infected areas.
7. Need felt for standardization of rules and closer cooperation between countries.
8. Development of International health efforts

③ History of Quarantine:

532 AD. Emp. Justinian - during plague epidemic ordered that all travellers should be purified in special places and given health certificates

630 AD. 'Cordon sanitaire' - armed guards placed on roads leading from Provence to Cahors.

Claimants to First introduction	1306	Rhode island explorers
	1348	<u>Sanitary council of 3 nobleman (Venice)</u>
	1377	Republic of Ragusa.

'Quaranta' - 40 days - Time that Jesus and Moses spent in the wilderness

1423 - 1st quarantine station set up in Venice (Lazaretto).

1585 - Britain first attempted.

By 19th century most countries adopted

However - Rigorously imposed and often brutal resulting in death of sailors. in addition to time and trade losses.

5. 1882-1905 - Discovery of TB bacilli.

5. 1882-1905 - Discovery of TB bacilli.
Hbri's cholerae, Actino-ryctois
& hbri of pneumonia, Actino-ryctois
CSM, Brucella
Plague, dysentery, Syphilis

Few important Historical events →

1. 1388 - First Sanitary Act of Parliament in Britain. prohibiting pollution of rivers ditches & open space.
2. 1747 - James Lind's demonstration of the virtue of fresh citrus fruit (scurvy).
3. 1798 - Jenner's discovery of preventive qualities of cowpox vaccine.
4. 1830 Consular bodies set up to exercise sanitary control during Mecca pilgrimage.
Constantinople - Superior Board of Health.
Sanitary, Maritime, Quarantine board of Egypt.

⑤ Development of International Efforts

1851-52 - First International Sanitary Conference
 - Lasted 6 months.
 - 12 states met in Paris.
 - Convention of 11 Articles and 137 regulations drawn up

1852-1907 2nd to 11th International San. Conferences
 Agenda included.

1. Mecca pilgrimage.
 2. Spread of cholera.
 3. Spread of Plague
 4. Importance of Disease notification.
 5. Setting up of permanent international organisation.
- } Measures to prevent it.

② 1902 Pan American Sanitary Bureau estd in Washington.

① 1907-1909. International office of Public Hygiene estd in Paris - based on Rome Agreement of Dec 1907

1912 12th Int. San. Conf (Paris) Yellow Fever included

③ 1919-29 Creation of League of Nations and its Health organization.

1921 Failure to join Paris office / US & French objections (political) / Joint commission set up to prevent overlap

1926 13th Int. San. Conf. (Paris) Typhus and smallpox included

1933- First Int. San. Conf. for Venereal Navigation.

1941 Allied conference in London. Establishment of Inter allied Post war Relief Committee.

1943 UN Relief and Rehabilitation Admin & Health department created.

1944-45 Int. Sanitary conference Revised and ratified.

1946-47 Transfer to WHO of functions of Paris office.

i) League of Nations - Health organization

ii) UNRRA - Health department

iii) Pan American San. Bureau

④

Factors contributing to this process of International Cooperation in Health

1. Mecca Pilgrimage leading to sanitary conventions

2. Cholera pandemics.

3. Plague epidemics and deathly & fumigation of ships.

4. Venereal disease among seamen.

5. Epidemics and problems of displaced persons after a during wars

6. Increase in Trade and Travel.

7. Need for Biological Standardization

⑤

8. Other diseases

- i) Smallpox.
- ii) Yellow Fever
- iii) Typhus Lenin said in 1919 "Either socialism will defeat the louse or the louse will defeat socialism"
- iv) Influenza Epidemic of 1918-19.

⑦ In addition to the International sanitary conventions (revision) and discussion of the above main problems many other aspects of medicine and public health appeared on the agenda of the meetings of the Paris' office and the Health Dept of the League of Nations. Many field trials and projects were sponsored, notification systems introduced and cooperative efforts in the solution of medical problems encouraged. Important among these were.

- Paris office
1. Drug conventions & control esp narcotics
 2. Water supplies.
 3. Disinfection.
 4. Periodic Med. Examin
 5. Cancer.
 6. Goitre.
 7. Hospitals.
 8. Other tropical diseases.

- League of Nations
Health Dept
1. Epidemiological intelligence services
 - Plague - notification
 - Cholera
 - Y. Fever - Weekly records (1925)
 - Typhus
 - S. pox - Bimonthly & Annual records
 - + Polio, Typhoid, Scarlet fever, Dysentery
 2. Cancer
 3. Leprosy.
 4. Heart disease
 5. Chinese drugs
 6. MCH school goes
 7. Health of Adolescents
 8. Health centres
 9. Health insurance
 - ⑬ Nutrition

10. Teaching of Medicine
11. Physical education
12. Unification of pharmacopias

② Unequal development in different countries in the promotion of health and control of disease, esp. communicable disease is a common danger.

- Field trials in Malaria.
- courses in Malariology.
- Pan African Health conferences 1932, 35
- Field Studies in Rural Hygiene
- International Leprosy Centre (Rio de Janeiro)
- Direct Assistance to Gorks of Greece, Bolivia and China. (Poland, Rumania, Rumania) to combat typhus
- Study tours and exchanges for Public Health officers
- Central epidemic intelligence Bureau. (Far East) in Singapore (Mar 1925)

European Conf. (1931)
Far East Conf. (1937)
(to discuss P.H. Needs)

Other Agencies - involved in International Health.

- ① ILO - 'Brunel's Agreement' previous work up. - Later Comt. on Hygiene of seafarers
- ② Rockefeller Foundation - vector control
 - i) Malaria eradication - 1st project sponsored jointly by Italian Gork in Sardinia 1946-50
- ③ Colonial Insecticide Committee - sent team for Malaria eradication in Mauritius from 1948

Conclusion: Whilst in the past the health of communities has been a national responsibility, in the future it will be more and more an international affair.

The constitution of WHO emphasises this.

- ① The health of all people is fundamental to the attainment of peace and security and is dependent upon the fullest cooperation of individual states

8/2/73

" Flying Doctor Services "

Advantages

1. Time.
2. Difficult routes
 - inter island
 - mountain
3. Emergencies
 - Fires
 - accidents
 - epidemics
4. Could provide
 - preventive services
 - mobile doctor

Disadvantages

1. Cost
more than land vehicles
2. Payload esp seaplanes
3. Sponsorship necessary
 - AID
 - Military
 - Police.
4. Confined to
 - Surgery
 - emergencies
5. No transport on ground.
available for emergencies

Ref:

Auxiliary Nursing

BYRNE, M + BENNETT, F.J. (1973)

Community Nursing in Developing Countries
Oxford University Press. £2

Voluntary Aid - Source of finance

1. Foreign - sending church. 10%
2. Fees - 40-50% - 80%
3. Govt grants 10-50%
 - (a) Bed occupancy grant.
 - (b) Training grants - For Nurse, Mwife, Med. Aux.
4. National church charity.

VOLUNTARY AID

1. Relief Agencies - Oxfam
 2. Religious Missions - Medical Mission
 3. Individual disease groups.
Chest & Heart Association
Police Leprosy funds
-

MEDICAL MISSIONS

Early beginnings

Year	Doctor	Origin	Country
1700	Stegelmilch	Protestant Mission Germany?	India
1799	Van der Kemp	Dutch	Africa
1834	Peter Parker	American	China
1841	David Livingstone	Scottish	S Africa
1841	Edw Med. Miss	Society	
1851	James Hudson Tayler	England (Protestant)	China
1869	Clara Swan	America	India
1869	Beverly blind School		
1878	Dr Bailey	Mission to Lepers	
1875	Robert Laws		Malawi
1893	Edith Brown	English	Ludhiana
1897	Albert Cook	English	Uganda
1898	W. Miller	English	Nigeria
1900	Ida Scudder	America	Vellore (India)
1900	Henry Holland		Pakistan
1912	D. Christie		Manchuria
1913	Schweitzer		Guinea
1901	Cochrane		Peking-China

Ref:

1. U.S.A Nat. Academy of Sciences (1962)
TROPICAL HEALTH Washington p215-20

2. JACKSON, H.C. (1963)

Directory of Protestant church related hospitals.
(Outside Europe + N. America).

New York, Missionary Research Library.

VOLUNTARY AGENCIES

Advantages

- Small source
- Fees - preferable pay
- something.
- better appreciated.
- Cheaper equipment
staffing.

Finance

Disadvantages

1. Outside funds - unstable
- shortage
2. Fees - in urban
Treating well to do.

POLITICS

1. Bureau CHAI (India)
or secretariat

2. Competition
3. Long stay

4. Remote areas.

1. Often unacceptable
in certain political
systems and may get
nationalised.
2. Do not often fit into
medical system of area.
(National plan)

3. Competitiveness

STAFF

1. More dedicated.

4. Religious bias

Voluntary Agencies

Advantages

1. Experimental schemes
freedom.

Disadvantages

20/2/73

" NATIONAL HEALTH SERVICE

Problems of Existing Services"

- ① Stress on curative medicine - especially cure of acute conditions.
- ② Under investment and under-development in certain specialities that are not that popular e.g. Geriatrics.
Psychiatry.
- ③ Inadequate continuity of care - For chronic diseases -
- need for care more than cure.
- ④ Inadequate accident and rehabilitation services.
- ⑤ Failure to define health care needs
- care depends on patient action.

NEEDS VS SERVICES.

From next year M.O.H disappears and will be replaced by Community Physicians who will determine needs of the community.

⑥ Organisational difficulties

1. 3 different major groups - difficult to coordinate
2. Different types of hospitals
3. Different catchment areas
4. " methods of financing.
5. Lack of good management
6. Delay in appointments
7. Lack of medical information systems

1/2/73

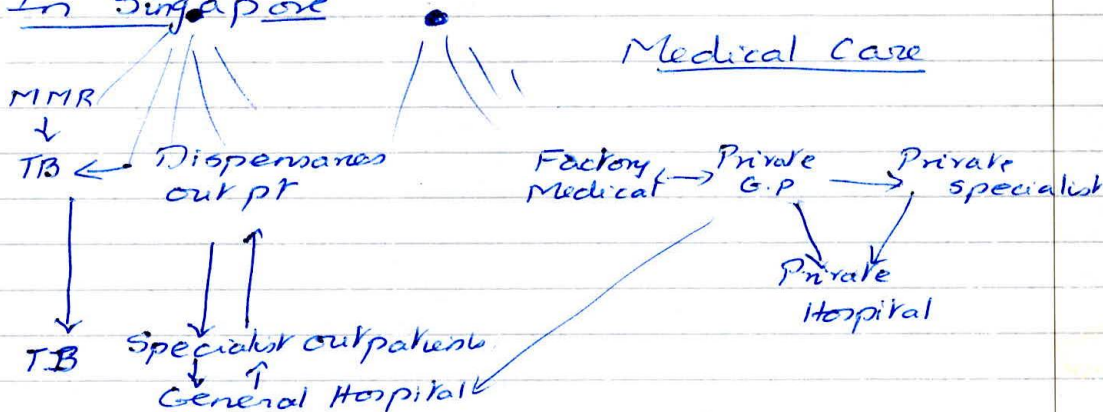
HEALTH ADMINISTRATION

Systems → Use → EFFECT → LIVERPOOL →
 NEED REOURCES STUDY

Politics Society Economics Information
 Epidemiology

The Evolution of Health Services in Response
 To changes in medical technology
 and in changing societies

- Development of Medical Science - Handout
 - In Singapore



- In U.S.A
 - In Scandinavia
 - In East Europe
- } Ref:
Handout

- The British System - a barrier exists between Primary & Secondary or Specialist care services

Physician Fees in U.S. in 1970

	GP	Paed	IntMed	Surger	Psy
First Visit	9	10	18	15	38
Follow up	6	7	9	8	30

The Traffic in Med. Training & Careers

Agricultural

Rural Economy - supporting a market & town
Shopkeepers, children,
cashiers, Nurses, Teachers

Regional or Industrial City

College & Trade Schools.
Accountants, Managers

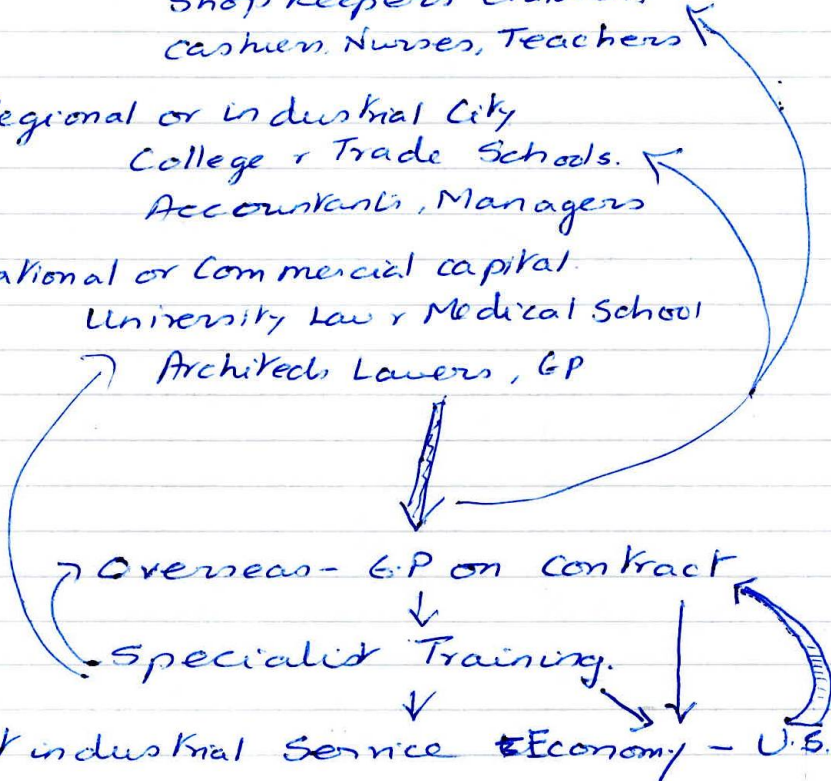
National or Commercial Capital

University Law & Medical School
Architects, Lawyers, GP

Overseas - G.P. on Contract

Specialist Training

Post industrial Service Economy - U.S.



Health Expenditure

Medical Care

Presumptive

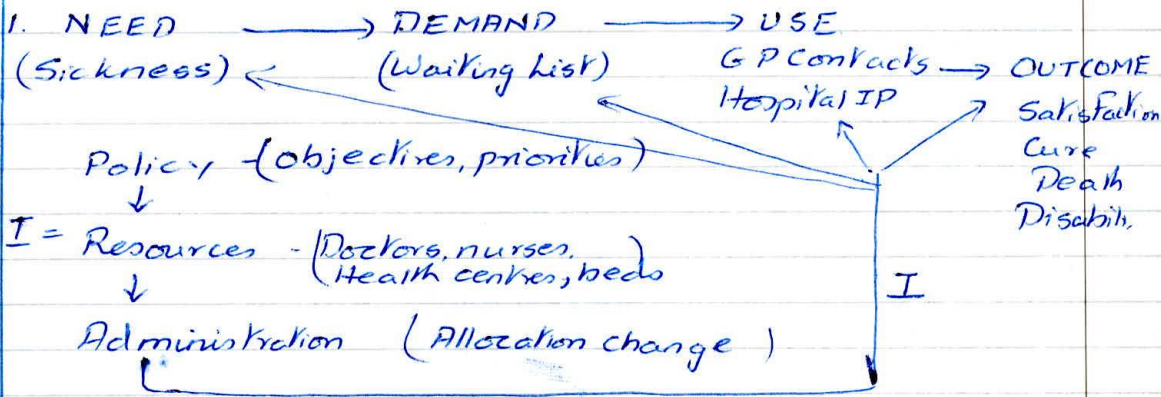
Symptomatic

Presymptomatic

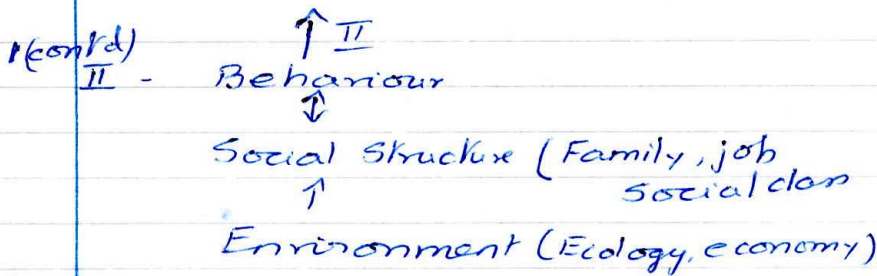
Vulnerable

NHS List

6/2/73



2. Expenditure per Head on Health.
USA, Sweden, Ceylon etc. Ref: Handbook



3. Illness in a community - Rates of use of services/month/1000 adults.

- 1000 population at risk
- 750 Adults reporting 1 or more symptoms
- 250 patients consulted physician
- 5 admitted to hospital.
- 1 - Intensive care

4. Use of Medical Services

- i) By age - 65+ - 13% of population - use 40% of services
- ii) Whether, home, residential accommodation, or hospital care to be used.

Top 10 hospital case
" medical cases
" surgical "

Outcomes and their Cost. (Use of Services)

Death - Loss of life & expectancy
Disease persisting - Medical care & loss of work
Dependency on care from nurse
Family or social
Disability at work - wages reduced
Discomfort - Analgesic relief.
Dissatisfaction of pt. purvey or or public
Disruption of family and society

Days in hospital for some common
Standard Surgery.

T & A's

Appendectomy

Cholecystectomy

Hemorrhoidectomy

Drc.

Hysterectomy

Lens extraction —

Social class - Demands & Uses

- i) Polio immunisation
- ii) 3-4 children in family
- iii) low birth^{wt} delivery
- iv) places of booking for childbirth by social class and outcome.

Percentage of women in USA
having had menopause Surgically/Naturally
by age 35+

Medical care will be more effective
as overlap of

- i) clinical need
- ii) Patient demand
- iii) System requirement - takes place
 - immunization
 - Fluoridation
 - smoking ↓

8/2/73

Evaluation of Health Services

Primary Care Physicians

- ① Common diseases - Cold, Tonsillitis, Bronchitis,
Simple R, 25%
- ② Chronic illnesses in Gen Practice
- Arthritis, Chronic emphysema
Bronchitis, HT, Asthma, Peptic Ulcer.
Stroke, Epilepsy, Diabetes.
- ③ Social Ills in Gen Practice
Receiving assistance severely deaf
Aged over 75 problem families
Old, living alone Blind, Delinquents
Broken homes Alcoholics
- ④ Tools for the job.
BP meter, Ophthalmoscope, Proctoscope, Gloves.
microscope, centrifuge, ESP tubes, Mb meter
Iv fluid, paracentesis.
- ⑤ Use of investigation.
- ⑥ Average week of GP - time spent on
surgery, home visits, clinics, administration

Functions of Hosp Care & their objectives in outcome

<u>Function</u>	<u>Service</u>	<u>Outcome</u>	<u>Time</u>
1. Investigation	Xray & Lab	Diagnosis	2 wks
2. Childbirth	Maternity	Perinatal	9 mths
3. Repair	Elective Surg	Restoration	3 wks
4. Rescue	Emergency Critical care	Survival	5 days
5. Maintenance	OP Follow up	Delay, relapse	1 yr
6. Rehab	Geriatric et al	Dependence	3 mths
7. Terminal care	critical care	Humane death.	3m

1/2/73

The Economics of Medical Care

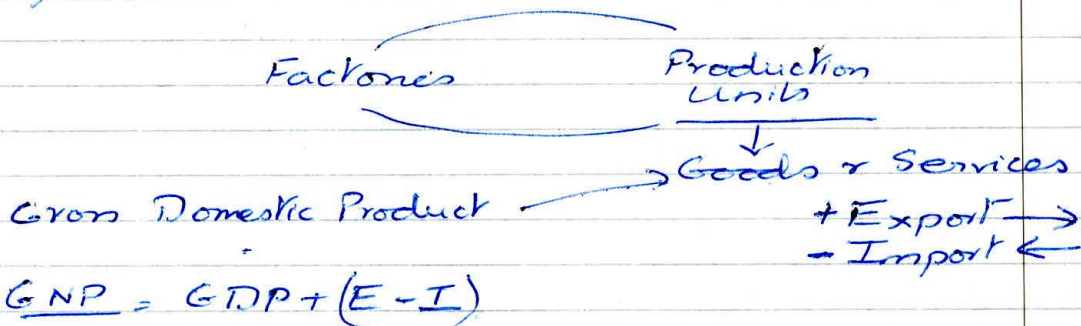
1. Economists must be supplied with data and objectives.

- Objectives (Health) must be i) qualitative
ii) quantitative

Factors determining objectives in Health Care

1. National income

- i) G.N.P



Gross National Income - Wages, salaries
sales, profits

$\frac{GNI}{P}$

- 1. Distribution -
- 2. Growth Rate

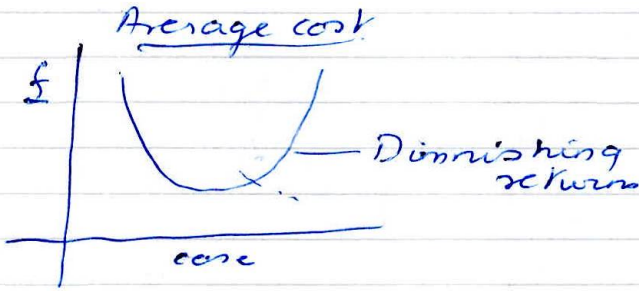
1. No apparent gain
2. Can't measure
3. Resources Scarce

∴ ↓

1. What to produce
2. How to produce
3. To whom do we distribute it.

Methods applied

1. Substitution
 - i) Define work of each
 - ii) Knowledge when substitution can be done

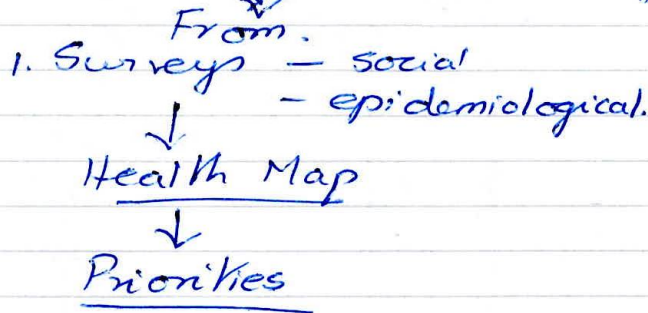


Demand for Services vs Need

- Not always index of real need.

Knowledge of Need required for

- i) Communicable disease
- ii) Prevention
- iii) Compassionate grounds etc Mentally or Phys Handicapped (surveys)



Ref: Social Trends HMSO No 2.
Culyere Williams

Systems that can be used

1. Market price → Problems
- 1. Distribution income necessary
 - 2. External benefits not seen

1. Value he places on his own life?
2. How much will the family pay?
3. How much will the society pay?



Measures

1. Productive stream over life time
 - not a good measure since again it depends on - social groups
 - age
 - type of disease

If Benefits greater than cost.
The problem arises of Choice of Project

1. Opportunity costs
2. Social rates of discount

8/2/73

Medical Sociology and
Health Services

Need for sociology in Medicine
Ref: Todd commission report.

Studies

1. Expressions of symptoms.
2. Behaviour during labour.
- 3.

6/2/73

INFORMATION SYSTEMS

1. Population based.
2. Accurate
3. Problem oriented
4. Brief and imaginative.
5. Feed back

12/2/73

Politics & policies in Health Services

Tackling a problem

1. Objective
2. Information
3. Possibilities - policy options
4. Decision
5. Feedback & reevaluation

Setting objectives e.g. for a health service
- who's health.
- what sort of service.

Information

- collection
- analysis
- presentation & perspective

Policy options

1. Economic
2. Administrative - in service.
3. Political

Input of
Public Fund

→ Output

require public support

4. Cultural

Decision

1. Returns against the chances of getting that return.

17/1/73

BASIC HEALTH SERVICE

- Lowest level of medical service
- Health Centre - Dispensary + Maternity centre + Health office.

Ref. W.H.O - P.H.P No 48

"Evaluation of Community Health Centres"



- | | <u>Functions</u> |
|---------------------------------|-------------------------|
| 1. <u>Primary Health Centre</u> | - Preventive only |
| ↓ | - curative only |
| Divided by size. | - preventive & curative |
| i) Rural. | |
| ii) Regional. | |

2. Specialised Health Centre a) Tackling specific diseases e.g. TB
YD
- b) or Tackling specific groups of people
- industrial
- school children.

3. Polyclinics - Primary + specialised.

- Historical:
- i) In U.K. - in 1920 Dawson committee suggested that though there was a Primary Medical care by G.P.s - a organised Preventive health centre should be set up.
 - ii) 1918 - Russian Health Centre.
 - iii) 1923 Dr Biggs - US Health centre.
Teris (1946) Bulletin Hist of Med.
20 387-412
 - iv) 1928 Tomeroy (1929)
JAMA

✓ 1926 - Sri Lanka.

Rockefeller Foundation - First H.C at Kalutwa.
By 1938 - 10 such centres

1931 - League of Nations

"Rural H.C" (+Preventive)

1941 - India - (P.H.C.)

Aim 5000 H.C's serving 60-100,000

1950 - L. America & Africa.

Nigeria

1. Traditional

2. Hospital — Colonial Govt 1890 - 1920's

Private — GP Lagos
Mission

3. Dispensary - Infectious Diseases Hospital.
1920 - 1930

4. Mobile team - Medical field Unit.

5. Mass Campaigns WHO - 1950's → IAS



Health Centres

Ref:

1. McLaughan N.D (1972)

"Medical Geography"

London Methuen £4.50

2. Traditional background to Medical Practice in Nigeria.

Univ of Ibadan - IAS No 25 30/-

3. Maruwa S. (1954)

TRS No 83

Methodology of planning an integrated health programme

for rural areas.

4. Maruwa. S. (1961)

W. Afr. med. J. 10 69-86

5. Bennett, F.S and Lukwama T.S.

(1964) - Preparing the problems of rural
dispensaries (C. Afr. J. Med.) 10 424-6.

6. Walker, A.T (1950) The Health Centre of Kenya.

C. Afr. J. Med 27 73.

7. Fendall, NRE (1954-5)

J. Trop Med Hyg 57 58
123 p 149.-

Cost per Illness (Kenya) 1972

Dispensary - 9p

Prim H.C - 22p.

Dist Hosp. \$4.72

Reg. Hosp \$960

Central Hosp- \$2080 -

Isocare Maps

Ref: | de Winter Health Service of District Hospital
in Malawi.

Health services

Population covered.

Transport facilities.

23/1/73

Medical Auxiliary

Definition: Any paid worker in a particular technical field with less than full professional qualification in that field, who assists and is supervised by a professional worker.

e.g. medical asst.
asst. nurse
asst. midwife
radiographer asst.
Laboratory Asst.

Ancillary - persons not medically trained but nevertheless essential to organised medical services

e.g. ward maids
kitchen staff
Ambulance drivers

Paramedical - All professions allied to medicine which together make up the health team.

e.g. nursing, midwifery, sanitation, dentistry, pharmacy, physiotherapy

Auxiliary can be

- i) Assistant (under supervision).
- ii) Substitute for professional in certain circumstances

In East Africa

Auxiliary is known as Med. assistance and he is in charge of the health centre

Adv

1. Takes over large load of Centre O.P.
2. Will stay in a rural area.
3. Only care available.
4. Knows area and people (members of that culture)
5. Cheaper to train
6. Less pay.

Dis. adv

1. Attempts at things beyond their capabilities
2. Standards decline.
3. "Half Doctor" problem
4. Professional jealousy.

Requirements

1. Detailed job descriptions
eg - Med. Nursing councils
2. Career Structure - Pride in being an assistant
 - a) Pay scale.
 - b) status levels
 - c) Representation in Ministry. -
 - d) Standardization & recognition of levels of training
 - e) Upgrading courses → Professionals for brighter students

Ref: GISH.O (1972) "Health Manpower and the Medical Auxiliary"

LONDON: I.T.D.G

£1.50

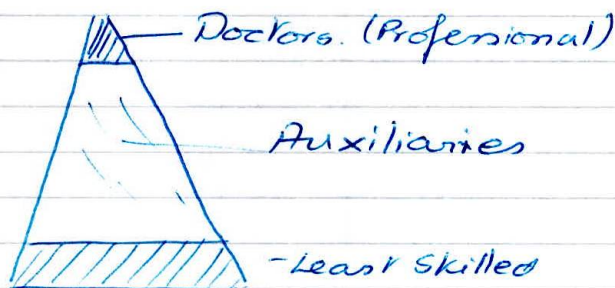
Handouts

① Relationships of Professionals and Auxiliary personnel in Medicine and the Para-medical.

②

Principles in Training of Auxiliaries

Pyramid Ref: Maurice Kings book



1. Training has to be very practical.
2. Very much oriented to the community to be served.
3. Principles of administration of a simple health centre - esp if he is substituting for a doctor.
4. Not often by a doctor since they are not always paractical.

Conditions of work

1. Income
2. Status.
3. Timings
4. Leave -

Criteria for further training

1. Professional competence.
2. Initiative.
3. Length of service - seniority in work.

Supervision.

1. Regular - by a Medical officer
2. Recognition of merit or competence

3. Method of correction - to fit in with local practice.
4. Supervisor must know all the people he is supervising - personally.
5. Must take responsibility for the mistakes of the auxiliaries
6. Supervision - should be less oriented towards finding fault and more oriented towards guidance and discussion of problems.

PATIENTS SEEK CARE: Reasons

1. Confidence that cure is probable.
2. Good quality of system.
3. Availability.
4. Cheaper cost or free centres
5. For prevention measures
6. Curiosity

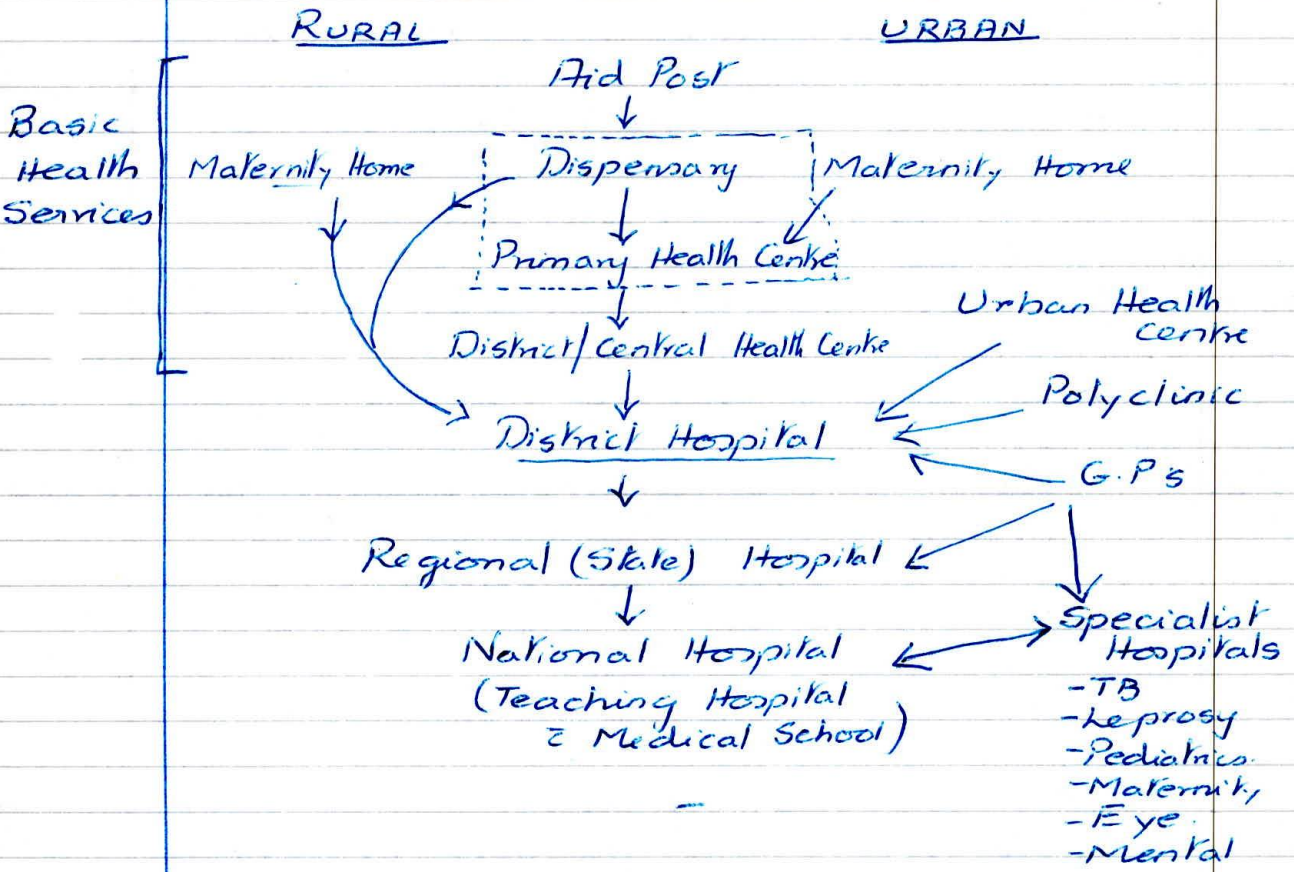
Ref: Haro A.S. (1971) - Measure of Need.

J. International Epid

Biologically	Not Ill		Ill		
	No	Yes	No	Yes	
use of service	Perceive need of care.				
	No	Yes	No	Yes	
No	Healthy don't use	Healthy Perceive unfounded need but neglect	Doesn't perceive Doesn't use	Sick Neglects care	Not available No confidence Traditional beliefs
Yes	Healthy. Participate in Pre. med exams & studies	Healthy. Perceive unfounded need & make contact	Doesn't perceive Participates in health exam ⁿ	Sick Seeks care.	

25/1/73

Health Services



G.P.s concentrate in ~~Rural~~ Urban Areas in all developing countries because

1. Difficult to make a livelihood in the villages
2. No electricity for home & hospital.
3. Living conditions not too good
4. No educational facilities for his family
5. Working conditions not good.

Encouragements to G.P. to work in rural areas

1. Grant - capital for hospital
2. Inducements - tax relief.
3. Discouraging entering Private practice
 - a) Bonding
 - b) Rural Postings

Encouragement for Govt. Rural Work. in general

1. Reorientation of medical education
2. Bonding to Govt Service
3. Early years in a rural hospital
4. No postgraduate grants unless worked in rural areas
5. Full Nationalised health service so that all doctors come under national health programme.
6. Improve general education facilities in villages.
7. Good housing on hospital campus.
8. Better & comfortable living facilities.
9. Allow combination of Rural work and private practice

8.

Importance of reviewing work of each member of the staff - to determine degree of utility e.g.

Staff	Activity - M.C.H Centre					
	Antenatal	Post N	Additional visits	Infant Clinic	Child Clinic	Total Kuno hrs/wk
1. Midwife	5.5	2	1	-	-	8.5
2. Asst. Midwife	5.5	3.5	1	10	-	20
3. Public Health Nurse	2.5	-	-	40	20	62.5
4. Asst. Nurse	2	-	-	10	10	22
	<u>15.5</u>	<u>5.5</u>	<u>2</u>	<u>60</u>	<u>30</u>	<u>113</u>

Improved Pattern

1. Midwife	7.5	3.5	2	10	-	23
2. Asst. Midwife	8	2	-	20	-	30
3. Health Visitor	-	-	-	20	10	30
4. Asst. Nurse	<u>-</u>	<u>-</u>	<u>-</u>	<u>10</u>	<u>20</u>	<u>30</u>
	15.5	5.5	2	60	30	113

9/1/73

Ref:

- ① Medical Care in Developing Countries
O.H. Economics
- ② Partners in Development - Pearson Report
- ③ Health in the Developing world - Bryant.

Indices to measure → Characteristics of Underdevelopment

1. <u>Population</u>	Third World = 66%	Dev - 34%
2. <u>Wealth</u>	" 12.5%	" - 87.5%

Wealth 3. G.N.P per capita
e.g. Malawi 40\$
China - 85.
USSR - 1000
USA - 3240

Education 4. Composite Index
a) - 15-19 years % enrolled in Sec. Sch.
b) % enrolled in ~~post~~ tertiary education x 5.
e.g. U.S.A - 1 (Rank order)
Pakistan - 42.
Ethiopia - 75

5. Population increase - Percentage

Ref ④ Medical care in Developing Countries.
Maurice King.
⑤ The Year 2000 - Kahn & Wierner (1968)

Rates of Change 6. Wealth rate projections over time
e.g. to the year 2000

Health 6 Rates used to compare Health conditions of developed and under developed countries

1. Incidence and prevalence rates of various diseases.
- study disease patterns.
2. Population pyramid.
3. Life expectancy.
4. Infant mortality rate & neonatal,
5. Maternal mortality perinatal.
6. Death Rates

Technological 7 Measures of Production & industrial progress
- energy. - hydroelectric power
- imports
- exports
- rail tracks

8 Rate of Urbanisation & % of Urbanisation
e.g. → UK - 82% W. Germany - 78% Kenya 16%
of latter USA - 70% Malaysia - 43% Thai 13%

Health 9 No. of doctors, nurses, hospital beds and Ratio indices ie no. of people / doctor / nurse / bed

e.g

Ratio indices 1962

Country	Doctor	Population per Nurse	Bed.
Colombia	2000	16,600	320
Nigeria.	50000	7000	1960
Thailand.	7600	5900	1260

No. of

Beds not a very good index \therefore

- i) Not representative of total medical care but only inpatient care.
- ii) 'Bed' description itself variable - patients on the floor in a rural hospital.

10 Distribution of medical personnel throughout country.

11 Government expenditure on Health.
% GNP % Govt Budget Per population in US \$

Statistics For India

1. Population - 550 million.

- i) Urban: Rural 20:80
- ii) Density - 178 per sq km.

2. G.N.P per capita (1965) 90 \$

No. of years needed to reach US GNP (1965) = 117

3. Composite Index 35.2

Rank order according to C I - 35

4. Population increase: 11.6 million/yr.
Rate = 2.5% per yr.

5. Vital Statistics

Birth Rate	37/1000	(70)
Death Rate	16/1000	(70)
I.M.R	139/1000	(70)
Life expectancy	50	(70)

Chagas disease

Recent discovery of mode of transmission - Blood Transfusion

- 99% of donors +ve to CFT
- 1-2% of these can transmit infn

- 1

6. Medical Education

No. of Medical Colleges = 103 (1971)

Admission capacity = 12000

7. Medical Care

No. of doctors = 1,15,725 (70%)

Doctor population ration 1:4730

Rural PHCs = 5183. $\left\{ \begin{array}{l} 2553 = 2 \text{ doctors} \\ 2455 = 1 \text{ doctor} \\ 175 = \text{No doctor} \end{array} \right.$

Subcenters = 28,167.

Hospital bed population ratio = 0.49/1000 (1968-69)

Nurses (71) - 66,000

8. Health Expenditure

	Outlay (million)	Health (mil.)
Third Plan	82,000	3418 (42%)
Fourth plan	159020	11555 (72%)

	III	IV
Health	2095	4335
Water supply & Sanitation	1053	4070
Family Planning	270	3150

"Mass Campaigns Vs General Health Services"

1. Local characteristic of a given health problem.
2. Type of existent health organization
3. General administrative set up.
4. Economic Conditions.
5. Cultural and social Habits of the population
6. Opportunities for General development.

Defn

- ① Mass campaign: A health programme that concentrates its efforts on the application, on a community-wide basis of measures specifically designed for the control of a particular disease
(Vertical)
- ② Gen. Health Service: Organised system of institutions in a given area responsible for carrying out a health programme of a multi-purpose nature using to a large extent multipurpose health workers and seeking as its ultimate objective, to meet the overall health needs of the population (Horizontal)

G. H. S

- Pros
1. Organisational structure
 2. Permanency.
 3. Participation in Community life.
 4. Adaptation to needs and resources
 5. Capacity for change and expansion.

- Cons
1. Lack of trained staff.
 2. Financial resources reqd.
 3. Many diseases have to be firmly rooted out by systematic, intensive methods

4. Significance of other health problems can become apparent for a rational plan only when such diseases are substantially reduced.

M.C

1. Intrinsic importance of disease
2. Economic considerations - productive capacity of populn.
3. Attitude of population
4. Technical requirement
5. Operational feasibility
 - i) clear precise schedules of work
 - ii) well defined techniques
 - iii) Frequent, expert supervision at all levels.
 - iv) Simple clear reporting
 - v) clear understanding of steps to be taken
6. Administration facilities
7. Consonance \bar{c} National Health problem.

Factors for Combining both

1. Interdependence of health problems
2. GHS reqd for consolidation and maintenance stages of M.C. (System of surveillance)

Combined campaign

Sequential campaign

Pre-eradication programme: Development of basic health services and health infrastructure before a campaign

- Conversion of single purpose staff to polyvalent workers.

- Completion of mass campaigns and their

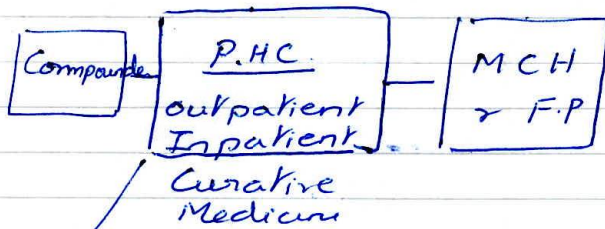
absorption at i) Peripheral level
 ii) Regional levels } maintenance of
 iii) Central level } a) Supervisory staff.
 b) Efficient, skilled,
 specialised personnel for re-assessment
 of problem at hand or other similar programme.

INDIA

N TCP - 1949
 Mass Campaigns - NMEP - 1952
 NFEP 1955 Goitre
 NSEP 1962 Trachoma
 N C.C.P 1970
 NLCP - 1955
NEFP

PHC =

Medical officers 1+1
 Compounder (Pharmacist).
 Public Health Nurse - 1
 Medical Soc. Worker - 1
 Nurse - 2
 ANM - 2
 Sanitary Inspector 1 or 2
 Health Assistant & Med. Aux. - 4
 Lab Assistant.
 Drivers & Class IV Staff



Fieldwork for National Programmes

- Sanitary Inspector] - Spraying
- Health Assistants] - environmental sanitation
- Social Worker] -> Motivation
- ANM]

=

Health and the Developing World

Impressions

1. Poverty.
2. Belief in mysterious forces.
3. No faith in health centre doctor.
4. Traditional systems esp in midwifery.
5. High cost of medical treatment.
6. Traditional weaning habits and malnutrition.
7. Poor transport facilities to hospital.
8. Special ways of life - nomadic.
9. Poor sanitation.
10. Overcrowding in hospitals.
11. Lack of money and personnel, - politics.
12. Lack of conscientiousness in the B.H.W's.

Problems countries face.

16/10

"Culture & Community"Dr. SchramPioneers in Public Health — Health of Towns

1. Chadwick, Edwin (1832) - Lawyer of London.
Observations on Sanitations - Reports of Royal Commissions.
2. SIMON, John - First Med. officer of Health in London.
3. SHAFTESBURY, Earl of - passed First 'Factory's Act' (1833) and 'Mines Act' (1842) - Pioneer in Industrial Health.
4. DUNCAN - Liverpool - widening of roads, piped water supply, system of health visitors.
5. SNOW - Account of a Cholera Epidemic in London and pinpointed that infected water was the cause (1854)
6. W. BOOTH (1865) - started Salvation Army.
7. BARNADO - (1880) - started homes for orphanages & destitute boys
8. BOOTH, Charles - (1890)
9. ROSS, Ronald - Anopheles mosquito in malaria cycle. also in Town health planning.
10. GORGAS - Yellow fever studies in Panama
11. OLUWOLE ¹⁹²⁶⁻¹⁹⁵⁰ - Studies on plague in West Africa
12. MARRIS ¹⁹⁶⁰ - Social survey of people in a city, and rehousing plans.

Pioneers in Tropical Medicine

1. LEEUWENHOEK (1673) - Microscope-inventor
2. (1796) JENNER, Edward. - smallpox vaccination.
3. (1847) SEMMELWEISS - Observations on puerperal fever
4. (1860) - PASTEUR Louis - Demonstrated bacteria and experiments on fermentation
- description of anthrax bacilli etc.
5. (1870) LISTER - Theory of antiseptics in Surgery.
Use of phenol-carbolic acid.
6. 1870-1900 - Discovery of Bacteria.
Lepra bacilli - Hansen
Filaria - Lewis, Bancroft.
Relapsing fever - Obermeier
Amoeba - Loesch
Cholera TB - Robert Koch.
7. 1897 MANSON-patrick - first +ve link between insects + disease - Mosquito-microfilaria - Filariasis
Gonococcus - Neisser.
Diphtheria - Klebs + Loeffler.
Malaria - Ronald Ross.
Yellow fever - Reed, Gorgas.
Sleeping sickness - Bruce ^{Castellani}
8. KOCH + KLEINE
13. William Farr - started office for registration of births + deaths

11. - Elizabeth Fry - Medical care in prisons

12. Father of occupational

Medicine = Bernardino Ramazzini

(1910)

9. BALFOUR, Andrew - Wellcome laboratory in Kharkov

10. NOGUCHI - Japanese research worker - worked on syphilis and yellow fever

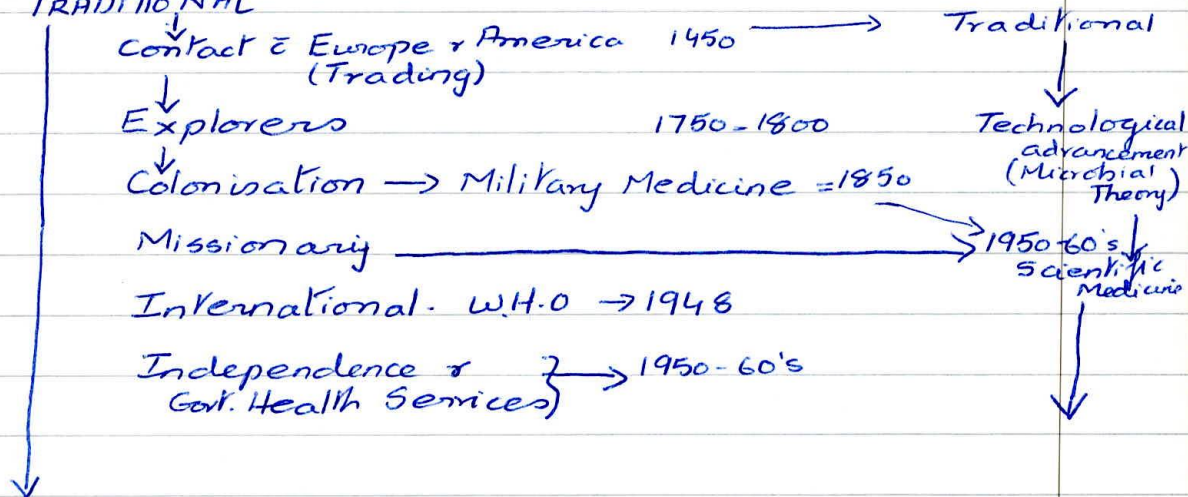
NO TOUCH I
NOGUCHI

20/10

Development of Health Services

AFRICA

TRADITIONAL



13/10

TROPICAL HYGIENE

Dr. Colbourne

"Characteristics of Tropical and Developing Countries"

① Geographical division of tropics not relevant.

② Climatic - Hot dry & Hot-damp.

Effects

1. Heat effects - stroke, exhaustion - more common in hot dry.

2. On organism - higher temperature leads to quicker development of gametocyte in mosq. stomach to sporozoite in its salivary gland.

3. On vector - mosquito passes through cycle more rapidly (egg to adult) in hot damp areas.

In very hot dry climates mosquitoes may not survive.

- House fly develops faster in a hot-dry region (indirect result of climatic conditions on predators of fly eggs & larvae).

4. On housing:

Hot dry - walls thick, ventilation less, high rooms

Hot damp - ventilation good

③ Socio Economic

Tropical countries are as a general rule socially and economically less developed than Developed countries.

1. Education - less well developed → staff ↓ esp doctors ↓

Training ↓
nurses ↓
Sanitarians ↓

∴ Question of how far intermediate technology groups can substitute for doctors.

Intermediate technology ↓

2. Health services - i) Staff ↓

ii) Direct health facilities ↓

iii) Environmental facilities ↓
water supply, sanitation etc.

3. Control of Communicable diseases more difficult because ↓ in men, ^{money} (machines) and materials.

4. Cultural characteristics of most of these countries also affect the methods used and their acceptance

④ Demographic

Demographic patterns characteristic of tropical or developing countries.

i) Premodern - High B.R & D.R. - Annual Growth Rate small.

ii) Transition - High B.R and fall of D.R.

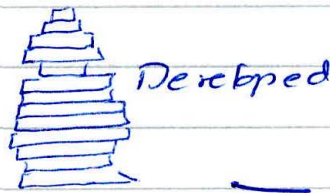
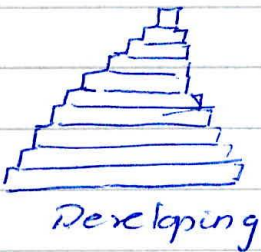
iii) Modern - low BR and low D.R.

e.g. Demographic profiles of modern transitional and modern populations (based on stable population).

For West: female.

B.R.	45.6	45.7	20.4
D.R.	40.6	15.7	10.4
Annual G.R. (Growth Rate) percent	0.5	<u>3.0</u>	<u>10.</u>

Population pyramids are also characteristic of developed and non-developed countries



⑤ Disease Pattern - discussion based on handout "Singapore - Principal Causes of Death"

1. Infectious diseases have decreased.

e.g. TB has i) fallen relatively - 2 to 6th position.

ii) fallen absolutely - 235 to 376/100,000

2. "old age" has i) increased relatively

ii) decreased absolutely,

increasing accuracy in diagnosis

3. Certain diseases classified under group like "infantile convulsions", fever unspecified' or "old age" are because unqualified personnel make such diagnosis
4. Nutritional diseases also, ^{nearly} disappeared.
5. Cancer has gone up relatively, and absolutely showing i) increase in numbers of cases, ^{relatively} by better diagnostic techniques - numbers from other groups like 'old age' enter the new figure
ii) Older people increase in population $\rightarrow \therefore$ Cancer figure \uparrow
6. Malaria, Dysentery, parasitic diseases all decreased relatively and absolutely
(ii) Can increase also due to increase in habits like smoking etc - but not very likely
7. Figures of infantile convulsions show:
 - i) unqualified personnel making diagnosis
 - ii) Fevers in children very common.
 - iii) Improved child health in 1964
 - iv) ?? less birth injuries due to better maternal care during injury -
8. Violence deaths less because.
 - i) better treatment

- ii) improvement in law & order in 1964
- iii) occupation health risks less in 1964.

9. Congenital malformations occur only in 1964 list in 14 because

- i) Better diagnosis
- ii) Relative increase on the list.
- iii) Lesser children in 1924.
- iv) ?? more drug toxicity.

10. That infantile mortality rate has gone down can be surmised by decrease in figures of infantile convulsions, dysenteries and nutritional diseases

11. An all around increase in health services to the people can also be concluded from the above figures since infectious & communicable diseases have decreased greatly —

Public Health Administration - Organisational Aspects (Harlan)

Chapter 9

① Introduction

Tasks of Dept of Health.

- Services
- Control of certain human activities
- Health education of public
- Guardianship of records

④ Purposes of organization

Administrative organization

Administrative management

"Organization is the arrangement of personnel for facilitating the accomplishment of some agreed upon purpose through the allocation of functions and responsibilities. It is the setting of the efforts and capacities of individual and groups engaged upon a common task in such a way as to secure the desired objective with the least friction and with the most satisfaction for those for whom the task is done and those engaged in the enterprise."

② Component Functions of administration (Gulick)

Planning

Organising the formal structure

Staffing

Directing work/making decisions

Coordinating staff activities

Reporting to executive & those responsible

Budgeting & fiscal management and control

③ Changes in P.H. Adm (In Recent years)

P = Long range Planning.

D = Consolidation of P.H. Agencies

I = Integration of internal administrative responsibility,

S = Job classification

Examination of prospective employees

Adoption of merit systems

Pre-service/In-service training programme

Decline in patronage appointment

Increase in professionally qualified

C = Coordination of Staff Activities

Expanded interagency coordination

Establishment & use of budgetary procedures

Expansion of administrative and

Service function of Health Agency

- Shift from Law enforcement to administrative regulation to health education

⑤ General Principles of Organization (Outline by Pfiffner)

1. Hierarchy or 'scalar' process

↳ broad functional base and

single, apical executive head

2. Every unit/person ultimately answerable to head

3. Principle subdivisions - Functional

4. Effective Span of Control

5. Self contained departments

6. Staff services - General & auxiliary

7. In large organisations personnel and finance shd be under 'chief'

8. Distinction between staff and

line activities and personnel shd be operating principle

and understood by all concerned

⑥ Levels of organisation

Three Levels

- Policy making — Legislative bodies & Boards
- Administrative
- Functional.

⑦ Policy Making

- Boards Odd numbers
Appd by head of Govt
Specific term
Professional / Community representatives
Specific responsibilities / functions

b) Advisory Committee

Additional means of obtaining broader community contact and participation.

Types i) Constituent

ii) Technical.

- These have no powers.
- Temporary basis

⑧ Administrative Level

Hierarchy & scalar plan.

Chief Exec - Health officer / Commissioner at apex.

Functions

- Political leadership
 - Administrative management
 - Ceremonial representation.
- Basic administrative Policy
 - Written orders / direction
 - Details of organisation / agency.
↓
Structure / leadership / responsibility.
 - Coordinated activities
 - Arbitration of claims of conflicting action / overlapping jurisdiction
 - Development of fiscal programme
 - Supervision of expenditure
 - Ultimate supervisory responsibility
 - Leadership
Long range new Executive behaviour to seek out those he needs / need him

⑨ Functional Level

i) Delegation of control steps

Desire to delegate
Selection of dept. heads
Definition of responsibility,
Training for responsibility,
Delegation of authority

ii) Establishment and demarcation

of general policies thru-out structure of organisation

iii) Management planning

- job analysis
- organisational studies
- budget planning
- work flow studies
- Standardisation of systems, techniques / procedure
- Internal checks - danger signals
- Flow of management up and down & across.

iv) Organisational chart

⑩ Scalar Principle

Administrative arrangement of the functional group or units in steps as in a scale.

- Leadership
- Delegation
- Functional definition

Concepts

- Unity of Command.
- Lines of authority, and responsibility.

Specific functional divisions

Units of organisation

⑪ Organisational structure

- Divisions
- 6-8 ideally for effective span of control. To prevent field day for pressure groups or forceful division chiefs

... of services and
 - logically
 - direct responsibility
 and reciprocal relationships
 clearly indicated.

Types of Organisation charts

- i) Skeleton
- ii) Personnel
- iii) Functional

Grouping of workers in functional

bureaus shd be based on

- i) ^{Major} Purpose of service milk control, H. educ^t
- ii) Process used ^{e.g.} - lab analysis, therapy,
- iii) Persons or things dealt with ^{e.g.} - expectant mothers
TB patients
- iv) Place where service is rendered
^{e.g.} County or School
- v) Knowledge, skill, and facilities
available & procedural convenience.

(12) Staff Services

Three Types

i) Administrative

ii) Service

iii) Auxiliary

Functions

i) Program planning

Budgeting.

iii) Personnel management

iv) Structural organization

(Self explanatory
 Method/Planning/Technical
 aspects of operation)

i) House keeping

ii) Stenographic pool.

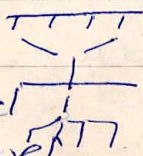
iii) Statistical service

iv) Central purchase/supplies

v) Accounting.

(13) Line of Action

Coordinated at each level
 before moving to next level



(14) Decentralisation

- i) Physical decentralisation
- ii) Authority/responsibility "
- iii) Operational "

At each level three functional areas

- i) management service
- ii) Health operators
- iii) Professional/technical direction

(15) Coordination and Control

Measures

- i) Harmonious/effective functioning
- ii) Avoidance of duplication and conflict
- iii) Best step - organisational Chart
- iv) Administrative manuals
 written executive and administrative orders

information circulars

Special instructions/directives

All these should be numbered, codified, indexed and routinely channeled throughout the organisation.

v) Written records/reports

- Financial

- Service

vii) Correspondence

- Screening procedures

viii) Staff conferences

a) administrative control

b) promotion of good relations

viii) Staff committees for

a) Inspection

b) Survey

c) investigation

d) planning

e) coordination

f) technical study

ix) Checks at level of Functional line employees

- Work flow charts
- Cross checks
- Job analyses
- descriptions and standardization of methods/procedures
- internal cross checks

(16) Evaluation (Ref. Notes)

Reference

- Evaluation Schedule for Use in the Study and Appraisal of Comm Health Programs. APHA - 1937
- Guide to a Community Health Study. APHA - 1955

Personnel Management

(Horton, Chapter 10)

1. Pre requisites

2. Observation (1d-1wk)

3. Orientation (1-2 mths)

4. Field experience (3-6 mths)

5. Apprenticeship (3-12 mths)

6. Inservice training (ongoing educn)

For P.H personnel.

Field training type categories

7. Manpower planning.

8. Recruitment and Employment

Merit systems

9. Compensation/Tenure/Promotion

Efficiency & service ratings

10. Morale and discipline

↓
Leadership based on/ability not authority
direct or formal penalties
indirect or informal approach

11. Conditions of Job appeal

(Factor - Public Service, Prestige, Power, Financial Satisfactory environment gain)
Sign of admn efficiency

12. Overtime

13. Leaves

- Casual
- Earned
- Sick
- Special
- On duty

14. Inservice Training

- To make up technical/scientific information deficiency
- Enlarge outlook and understanding of job.
- Acquaint staff & fundamentals of personal and public relationships to ensure smoother day to day functioning.

iv) To keep staff abreast of newer technical, procedural, and administrative developments

Methods

- Formal orientation course
- Field orientation in well organised dept
- Conferences
- Staff meetings
- Refresher courses
- Full time study leave for specific course

15. Retirement plan

- social planning for security - pensions etc
- i) maintains efficiency
- ii) Provides place for newer & younger people
- iii) aids in solution of dependency of aged

Must have Good Pre-retirement Counselling

Fiscal Management in Relation to Public Health

(Honlon, Chapter 8)
1953

Public Health Programmes are usually govt-financed or ultimately from the tax-payers contributions — Hence sound management of the public financial programme is an imp responsibility of P.H. Admⁿ.

1 Fiscal policies of Govt laid by legislative branch

- i) General nature and extent of public health services to be provided
- ii) Appropriation of funds necessary to meet costs.
- iii) Revenue measures necessary for financing appropriations
- iv) Authority and responsibility for collection and expenditure.
- v) Establish operating units
- vi) Organise the machinery thru which operating units are financed.
- vii) Account to the public for
 - revenue measures enacted
 - expenditures incurred
 - services rendered.

2. Financial operations

- i) Revenue administration
 - ii) Treasury management
- custody and disbursement of public money.
- (Taxing)
Revenue estimates
Revenue measures)

iii) Budgeting

Types of Funds

a) Expendable funds

- i) General fund
 - ii) Special fund
 - iii) sinking fund
- b) Working Capital funds
- c) Endowment funds
- d) Suspense funds

Budget defined as:

administrative tool for the purpose of a) estimating future needs and future resources b) the wise appointment and systematic expenditure of the resources that are available during a given period of time.

Uses

To a P.H administrator budget not only fulfills demands for agencies providing funds but also holds many advantages and uses for him in his management of the health dept.

- i) influence on economic use of working resources
- ii) Prevents waste and conserves resources
- iii) Places definitely the responsibility for each function of the organization

- iv) presents in cold figures the best judgement of the executive responsible for a definite organisational objective.
- v) ^{Serves as a} Danger signal for indicating variance between estimates and results.
- vi) Determining relative effectiveness and cost of activities/procedures.
- vii) Compels organisation to study its market (the people) and its own methods and services.
- viii) Serves as a guide to future needs possibilities and sources of revenue.

Principles of Budgeting

1. Confidence in the idea and willingness to cooperate with its requirements
 2. Importance of enlisting the interest and cooperation of all subordinates in the preparation of the budget
 3. Estimates (guesstimates) should be based on
 - i) past performance
 - ii) existing assets
 - iii) plans for expansion
 - iv) anticipated assets
- Based on what is available rather than what is desired.
4. Items classified by units of organisation
 5. Flexibility.
 6. ~~Activities~~ based rather than heads of expenditure.
 7. Operating expenses / capital costs and fixed charges separately.
 8. Contingent funds (not more than 35%)

9. Since budget is essentially an estimate of future needs and activities its construction should take into consideration

- i) the cost of operation on the present scale
 - ii) ~~the~~ administrative / functional and depreciative costs
 - iii) Anticipated cost of operation of expanded activities
 - iv) coordination of existing and anticipated activities
10. Budget should be worked on a long-term basis - and checks thru out the year.

11. A sound system of accounting should be introduced.

- i) General ledgers
- ii) Complete and detailed record of receipts and expenditures.

12. Unit Cost Accounting valuable fiscal procedure (-computation of the complete cost of an item which may be either a product or a service.)

eg of a nursing visit
of a food service
of an immunization
of a sanitary inspection

13. Purchasing of materials and supplies
- central agencies
- inspection, sampling
storing, supply

14. Auditing of Accounts

CHALLENGES FOR MANAGEMENT OF HEALTH CARE
INSTITUTIONS IN KARNATAKA

- KEY NOTE ADDRESS

AT THE INAUGURATION OF
INDIAN HOSPITAL ASSOCIATION - KARNATAKA

BY
A.K.ROY
HEALTH CARE ADMINISTRATION
ST. JOHN'S MEDICAL COLLEGE HOSPITAL
BANGALORE 560 034

1.
AUGUST 1, 1992

Health care institutions are complex and dynamic, continually interacting with diverse political, economic, social and technological forces in their environments. It is difficult to assess the effectiveness of health care institutions and re-define the emerging role without a deeper understanding and analysis of socio-economic changes during the last 44 years. An objective analysis and realistic assessment of changes and development in health care scenario of this country since 1947 shall reveal significant result in reducing general, infant and maternal mortality, increase in expectancy of life at birth, control of some infectious and vector borne diseases, eradication of smallpox, etc. Amongst innumerable failures the major are population control, control of common communicable waterborne and airborne diseases which has long been eradicated in developed countries. There is no improvement in nutritional status of the population, the prevailing rate of malnutrition amongst the women and children is alarming. The failure is glaring in basic health infrastructure like water supply, sanitation, housing which directly influences the 'quality of life'. Debilitating diseases remained uncontrolled. Health problems related to industrialization, rapid and unplanned urbanization like accidents, disease related social maladjustment like STD, AID, drug addiction, mental problem are on the rise. Environmental pollution, degradation of natural resources, occupational hazards are going to add many more complexity to problem ridden health situation of this country. A significant effort has been made to improve the accessibility to health care by increasing the number of PHC's and subcentres. But the 'service quality' remained far below the expected level and absence of organised referral system, inadequate number of ill administered taluka and district hospital has plagued the health situation of the country.

In terms of reduction in death rate and increase in expectancy of life at birth the improvement is significant, but in terms of improvement in the 'quality of life' the growth is negative.

Our focus is on the health status of Karnataka. The total area of Karnataka is 1,91,791 sq. kms. divided in four revenue districts, 20 districts, 49 sub division, 175 taluka 250 towns and cities and 27048 villages. Nearly 42 percent of the villages are inhabited by less than 500 people. According to 1981 census population was 371.36 lakhs (projected 1992 - 462 lakhs), percentage of urban population 28.89, sex ratio 963, percentage literate 38.46, female literacy as low as 27.71, schedule caste and schedule tribe constitute about 20 percent of the total population; density of population is 194.

In 1988, birth rate has been calculated at 28.7, death rate 8.8, infant mortality 74, expectation of life at birth 56.3 and dependency ratio 858. Projected population by 2000 A.D. is 529 lakhs and increase of 75 lakhs on the current population

The latest available data (March 1990) revealed 288 hospitals with 34477 beds, 208 dispensaries with 121 beds, 625 Primary Health Unit with 730 beds and 1142 Primary Health Centres (PHC) with 7069 beds. In addition there are 160 Community Health Centres, (CHC, upgraded PHC) and 7793 sub-centres. Medical institution population ratio 1:19658 and bed population ratio urban 1:380 and rural 1:3689 total 1:1049.

There are 19 medical colleges (4 government, 15 private), 13 dental colleges (1 government, 12 private), 4 College of Nursing (1 government, 3 private).

As far as Indian System of Medicine and Homoeopathy is concerned in 1990 there were 23 hospitals with 750 beds and 407 dispensaries. There are 9 Ayurvedic colleges (government 3, private 6), 9 Homoeopathic Colleges (government 1, private 8) 1 Unani College (government) and 1 Nature Cure College (government). (government) ... (1)

Analysis of incidence and mortality from principal diseases of 1988 and 1989 reveal acute diarrhoeal diseases other than Cholera, Tetanus, Acute Respiratory Infection and Pneumonia, Tuberculosis are major cause of ailment and death in the state. Number of cases and death from gastro-enteritis and cholera is on the high side. Active Tuberculosis cases brought under treatment as on 1990 was 8,72,568. The prevalence rate of leprosy was estimated at 2.39 per 1000 in 1990.

Accessibility of basic health services in the state is indicated by the following :

TABLE - 1

	<u>Urban</u>	<u>Rural</u>	<u>Combined</u>
1. Delivery conducted at home by untrained village dai or other untrained professional (1986)	6.6%	17.6%	14.8%
2. Delivery conducted at home by relatives (46.4% of the total deliveries in the state)	19.6%	35.6%	31.6%
3. Death occurred and was attended by unqualified practitioner	4.2%	9.8%	8.6%
4. No professional doctor/Hakim/Vaidya attended (58.8% of total death were not attended by professionally trained physicians)	41.9%	52.6%	50.2%

Percentage of Infant death to total death in the state 24.53 compared to national average of 28.23. Thirty five percent of the population live below poverty line (1983-84). Percapita (Public Sector) expenditure on health (1985-86) is Rs.34.24 on Health Rs.8.86 in Family welfare, which is below all India level (Rs.46.23 and Rs.7.89).

There is a need for those concerned with decision making for the health and welfare of the people of a country to redirect their priorities to examining more fundamental issues. These issues are the basic mechanisms necessary for whatever programme may be formulated or eventually evolve through voluntary initiative. The inadequacies of our present programme are familiar to most. To review them again may help only to illustrate the need for a systematic, co-ordinated approach to their solutions.

As we review the myraid committee reports, proposals and programmes that have been abandoned or replaced by the planning authority in the centre since 1948 are excellent examples - it is clear that, lack of overall strategy and objective, piecemeal approaches are doomed to failure. It is doubtful that this country will make constructive progress in overall health affairs until it can view the problem as a whole. It must be understood that :

1. Health care extends beyond the delivery of health services. It cannot exclude consideration of such socio economic factors as education, housing, sanitation, income, nutrition, inequitable distribution of health facilities, environment, lifestyle and the training of appropriate manpower; ... (2)

2. The weakness of our present disjointed, fragmented and multilevel practice of delivering health care - whether it be narrower concept of sickness care or the broader concept of health and social care ('human care') - must be acknowledged by all parties if they even to be considered;

3. Change is inevitable and desirable, but change in any part of the system affects every other part. It must be gradual, consistent and compatible with defined objectives;

4. The system - which includes many levels and division of Government sector, civic authorities, voluntary sector, private sector, private practitioners, third party payers and consumers - must therefore be dealt with as a total entity;

5. 'A Comprehensive health and social programme' may not be monolithic, but can be administered by government, the private sector or any combination of the both;

6. A huge social service sector like health of a nation cannot be overly dependent on foreign technology, knowhow, import of bulk drug, etc. for a long time. The country has to develop its own model, technology, system suited to its own requirement in relation to quantity, quality and cost.

7. Integrated approach to health and medical care by trying to utilize the maximum benefit from various systems of medicine is a must - people are to be educated about strengths and weaknesses of each system so that they can feel free to choose;

8. It must take into account problems of organization, administration and leadership at all levels ... (3)

9. A comprehensive developmental programme can only succeed if leaders from all sectors work as partners, rather than adversaries.... (4)

The above requirements are enormous and highly complex. Components are numerous, complicated and competing. At the same time they are very much interdependent. If we do not consider them as a part of overall system, if the organizational base is not flexible, we cannot expect our solutions to bring lasting results.

The country is going through a period in which there is strong sentiment in favour of decentralization and local self determination and against control by central and state government. It seems natural, therefore, to ask why health and social care should be more structured and co-ordinated. The present 'system' cost too much to providers and consumers as the services are fragmented and uneven in quantity, quality and distribution. In a situation like this the consumer is unable to judge his money's worth. Above all, the health and welfare of the people of a nation are too important to be left to a haphazard diversity of practice.

COST OF MEDICAL CARE

Health and social needs of the people are basic to the nation's welfare. Central, state and local bodies have the responsibility to meet the needs upto their capacity. So do providers from the voluntary and the private sector and so do the recipients themselves. Cost-containment in human welfare is very difficult (over rationing) and we may disagree with the priority upon public and private expenditure, yet we must

still recognise that our 'human care' needs can be almost infinite, and from the resources from which they can be met remain finite. This is an inescapable reality that must be faced. The cost of health care - particularly of sickness care - is steadily increasing. ... (5)

Reliable financial data on national health expenditure is not available, several groups have attempted to estimate national health expenditure. There is wide divergence of data but one significant finding is voluntary and private sector expenditure on health varies 50 to 80 percent of total expenditure. These studies also suggest that India's overall spending as a percent of Gross Domestic Product (GDP) may vary from 3 to 8 percent of GDP, although the public sector expenditure is estimated around 2 percent excluding expenditure on family welfare, water and sanitation ... (6)

It must be understood that significant cost containment cannot be achieved through the efforts of voluntary providers it can only be achieved through prudent and knowledgeable buying by consumers. It is unrealistic to expect effective overall control of costs as a result of governmental initiative alone. The delivery of health care is a 'Big Business', one of the largest industries in the country. No business of its size would imagine that it could operate efficiently and economically, with a reasonable assurance to good quality, without careful coordination of all its component parts ... (7)

FRAGMENTATION, DUPLICATION AND LEADERSHIP

Instead of coordination, however, fragmentation of responsibility and duplication of services are common at all levels of health and social care - in central, state and local

bodies, voluntary and private sector. Clearly the result is increased costs.

In India health is a state subject, state and municipal local bodies are important financiers and providers of public sector health care. Government financing of health includes : expenditure by state government and local bodies, centrally sponsored schemes, purely central schemes. Government expenditure on health is subdivided into six heads, minimum need programme (rural health), control of communicable diseases, hospital and dispensaries, medical education and training, Indian Council of Medical Research, Indian System of Medicine and Homoeopathy, ESI and other programmes. Some of the health related programmes are provided through other ministries like Ministries of Human Resource Development, Social Welfare, Rural Development, etc. In addition direct financing of health is made through Ministry of Defence, Ministry of Railway and a number of other public sector organizations. Drugs and Pharmaceuticals is under the control of Ministry of Petroleum. In a situation like this problem of co-ordination, problem of leadership (who takes initiative) could be easily visualised.

Administration with competent and respected health professionals are the crying need. The government could not find ways to recruit and retain the necessary career professionals who could broaden the concern to human services. It is difficult to expect competence, continuity and consistency in programme in a bureaucratic and a highly politicized atmosphere in which these 'short tenure' bureaucrats operate.

The current sentiment that strongly favours more local control . at grassroot level and peoples participation - gives greater responsibility to the state. The leadership

has to be flexible, adaptive and innovative. In fact there are continuous allegation and counter allegation between centre and state officials about non availability of fund, non conformance to guidelines and inadequate result. If any one tries to make an objective evaluation from state's past record, a very legitimate question that is likely to arise whether their organization and competence are such that they will be able to carry out whatever responsibilities they are expected to assure.

A greater degree of fragmentation besets the private sector - voluntary hospitals, private teaching hospital, private profit seeking hospitals, industrial hospitals, nursing homes, diagnostic centres, third party payers, private practitioners, and the entire gamut of resources concerned with care of people. They are mushrooming in urban and semiurban areas, they are appearing to becoming more and more self centred and concerned with individual 'survival' or preservation of the market segment. Regional and state co-operation remained as lip service. The existing institutional and professional association do not have required expertise or organizational strength to deal authoritatively and competently with other organizations and with government.

In a pluralistic society like ours, states, local bodies and institutions differ greatly in resources and demands made upon them, in expertise and in local conditions. Solutions to these problems need pluralistic approach. They cannot be achieved solely by government initiative or solely by the individual effort of voluntary and private institutions. But this very need for varied approaches makes it imperative that

all levels of government, voluntary and the private sector work together to co-ordinate their efforts on every front. ... (8)

COST CONTAINMENT

Cost of medical care (sickness care) is rising out of all proportion and there is increasing public criticism. The major part of the expense is for acute care. "A satisfactory mechanism has not been found to deal with the remarkable influence of the physician, not only upon the responsibilities of the hospital and services it provides, but also on the utilization of those services and on the patients' admission, discharge and length of stay. Actions of the physician can affect the hospital's financial health and its very existence. Yet in most institutions the physicians assume no personal responsibility for costs related to the patients or to the hospitals". ... (9), The market place has little influence upon the physicians services for hospital costs. In private practice the physician charges 'usual, customary and reasonable' (UCR) fees, as well as broad latitude is given to the frequency of visits, utilization of technological procedures and the ordering of special tests - these rights are fiercely defended by the physicians and their association. ... (10) The lines are generally fuzzy between quality of care, custom, protection from malpractice and simple economics and income - all concern to the practicing physician. ... (11)

Planning, quality and utilization control and cutting down 'frills' are the general tools that could be tried by the voluntary and private sector. Regulation on consumption of

health resources is an impossibility in a democratic society. The alternative advocated revolve around the expectation that the purchasing bodies or individual patients will respond to market forces and will purchase prudently". ... (12). "People do not buy health care as they do clothes and groceries. They do not want to go to doctor or to hospitals any more than they want to go funderal homes. They usually ask for health care because they need it or because they think they need it"... (13) The cost of care is inflated in both ways : if they do not report early and wait for the disease to aggravate or they report too frequently with a tendency to overconsume health resources. "It is a rare personwho can assess the quality and quantity of care that he/she needs at one point of time and whatever he/she receives can be equated with its cost"... (14)

The health sector of a given society should endeavour to make the services available to common people at a reasonable and affordable cost. As we are moving towards free enterprise economy - the big question is who determines a reasonable and affordable cost and how ?

A realistic thrust of cost containment should be on health education making people health conscious, assume 'self responsibility for maintaining health'.

QUALITY ASSURANCE

Hospital authorities in government, voluntary and private sector are evading a formal system of quality assurance for a long time, whereas in advanced countries the present trend is toward 'Total Quality Management'(TQM). 'Doing Something somehow' may be an acceptable standard during

dire emergencies in the battle front. Providing medical services without any regular formal system of review, without developing any performance index (PI) year after year cannot be considered as a professional service. The governing board or management committee may not be aware that the institution (management) and the treating physicians are directly responsible to the patients for any lapse in service. The 'Consumer Forums' are getting more and more teeth and if we fail to maintain standard quality of services, they will drag us to the court. More than that, patients will be misinformed and they will become more conscious about their rights and underplay their responsibilities. The danger is, physicians will try to avoid the slightest element of risk, health services shall become more 'cost intensive and litigation prone'.

SICKNESS CARE AND HEALTH CARE

Many health care providers, payers and governmental agencies do not clearly understand that it is impossible to separate health and social services in considering the total welfare of the individual as a member of the family and a part of the community. Too many programmes and institutions are geared to sickness instead to health. The present emphasis is on crisis-oriented treatment of acute episodic illness. If it is to be truly effective, it must be viewed as only one part of a continuum. This should include ambulatory, institutional (acute and long term) and home health care... (15). It must also be recognised that the allied social components mentioned at the beginning of this discussion are of major importance in the development of a strategy or a programme for human care. For example, it is impossible to separate health from social

services in the care of children, the aged, the mentally ill or physically handicapped, the endemic patients of tuberculosis and leprosy, the indigent. A combined approach is not only more humane, but more economical as well. For many elderly individuals, mental illness and endemic diseases, social support in their own home is sufficient and home health care can be provided at about 50 percent less cost than institutional care.

It is quite evident that neither a governmental agency nor the private voluntary sector alone can plan for such comprehensive care, let alone provide it. Effective result can be achieved only through the coordinated efforts of the agencies, governmental and voluntary and private, that must participate in its provision along with those receiving them... (16)

HOW CAN WE APPROACH VARIOUS FUNDAMENTAL ISSUES

The health managers and planners are at a cross road - the population of the country is going to touch a billion by 2000 A.D., the country needs a gigantic health system, resources are scanty and health problems are innumerable, interwoven in the complex socio-economic fabric of the country. The need is for " A COMPREHENSIVE APPROACH TO HEALTH AND WELFARE". It is easier to point out deficiencies of our practice of health care than to propose practicable measures to improve it. It is not my purpose to advocate any specific plan. No one person can have the range of expertise required to find solutions to all the problems. However, I firmly believe that a concerted and systematic effort by those with experience in each of the major components of health care should find it possible to reach agreement on a comprehensive

programme that will work reasonably well. I shall confine myself to suggesting certain broad avenues which, if followed by all parties concerned, might lead to an organizational, administrative and leadership capacity to develop and implement a programme of health and human services for the people of this country.

ROLE OF THE STATE

Regardless of political philosophies, the states must always play a major role in any programme concerned with the health and welfare of their people. Questions are raised about competence and capacity to meet those responsibilities. Their organization, administration and leadership require far more attention and commitment than what has been demonstrated so far. The senior officials of various ministries involved directly or indirectly to various health issues, should be encouraged to mount a joint major study of the inherent problems. Its purpose would be to establish sound principles, guidelines and organizational patterns to help the states to carry out their responsibilities - whatever is required to assure effective methods for the delivery of health and social care to people. The experience of states could be thoroughly reviewed and deliberated before starting the process of reorganization. ... (17)

Each state should carefully explore, together with the private voluntary sector, the creation of an independent state 'Institute/Academy of Health'. This would enable the state to tap more effectively the many available resources of education research, health care provision and payment, and to develop a working partnership with governmental agencies,

business and labour interest and informed consumers.

Purpose of the Institute : Planning, quality control
Integration of facilities and programmes, modifications of
systems of providing and changing for health services with the
components of the delivery system. It must be concerned with
cost containment.

Objective of the Institute : Partnership and co-operation
with proper organization and administration of the state in the
broad field of human services and specific involvement of
government.

Authority of the Institute : The competence and the
representation of the body should enable each state to decide
what authority it should be given beyond that of providing
research and consultation. ... (18)

The delegates of Indian Hospital Association - Karnataka
are genuinely interested in establishing a formal partnership
with state government for development of health and welfare
of the people.

We must laud the Government of Karnataka's decisions to
establish a 'Health University' in the state.

ROLE OF THE CENTRAL GOVERNMENT

Again regardless of political trends, the Central
government bear a comparable responsibility to develop more
effective working organization and leadership. Serious
consideration has to be given for creating an innovative
atmosphere for testing and field trial of new concepts, ideas,

techniques with sponsorship and support of both central and state government and active participation of private voluntary sector. There are many experienced health professionals who have been active in health administration - both in governmental and private sector areas - who would be invaluable in such an effort. It is very essential that any activity or organization of this sort must not be politicized. Its objective should be to help the central government develop its organization and leadership so as to produce realistic and constructive programme and to administer that programme knowledgably and flexibly so as to allow for changes. Its approach should be strictly professional and its sole purpose the improved care of people - 'not to heating headlines and propaganda for the next election'.

Associated with this approach should be a renewed effort to establish a stable core of competent professionals in both central and state governments, who are respected and supported for their contribution to human welfare. ... (19)

ROLE OF THE VOLUNTARY AND PRIVATE SECTOR

In the voluntary and private sector the groups and individuals involved in the care of people, training and development of manpower, and continuing research are divergent in their objectives and goals. Their primary task would be to develop a mechanism by which many independent organizations with special interest can work together constructively and advise their partners in government objectively.

1. Health Care Model : We require to develop an independent and unique 'health care model' and gradually replace 'foreign technology and drug dependent sickness model', Our

model should embrace an integrated system of medicine - Ayurveda, Allopathy and Homoeopathy - and much more emphasis should be placed on development and popularization of herbal drugs and home cure.

2. Financing of Health : Economy and improved services may result from providing health care through 'Health Cooperative', 'Comprehensive Prepayment Scheme', 'Group Practice', Not much study or experimentation has been done on its feasibility in the country. They have the advantage of involving physicians in fiscal responsibilities. The most important aspect for consideration is it helps generation of income from more positive contribution towards improvement of health rather than from 'increased sickness'. ... (20), (21)

3. Health Services Planning

(a) Currently the system concentrates on crisis care of acute sickness in hospitals and nursing homes. Ambulatory treatment in outpatient clinic needs much bigger emphasis - lighted OPD is the need of the day. Equal emphasis should be given to develop integrated home health care services.

(b) Regional Planning : Overlapping and duplication of services has to be stopped at all cost, regionalization of health services is a must. The state health planners should play the pioneering role of coordinating various health service units. Free flowing referral system of both converging and diverging type could be developed through active co-operation of larger and smaller institutions.

(c) Primary Physician : The need for conscious, dedicated primary. (personal and family) physician in the country is much greater than specialists and superspecialist. The teaching programmes and institutions are required to pay more attention to training of 'well rounded' primary physicians. Such new physician shall be trained to recognize the patients' need and if the physician is unable or unwilling to follow up his patients conditions adequately, he should be the first one to encourage home health care agencies, other health services or specialist to share or take over the responsibility. Continuous medical education is a must for the primary physician, without which they may be gradually reduced to 'professional quacks'..(22)

4. Cost Containment: The emphasis of cost containment should be on : 'Health Education', 'Early Reporting', 'Quicker Inexpensive Diagnosis' and 'Home Care'. The top most priority should be on rousing 'health consciousness' and acceptance of 'self responsibility' for maintaining health.

5. Quality Assurance : We have avoided a formal system of review of quality of services for a long time resulting in 'non-professional attitude of doing something somehow by the health professionals in general'. The management of health care institutions demonstrate a 'typical fire fighting attitude'. The greatest mistake is ignoring the 'educational content from a review programme'. Services provided in this manner can never be termed as 'professionally and technologically sound'.

6. Professionalization of Management : The country needs a large number of well trained, experienced and dedicated 'health leaders'. Growing complexity of hospital and health management makes it imperative. Our success in meeting the comprehensive health and welfare need of the teeming millions largely depends on the professionalization of management.

7. Holistic Approach to Health Care : If we try to trace the changes and development in health care in both developed and developing countries in terms of rising cost, larger commitment of resources and outcome during the last four decades, 'sickness or illness' oriented health system has no future and has to be discarded. 'Wellness' orientation is a must. Should we commit the same mistake and wait till we reach a point of no return ? Should we change our direction and recast a new model and move towards holistic health ?

The system suggested does not require super agency or massive cooperate effort. It can involve voluntary and private sector institutions preferably in the shape of 'consortia or 'Confederation' or informal agreement of cooperation and many types of partner relationships. The fundamental objective would be concern for individual patient - putting him in right place and right time with the least delay (red tape) and the least expenditure and with maximum of continuing professional supervision... (23)

These suggestions are made only as modest challenges to stimulate thinking about realistic approaches to a comprehensive well co-ordinated system of health care for the people of this country. I am confident that a workable system

can be achieved if experienced professional from government, voluntary and private sector attack the problem with open mind, a spirit of co-operation and a determination to succeed.

A quotation from the speech of Jack Masur is appropriate "those of us who work in hospitals must join with education, social work, employment placement, vocational guidance and any number of related services to provide patients with the help they need to restore them to their maximum functioning ... physicians in hospitals must realize that their job is not ended when the fever is down, or the sutures out of 'clinical cure' has been achieved... we shall have to concentrate on the ends as well as the means in the management of patients"... (24)

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APPENDIX I

VITAL STATISTICS

	Karnataka	India
1. Birth Rate (1988)(Provisional)		
Rural	30.1	32.8
Urban	24.9	26.0
Combined	28.7	31.3
2. Death Rate (1988)(Provisional)		
Rural	9.5	11.8
Urban	6.9	7.5
Combined	8.8	10.9
3. Infant Mortality Rate (1988) (Provisional)		
Rural	83	102
Urban	46	67
Combined	74	94
4. Expectation of Life at Birth (1976 - 80)		
<u>RURAL</u>		
Male	54.0	51.0
Female	53.9	50.3
Persons	53.9	50.6
<u>URBAN</u>		
Male	62.9	59.6
Female	64.9	60.8
Persons	64.0	60.1
<u>COMBINED</u>		
Male	56.2	52.5
Female	56.6	52.1
Persons	56.3	52.3
5. Dependency Ratio: (1981) (No. of persons in the age group of 0.14 and 60 and above per 1000 persons in age group 15-59)	858	854

IMPORTANT HEALTH INDICES
(FOR PROJECTED POPULATION OF 1990)
(GOVERNMENT HEALTH AND MEDICAL INSTITUTIONS ONLY)

I	INSTITUTION POPULATION RATIO	
	i. Rural	1:19527
	ii. Urban	1:39789
	iii. Total	1:22895
II	BED POPULATION RATIO	
	i. Rural	1:3948
	ii. Urban	1: 551
	iii. Total	1:1496
III	DOCTOR POPULATION RATIO	
	Excluding Teaching Staff	1:10062
	Including Teaching staff	1: 8196
IV	AUXILARY NURSE MIDWIFE/MIDWIFE POPULATION RATIO	
	For Total Population	1:4869
	For Rural Population	1:3462
V	NURSE BED RATIO	1:7
ALL HEALTH AND MEDICAL INSTITUTIONS IN THE STATE		
I	INSTITUTION POPULATION RATIO	
	i. Rural	1:18796
	ii. Urban	1:22158
	iii. Total	1:19658
II	BED POPULATION RATIO	
	i. Rural	1:3689
	ii. Urban	1:380
	iii. Total	1:1049

INCIDENCE AND MORTALITY FROM PRINCIPAL
DISEASES FOR THE YEAR 1988 AND 1989

Sl. No.	Name of the Disease	1988		1989 (provisional)	
		Cases	Deaths	Cases	Deaths
1	2	3	4	5	6
1.	Acute Diarrhoeal Diseases other than Cholera	2,72,938	356	2,65,723	179
2.	Diphtheria	1,141	15	1,165	8
3.	Poliomyelitis	1,325	30	326	6
4.	Tetanus :				
	i) Neonatal	348	62	111	29
	ii) Others	5,630	358	2,789	147
5.	Whooping Cough	8,190	13	3,477	-
6.	Measles	5,750	33	8,706	20
7.	i) Acute Respiratory Infection	2,72,565	120	2,07,173	248
	ii) Pneumonia	7,697	101	2,748	80
8.	Enteric Fever	21,174	39	8,078	19
9.	Viral Hepatitis	6,944	93	2,602	71
10.	Japanese Encephalitis	44	18	7	3
11.	Meningococcal Meningitis	175	29	385	9
12.	Rabies	3,626	47	2,179	27
13.	Syphilis	9,192	1	5,973	-
14.	Gonococcal Infection	10,265	-	7,620	2
15.	T.B.	2,98,595	1,330	70,049	943
16.	All other Diseases	94,50,199	13,499	68,43,310	6,694
TOTAL		1,03,75,798	16,144	74,32,421	8,485

MORTALITY INDICATORS - 1986

Sl. No.	Indicators	KARNATAKA			INDIA		
		Rural	Urban	Combined	Rural	Urban	Combined
1.	Crude Death Rate	9.4	6.8	8.7	12.2	7.6	11.1
2.	Infant Mortality Rate	82.0	47.2	73.2	104.6	62.0	96.4
3.	Neo-natal Mortality Rate	60.8	35.5	54.5	65.6	36.2	59.8
4.	Post-natal Mortality Rate	21.2	11.7	18.8	39.1	25.8	36.6
5.	Pre-natal Mortality Rate	57.3	35.1	51.7	51.8	32.7	48.1
6.	Still Birth Rate	12.2	9.6	11.5	10.5	9.0	10.2

PERCENTAGE OF INFANT DEATHS TO TOTAL DEATHS - 1986

India/State	Rural	Urban	Total
India	29.40	22.00	28.23
Karnataka	26.16	18.58	24.53

PERCENTAGE OF POPULATION BELOW POVERTY LINE
PERCENTAGE OF POPULATION BELOW POVERTY LINE BY RURAL/
 URBAN AREAS 1983-84 (PROVISIONAL) IN SOUTHERN STATES & INDIA

Sl. No.	India/State	Rural	Urban	Combined
1.	Andhra Pradesh	38.7	29.5	36.4
2.	Karnataka	37.5	29.2	35.0
3.	Kerala	26.1	30.1	26.8
4.	Tamil Nadu	44.1	30.9	39.6
5.	All India	40.4	28.1	37.4

PER CAPITA (PUBLIC SECTOR) EXPENDITURE
ON HEALTH (MEDICAL AND PUBLIC HEALTH AND FAMILY
WELFARE OF SOUTHERN STATES DURING THE YEARS 1983-84 TO
1985-86

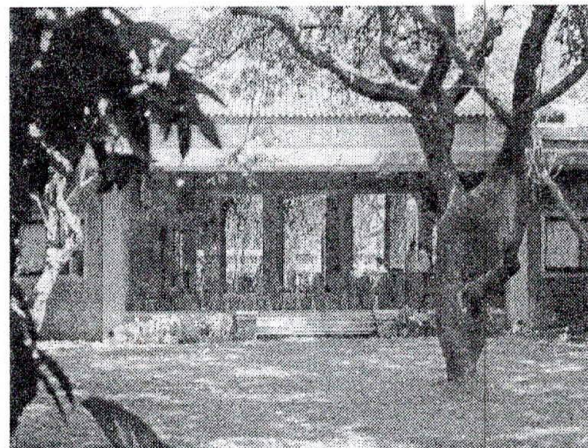
State/UT	1983-84 (Rs.)		1984-85 (Rs.)		1985-86 (Rs.)	
	Health	F.W.	Health	F.W.	Health	F.W.
Andhra Pradesh	31.32	5.69	33.28	6.56	39.08	7.86
Karnataka	24.98	4.80	31.58	5.62	34.24	8.86
Kerala	49.65	4.41	47.15	7.14	45.36	9.12
Tamil Nadu	50.76	4.63	40.84	5.39	47.57	5.23
Pondicherry	104.99	5.35	127.03	5.11	153.47	6.21
All India	37.20	5.41	41.24	5.88	46.23	7.19

TEN MAJOR DISEASES IDENTIFIED BY THE SURVEY TEAM
OF COMMUNITY HEALTH DEPARTMENT OF ST. JOHN'S
MEDICAL COLLEGE, BANGALORE

St. John's Medical College Hospital (Source: Hospital Records)	Vol. Organization (Source : Ques- tionnaire survey)	Government (Source : Dist. Health Office)
1. Chronic Obstructive pulmonary disease	Pyrexia of unknown origin	Gastroenteritis
2. Hypertension	Gastroenteritis	P U O
3. Diabetes	Upper Respiratory Infection	Rheumatic Arthritis
4. Ischaemic Heart Diseases	Anaemia	Acute Respira- tory Infection
5. Gastroenteritis	Leucorrhoea	Injuries
6. Urinary Tract Infection	Peptic Ulcer	Allergies
7. Pulmonary Tuberculosis	Injuries	Pyoderma
8. Bronchial Asthma	Pyoderma	Anaemia
9. Typhoid	Bronchial Asthma	Leucorrhoea
10. Septicemia	Scabies	Dysentries

MP-7.

Information on
**Master of Health Administration
and
Master of Hospital Administration
Degree Programmes 2001-2003**



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TATA INSTITUTE OF SOCIAL SCIENCES
(A Deemed University)

For circ lib
In
- 27/7/01

POSITIONS AND INCUMBENTS

Director

Prof. R.R. Singh

Head, Department of Health Services Studies

Prof. C.A.K. Yesudian

Administration

Dr. S.K. Bandyopadhyay	Registrar
Mr. H.G. Bhise	Asst. Registrar (Academic)
Ms. Janaki Ramdas	Asst. Registrar
Mr. Dilip K. Shetty	Asst. Registrar (Personnel)
Mr. V.L. Ghotage	Asst. Registrar (Accounts)

Academic Section

Ms. Geetha V.	Section Officer
Mr. V.G. Gimonkar	Senior Assistant
Mr. V.K. Shinde	Assistant
Ms. S.D. Bhalerao	Upper Division Clerk

Library

Dr. M.M. Koganuramath	Librarian
Ms. S. Subramanian	Assistant Librarian

Hostel/Dining Hall

Dr. H. Beck	Warden, Men's Hostels
Dr. V. Gowri	Warden, Women's Hostels
Dr. G.G. Wankhede	Chairperson, Dining Hall
Ms. S. Deodhar	Section Officer (Hostels)
Mr. M. Momin	Section Officer (Dining Hall)

Students

Prof. S. Bharat	Students' Union and Sports Advisor
Ms. Hemangi Naik	Student Counsellor

Hon. Medical Officer

Dr. (Mrs.) R.V. Ambekar

About the Institute

The Tata Institute of Social Sciences (TISS) was founded by the Trustees of the Sir Dorabji Tata Trust in 1936. Then called the Sir Dorabji Tata Graduate School of Social Work, it was given its present name in 1944. The TISS is a pioneering institute of Social Work and a centre of excellence in social science research in South Asia. It is a registered society under the Indian Societies Registration Act (XXI of 1860). In 1964, the Institute

became a Deemed University under Section 3 of the University Grants Commission Act, 1956.

About the Department of Health Services Studies

The Department of Health Services Studies was established in 1989 with the objective of undertaking training, research, field action and consultancy in the field of health services. The Department organises a one year evening programme, a Diploma in Hospital Administration and 5 to 10 short-term training programmes in health care management and hospital management. It also undertakes research projects sponsored by national and international organisations. The department is recognised as centre of excellence in health training by Ministry of Health and Family Welfare, Government of India.

About the MHA Programmes

The Master of Health Administration and Master of Hospital Administration, referred here to as MHA, fulfill specific needs of developing a cadre of professional managers in the health sector. The syllabus and course content take into consideration the existing background of available personnel and the future needs of the health sector. These comprehensive post-graduate programmes will provide a professional qualification for those who wish to take up health/hospital administration as a career. They will also be of immediate benefit to those currently engaged in health/hospital administration at senior and middle levels.

Format of the Programmes

The MHA is a two year post-graduate degree consisting of four semesters. Each semester is further divided into four modules. The duration of each module is one month, covering a few courses or an internship. The student will accumulate credits in each module. This means that the student has to write examinations, do assignments, make presentations and undergo internship training in each module, all of which will be evaluated for credits. The programmes are also organised in a step-ladder fashion in which the student will be awarded a **Certificate** for completing all the requirements for the first semester, a **Diploma** for completing all the requirements for the second semester, and finally, the **Degree** for completing all four semesters.

The step-ladder programme has been devised to help working administrators acquire credits at a pace convenient to their work and domestic commitments. This

means that, if a student can spend only a few months in an academic year for this programme, he/she can accumulate credits for the period of his/her work and can complete the programme at a slower pace not necessarily in two years.

Eligibility

1. The applicant must have a First Bachelor's Degree or its equivalent (under 10+2+3 or 10+2+4 or 10+2+2+1 year bridge course pattern of study or any other pattern fulfilling the mandatory requirement of 15 years of formal education to become eligible for admission to any Master Degree programme) from a recognised university in any faculty with a minimum average of 50% of marks (40% for SC/ST).
2. Age under 45 years. The age limit may be relaxed only in special circumstances.
3. Preference will be given to persons holding administrative positions in the health sector.
4. Medical graduates should have completed internship before the date of commencement of the academic session. Otherwise, their candidature will be automatically cancelled

Eligibility once determined on the basis of the information given by the candidate in the coding sheet shall be final for the purpose of test/interview/selection.

Method for Calculation of Average Percentage of Marks

Marks of only the first Bachelor's degree pursued by the applicant will be taken for determining her/his eligibility. Marks of all the subjects taken at the Bachelor's Degree examination, including major/main, minor/subsidiary, languages and college marks (internal assessment) are to be taken into account while calculating the overall average percentage of marks to be shown by all the candidates applying for the M.H.A. programmes of the Institute (page 2 of the application form for admission and the coding sheet). Examples for the same are given below. The candidates, whose marks are in the grade points must attach a **photocopy of the conversion table** along with their application to check the percentage of

LOCATION AND ACCESS

The Mumbai campus of the Institute is located in the North-East Section of Greater Mumbai on V.N. Purav Marg, earlier known as Sion-Trombay Road. It is situated opposite Deonar Bus Depot. The nearest local railway station is Govandi. State transport buses from Kolhapur, Solapur, Goa, Pune and other cities, pass by the Institute and the nearest ST bus stop is at Maitri Park.

BEST Bus Routes

The BEST buses stop near TISS is known as Deonar Bus Depot stop.

Locations

From Dadar Station

From Chhatrapati Shivaji Terminus

From Bandra Station

From Kurla Station

Bus Routes

90, 93, 503, 504, 506, 521 (all Ltd.) and 59

8 Ltd. (upto Diamond Garden, Chembur)

352, 358, 505 (all Ltd.) and 371

362 and 501 Ltd.

COMMUNICATION

Postal Address

Post Box 8313, Deonar, Mumbai - 400 088

Telephone/Fax Services

Telephone Nos.: 91-22-556 3289-96, Extn. 261

Fax: 91-22-556 2912

The telephone board functions from 9.00 a.m. to 8.00 p.m. from Monday to Friday.

e-mail

acadsec@tiss.edu

Website

<http://www.tiss.edu>

Telegram

FERNSTALK, Chembur, Mumbai 400 071.

- (iv) Fees once paid will not be refunded under any circumstances.
- (v) Hostel Accommodation: Selected candidates requiring hostel facilities should check allotment status from the Wardens. The Institute reserves the right to decide admission to its hostels and can refuse admission without assigning any reason.
- (vi) Medical examination: The candidate should undergo a medical examination on June 22 or June 25 after paying the fee of Rs. 50/- for the purpose. All foreign candidates and the Indian nationals returning from abroad, should give an undertaking to undergo an HIV/AIDS test, as per the Government of India regulations.
- (vii) Migration Certificate: Certificate issued by College/ University authorities should be handed over to the office of the Assistant Registrar (Academic), within a month after admission.

marks. In the absence of such a conversion table, the application will be treated as incomplete and rejected.

Examples for calculation of average percentage of marks.

1. In case of candidates who have passed a Bachelor's degree under 10+2+3 pattern of study.

I Year	Main Courses		Subsidiary Courses including languages				Grand Total
	I	II	I	II	III	IV	
Course No.							
Max. Marks	100	100	100	100	100	100	600
Passing Marks	35	35	35	35	35	35	-
Marks Obtained	60	45	50	65	50	54	324

II Year	Main Courses		Subsidiary Courses including languages				Grand Total
	III	IV	V	VI	VII	VIII	
Course No.							
Max. Marks	100	100	100	100	100	100	600
Passing Marks	35	35	35	35	35	35	-
Marks Obtained	70	60	40	50	55	55	330

III Year	Main Courses		Subsidiary Courses including languages				Grand Total
	V	VI	IX	X	XI	XII	
Course No.							
Max. Marks	100	100	100	100	100	100	600
Passing Marks	35	35	35	35	35	35	-
Marks Obtained	75	65	45	55	60	60	360

$$\text{Average Percentage of Marks} = \frac{324}{600} + \frac{330}{600} + \frac{360}{600} = \frac{1014}{1800} = 56.33$$

APPLICATION FOR ADMISSION

The prescribed application form may be obtained from the Assistant Registrar (Academic), Tata Institute of Social Sciences, Deonar, Mumbai-400 088, specifying the title of the programme for which admission is sought by enclosing: (i) a Bank Draft of Rs. 250/- (non-refundable) drawn in favour of TATA INSTITUTE OF SOCIAL SCIENCES, preferably payable at the State Bank of India, Deonar, Mumbai and (ii) a self-addressed envelope (20 cms x 25 cms) affixed with postal stamps worth Rs. 32/- for one form with brochure and Rs. 44/- for two forms with two brochures.

SUBMISSION OF APPLICATION

The application form must be complete in all respects with all annexures.

The Registration fee of Rs. 250/- (non-refundable) payable in cash at the Institute cash counter or by Bank Draft should accompany the application.

The last date for receiving the application forms at the Institute is **March 30, 2001** upto 2.00 p.m.

The last date for receiving application sent by POST from remote areas/regions (Assam, Meghalaya, Arunachal Pradesh, Mizoram, Manipur, Nagaland, Tripura, Sikkim, Jammu & Kashmir, Lahaul and Spiti district and Pangi sub-division of Chamba district of Himachal Pradesh, Andaman and Nicobar Islands or Lakshadweep) or abroad, **the last date is 06-04-2001.**

Candidates who are claiming the benefit of extended time should clearly indicate in their forwarding letter along with the application form, the name of particular area or region (e.g. Assam, Meghalaya, J&K, etc.) from where they have posted their application. In case they fail to do so, the benefit of extended time will not be allowed to them.

In case of applications received **BY HAND OR THROUGH COURIER OR COURIER SERVICES OF ANY TYPE**, benefit of extended time will **NOT** be available, regardless of the place of residence of the applicant.

Candidates should clearly note that the Institute will in no case be responsible for non-receipt of their application or any delay in receipt thereof on any account whatsoever. They should therefore ensure that their applications reach the Institute on or before the prescribed last date.

Candidates can also deliver their applications personally to the Academic Section, TISS, against proper receipt. The Institute will not be responsible for the applications delivered to any other functionary of the Institute.

Candidates should write their name and address on the reverse of the Bank Draft at the top, at the time of submitting the completed form.

The candidates should write in bold capital letters on the envelope "Application for Admission to the MHA"

Application will be treated as incomplete if the photocopies of relevant mark/grade cards and other testimonials are not submitted with the application form. Incomplete application forms will be rejected. Candidates will be called for the tests only on the basis of information provided by them in the coding sheet attached with the application form. Therefore, in case it is found that the information furnished by a candidate is incorrect or misleading or ineligibility being detected before or after the tests / interview / selection / admission, his / her candidature will be cancelled without giving reasons thereof.

Objection Certificate from the employer, if employed, and (x) a conversion table of grade points into percentage equivalents, in the case of grade card holders. **Admission will be subject to the fulfilment of the eligibility requirements as confirmed through verification of original certificates and mark-sheets.**

Original documents for verification will not be accepted by Post or courier service. They have to be presented by the candidate or his/her nominee in person.

Important: If any of the above documents in original are not produced for verification, or the copies of the document attached to the application form do not tally with the original documents, provisional selection will be immediately cancelled.

Announcement of Selection

The list of candidates selected will be displayed on the Institute's notice board on **Wednesday, June 20, 2001.** The selected candidates will be informed by post or telegram. **All the selected candidates will be expected to make their own arrangement to check the result of their admission to the Institute, since there is no guarantee about the delivery of telegram/letter.**

The M.H.A. programmes will commence on Wednesday, June 27, 2001.

After Selection Formalities

- (i) Acceptance letter should be obtained, signed and returned to the Academic Section on or before Friday, June 25, 2001, if admission is accepted.
- (ii) The full fees and deposits of the first semester should be paid to the Cashier of the Institute on or before June 25, 2001, if required by T.M.O. or a Bank Draft drawn in favour of **Tata Institute of Social Sciences.** Otherwise, the admission will be treated automatically cancelled. No further extension would be given and selected candidates in the waiting list will be offered the seat. Cash timings: 10.30 a.m. to 1.00 p.m. and 1.30 p.m. to 2.00 p.m. from Mondays to Fridays and from 10.30 a.m. to 1.00 p.m. on Saturdays.
- (iii) Those, who have accepted admission by paying the full fees and deposits, are expected to join the programme on June 27, 2001, Admission of those who fail to join by July 4, 2001 will remain automatically cancelled.

education in a different subject, e.g. B.Sc. after B.A. or B.Com. after B.A. or M.A. in one subject after M.A. in other subject will not be eligible for the G.O.I. Post Matric Scholarship.

- (d) SC/ST candidates who, after having completed their educational career in one professional line, continue professional studies in a different line, e.g., LL.B. after B.A./B.Ed. will not be eligible for the G.O.I. Post Matric Scholarship.

V. After selection

- (a) Reimbursement of Travelling Allowance (TA): Travel expenses from their place of residence to Mumbai for joining the programme will be met by the Institute on production of tickets or giving ticket nos.
- (b) SC/ST candidates in employment whose pay is protected during the period of study and SC/ST candidates who have already availed of the Government of India Scholarship, during a professional course of a University, will not be eligible for G.O.I. Post Matric Scholarship.
- (c) Those SC/ST candidates who are eligible for the Post Matric Scholarship will be exempted from payment of tuition fees and other fees including all deposits. They are also exempted from payment of Dining Hall and Hostel charges during their study at the Institute. However, selected candidates (other than Maharashtra) are required to bring two Post Matric Scholarship forms (fresh) while coming to the Institute for joining the programme. They should also obtain the parents'/guardian's signature on the form, wherever required.

Verification of Original Documents:

The following documents must be produced for verification in original by the selected candidates at the time of admission.

- (i) Secondary School Certificate Marks-sheet (X/XI); (ii) Higher Secondary Certificate Marks-sheet (XII); (iii) First Year/I & II Semester Bachelor's Degree Marks-sheet; (iv) Second Year/III & IV Semester Bachelor's Degree Marks-sheet; (v) Third Year/V & VI Semester Bachelor's Degree Marks-sheet; (vi) Fourth Year/VII & VIII Semester Bachelor's Degree Marks-sheet; (vii) Caste/Tribe Certificate (only for SC/ST); (viii) Income Certificate of the preceding financial year (only for SC/ST), (ix) No

SELECTION PROCEDURE AND ADMISSION

Assessment for Selection

Those satisfying the eligibility requirement will be assessed for selection through the following:

Academic Background

The academic background is assessed by the overall percentage of marks secured in the first bachelor's degree.

Essay Test

The topics for the essay test are based on contemporary issues. Candidates are judged in terms of their ability to understand the problem, to think clearly, to express in simple language and to present ideas systematically. This test will be conducted in **English, which is the medium of instruction at the Institute.**

Group Discussion

Every candidate participates in a group discussion comprising about 10 candidates. An assessment of the candidate is made on the basis of expression of ideas, relationship to the group and contribution to the discussion.

Interview

To be eligible for the interview, a candidate should secure at least 40% of the marks in the Essay Test and Group Discussion put together. The candidate is also expected to know something about the field of specialisation for which he/she has applied.

Reservation of Seats for Scheduled Caste/Tribe Candidates

15% and 7.5% of seats are reserved for SC/ST candidates respectively, under each programme.

Foreign Nationals

Foreign nationals have a maximum of 5% of the seats.

They have to obtain the **student visa** which should indicate (i) the name of the Institute, and (ii) the period of study at the Institute. Only such candidates will be permitted to appear for entrance tests at this Institute, subject to their fulfilling the eligibility requirements as

applicable to the general candidates. They will be admitted only if found suitable. If they have stayed in the hostel, they will vacate it by the evening on the day of announcement of their selection results.

Self-supporting foreign nationals should also give data, under item 18 on page 6 on the Application Form. Their admission is subject to the regulations of the Government of India. The candidates other than SAARC countries should deposit US \$2,850/- with the Institute immediately on admission, to cover the first year's fees plus board and lodging charges and related expenses. Candidates from SAARC countries will be required to pay all fees as per the Indian students. The Institute does not offer financial assistance to foreign nationals. They should give an undertaking to undergo an HIV/AIDS tests as per the Government of India regulations.

Deputed Candidates

The officers deputed by the Central/State Governments/autonomous organisation, for studying the MHA Degree Programme will have to undergo the written test and group discussion and, if found eligible, the interview, along with other candidates. A government officer, having quarter in the Mumbai Metropolitan Region, will not be eligible for hostel accommodation, unless the person has surrendered such accommodation and produces a certificate to that effect.

HOSTELS

Separate hostels are available for men and women. Candidates requiring hostel accommodation should include, along with the application form for admission, a hostel application form, duly completed and signed by the parent/guardian. While allotting accommodation in the hostels, preference will be given to students from outside Mumbai, who have no relatives in the city. **Please note that candidates cannot claim hostel accommodation, merely because they have submitted the hostel form.**

DISTRIBUTION OF CREDIT HOURS

The total credit hours for this programme will be 88, divided equally between the First Year and Second Year, as detailed below.

First Year	Credit Hours
Courses	32
Internship	12
Total	<u>44</u>

annum during the financial year 1999-2000. They should attach a photocopy of the income certificate of their parent/guardian issued by the employer or by a Village Revenue Officer.

- II. Reimbursement of Travelling Allowance (TA) etc.: Those SC/ST candidates who will be called for the tests to be held in June 2001 at the institute, must produce two photocopies of the income certificate for the financial year 2000-2001, before appearing for the tests. If the candidates appearing for the tests for the first time are unemployed, and their parent's/guardian's income is Rs. 60,965/- or below, per annum for the financial year 2000-2001 they will be provided free hostel accommodation, meals, and to and fro travel expenses (second class railway or State Transport Bus fare). The reimbursement of the travel expenses will be subject to their submission of the tickets or ticket numbers. **It will be the responsibility of the SC/ST candidates to fill in the TA form before they sit for the test and collect the money as soon as the test will be over. Non-receipt of TA will not be accepted as reason for overstay in the hostel.**
- III. SC/ST candidates who are eligible for such facilities should report at the Institute only after receiving the call letter for test. Any applicant not receiving call letter by May 15, 2001 should presume that he/she has not been called for tests. Those staying in the hostel will be required to vacate rooms immediately after the interview or the names of the candidates selected for interview will be announced, as the case may be.
- IV. (a) SC/ST candidates who have already availed of free facilities but were not selected and who wish to try again, should deposit on arrival, at the rate of Rs. 50/- per day, as lodging charges if they desire to stay in the hostel. Their boarding and lodging expenses at the Institute and travelling expenses will be reimbursed only if they are selected.
- (b) SC/ST candidates who have received financial assistance to enroll for any Master's degree programme of the Institute in one field will not be eligible for similar free facilities if they apply for Master's degree programme in another field.
- (c) SC/ST candidates who after passing one stage of education are studying in the same stage of

Selection for Interview

The names of the candidates eligible for interview on the basis of performance in the tests and group discussion will be announced on the same day at about **8.00 p.m.** The interview will be held on the next working day. Candidates not eligible for interview should immediately vacate the hostel, if availed of it, to make room for other candidates.

As the candidates are selected strictly on merit, no request will be entertained for information regarding the marks obtained by them in the entrance tests.

Facilities During Selection

Hostel

In comparison to the number of outstation applications received, the hostel facilities are very much inadequate. Therefore, hostel accommodation may be provided only to those candidates who do not have relatives or friends in the Mumbai Metropolitan area. Those needing accommodation should write to the Section Officer (Hostels) or the Warden, Men's/Women's Hostel. Since only a few rooms are available, allotment will be on first come first serve basis. During the period of selection, the charges for lodging will be Rs. 50/- a day which should be paid to the hostel staff immediately on arrival. Candidates who are not selected for interview must vacate the rooms immediately after the selection list is put up on the notice board. **Persons accompanying the candidates will not be provided accommodation.**

Dining Hall

The Dining Hall is managed by the Dining Hall Committee, consisting of student representatives, with a Faculty member serving as Chairperson. Vegetarian and non-vegetarian food is available.

Tea/Lunch Coupons

Coupons can be bought from the cash counter and the Section Officer (Hostels), if applicants wish to have Tea/lunch in the Dining Hall of the Institute

Special Facilities for Scheduled Caste/Tribe Candidates

1. Registration Fees: SC/ST candidates need not pay the registration fee if they are unemployed and their parent's/guardian's income is Rs. 60,965/- or below per

Second Year (Health)

	Credit Hours
Courses	26
Internship	12
Research Project	6
Total	44

Second Year (Hospital)

Courses	26
Internship	12
Research Project OR Additional Internship	6
Total	44

CURRICULA (Courses listed below are subject to change without notice)

Basic Courses: Each course is for a duration of 2 hours and carries 2 credit hours. BC1 to BC15 are **compulsory** for all the students.

FIRST SEMESTER

Basic Courses:

BC-1	Social Sciences in Health
BC-2	Health and Development
BC-3	Health Policy and Administration
BC-4	Principles of Health Services Management
BC-5	Research Methodology
BC-6	Qualitative Research Methods
BC-7	Organisational Behaviour
BC-8	Human Resource Management
BC-9	Labour Legislation
BC-10	Operations Research
BC-11	Health Systems Research
BC-13	Financial Accounting
BC-14	Basic Epidemiology and Bio-statistics
BC-16	Comparative Health Systems

Specialisation Courses (Health)

HE-1	Community Organisation in Community Health
HE-2	Management of National Health Programmes

Specialisation Courses (Hospital)

HO-1	Organisation and Administration of Supportive Services
HO-2	Organisation and Administration of Clinical Services

SECOND YEAR

Basic Courses:

BC-12	Economics of Health Services
BC-15	Strategic Management in Healthcare Settings

Specialisation Courses (Health)

HE-3	Financing of Health Services
HE-4	Advanced Epidemiology
HE-5	Health Planning
HE-6	Management Information Systems
HE-7	Materials Management
HE-8	Public Health Legislation
HE-9	Health Education
HE-10	Health Status of Women
HE-11	Urban Health
HE-12	Health Policy Formulation and Implementation
HE-13	Non-governmental and International Agencies in Health Sector

Specialisation Courses (Hospital)

HO-3	Organisation and Administration of Super-speciality Services and Facility Services
HO-4	Management Accounting
HO-5	Materials Management
HO-6	Marketing Management
HO-7	Financial Management
HO-8	Legal Framework for Hospitals
HO-9	Hospital Planning
HO-10	Information Resource Management
HO-11	Systems Development in Hospitals
HO-12	Quality Management
HO-13	Seminar on Management Issues in Hospitals

ESTIMATED EXPENDITURE FOR ONE ACADEMIC YEAR

	Rs.
A. Tuition Fees	9,000
Other Fees	820
B. Hostel	
Single Seater	2,400
Double Seater	1,400
Multi Seater	1,000
Electricity Charges	1,000
Dining Hall (for vegetarian food) (for non-veg. food extra charges)	7,200
D. Internship Expenses	2,000
E. Project Expenses (Second Year)	2,000
F. Block Internship Expenses	500
G. Refundable Deposits	4,000

**Total Estimated Expenditure
(Excluding Research Expenses)**

	First Year			
	I	II	III	Non-Resi.
First-Year	26,430	25,430	25,030	12,810
Second-Year	25,330	24,330	23,930	11,930

I - Single Seater Room; II - Double Seater Room;
III - Multi Seater Room.

Fees and Deposits payable for First Semester:

The following fees and deposits are to be paid to the Cashier, and the official receipt to be obtained by the candidate:

Rs. 6,940 (day scholars)
Rs. 11,640 (hostel students)

In addition, the hostelites will be required to pay the hostel charges, as per the hostel allotment.

Participation in Crisis Events: In keeping with the tradition of the Institute, the students may be called upon to participate in relief work and extension activities of the Institute, in or outside Mumbai, from time to time. Examples of some of the natural, social and human crisis situations that the students have participated in, are floods, earthquakes (Marathwada earthquake of 1993), environmental disaster, riots (Mumbai riots of 1993) and extension activities such as literacy campaigns. All students will be expected to participate in these activities which emerge from the character of the Institute as a university conducting professional courses, with teaching, research and extension functions and social responsibilities towards the community. The Institute will decide the extent of incorporation into the curriculum and the nature of credit to be awarded.

OTHER IMPORTANT INFORMATION

The tests will be held from June 13 to 19, 2001 except on Saturday and Sunday. The actual date of the tests of a candidate will be informed through the call letter which will be sent under REGISTERED POST. Any applicant not receiving such a letter should presume that he/she has not been called for the test.

Request for change in the dates for tests/interview will not be entertained.

30. Management of Health Information and Records

I. Introduction :

For planning and management of health services, every organization or department requires adequate, reliable and updated information. Without information, the decision-makers, be they doctors, administrators or policy makers cannot make effective decisions. The planners and administrators must ask the following questions :

- a. What is the nature of information required for planning: organizing, coordinating and control of health services?
- b. In what form is this information required and by whom, at what levels?
- c. When is the information required?
- d. How quickly should this information be available? What will be cost or consequences, if this information was not available speedily and in the right form?

On the basis of the above answers, the organizational leaders can determine the technology to be used in gathering information, storage of information and retrieval of information. Also, the organization can determine the type of manpower required to process information to maintain the records.

This chapter examines briefly the nature of information processed in a health organizational, the health services records to be maintained, the present status of information available in India and the approaches to gathering the approaches to gathering the required information.

II. Information and Records :

The types of information normally required by an institution and the types of records maintained are as follows :

Activity	Paper work
a. Correspondence	
Staff problems	Staff files
Patient problems	Patient referral letters
Administrative problems	Letters to and from supervisors
b. Health Care Activity	
Patient arrival	Registration
Examination & diagnosis	Clinical record
Treatment	Lab.Registration
Inpatient admission	Ward Register
Discharge	Discharge letter/form
Special Diseases	TB/Leprosy Register
Maternal care	Ante-natal card
Child care	Child health card

c. **Administration of Funds and Equipment**

Ordering	Requisition forms
Storing	Stock ledgers
Issuing	Issue Vouchers
	Inventories
Funds	Cash books
	Receipts
Staff Meetings	Petty Cash Vouchers
Environmental Survey	Minutes of meetings
General Activity	Report Forms
Health Education	Monthly Report form
Family Information	Posters/Leaflets
	Family file

Medical Records, planning, organizing and its management are based on the needs of a hospital.

Main considerations are :

a. Medical Records should always be available when required and in the form they are required. Good system of numbering and tracing to enable speedy retrieval are required.

b. Adequate liaison should exist between the different groups of staff using medical records to enable due consideration to be given to such matters as the design and content, methods of storage, availability, use and movement of records.

c. Medical records proceedings should cause patients minimum of waiting, inconvenience and embarrassment.

d. Medical records work will generally be organized on the basis of the hospital rather than the groups.

e. A group policy for the organization of medical records work should exist. There should be a medical records committee consisting of centre and state level officers responsible for managing health institutions. This committee should develop information and records system common for public and private hospitals, as well as nursing hours as per the provisions of the International Classification of Diseases, 1979.

f. The Medical Records Department should generally be adjacent to or linked with the Outpatient Department, where one exists, since normally a considerable part of its work is associated without patient arrangements.

III. Present Status of Health Information System :

a. Keeping in view the provisions of International Classification of Diseases, which became effective on 1st January 1979, there is gross inadequacy of health information needed for planning and management of health services.

b. Need for a change from the outmoded practice of maintaining the data in files which involves a cumbersome process for its retrieval to the increasing use of mechanized data storage and processing equipments.

c. Hospital statistics tabulated in statement A to F. Very few hospitals and States collect and report the data-major reason is lack of an agency for appropriate maintenance of medical records and processing and dissemination of the data mostly done by para-medical personnel like nurses, pharmacists, etc. Medical certification of cause of death and uniform classification of diseases, not maintained.

d. A central compilation scheme for hospital inpatient data has been effectively developed and provided encouraging results in the States of Punjab, West Bengal, etc. The scheme can be implemented by employing one or two statistical assistants or medical record technicians or creation of institutional statistics units at State headquarters.

e. Data on health manpower is inadequate.

f. Lack of information on facilities of undergraduate medical training, post-graduate medical education and different categories of para-medical-personnel training .

g. National diseases control programmes for malaria, filaria, tuberculosis, leprosy, cholera, sexually transmitted diseases, trachome and EPI diseases, limited surveys have been conducted to determine the extent of some of those disease. Epidemiological services are hardly developed to provide any significant information on the trends of the different communicable diseases and the epidemiological factors responsible for their spread and control.

h. GOI has stated "monthly Surveillance Report" based on data collected on cases and deaths of about 20 communicable diseases.

i. Primary Health Care : 5400 PHCs, 40,000 Sub-centres, village level community health workers being selected and provided training for community participation. Monitoring and Evaluation of these activities involves collection of health information generated from rural communities through basic health workers.

- i. Occurrence of communicable diseases-
Institutional and non-institutional.
- ii. Immunization and other preventive activities.
- iii. Maternal and child care and other family welfare services.
- iv. Vital events.
- v. Availability of health and medical services in terms of personnel, patient attendance, laboratory services, etc.
- vi. Health education activities.
- vii. Many other such information.

Suitable reporting forms using standardized vocabularies and definitions need to be evolved for transmitting information from one level to the next higher level at periodic intervals.

j. In order to meet the requirements of planners and administrators, data from official health statistics need to be supplemented by information that are not routinely collected. Such data could be obtained through special investigations-surveys and studies.

k. Currently, input data recorded in forms or registers and stored in files without sufficient classification of indexing which possess problems in retrieval. Scientific filing system for data storage with proper classification and indexing required.

IV. Suggestions for Improvement of Information and Records for Effective Health Services Management.

a. Medical Record Departments in all hospitals for carrying out maintenance of records coding, compilation and dissemination of the hospital statistics, is essential. Hospitals without medical record departments be provided with one or two statistical assistants.

b. Pending the establishment of medical record departments in hospitals, as an interim measure, a central compilation scheme for morbidity and mortality among hospital inpatients be introduced on the pattern already in vogue in the States of Punjab and West Bengal.

c. Need for special surveys : To fill up gaps in information that routinely collected official statistics fail to provide, following subjects should be surveyed on priority basis :

- i. General health status and nutritional status of the community .
- ii. Extent and causes of mortality particularly among infants and mothers.
- iii. Utilization of health services by the community.
- iv. Total medical care facilities under different systems of medicine.
- v. Health manpower studies including para-health personnel, state-wise and employment status :
- vi. Attrition rate, unemployment rate, rural-urban distribution, etc., of health manpower.
- vii. Assessment of the extent and magnitude of the problem of brain drain for health professionals.
- viii. Sample surveys on participation rates among highly trained professionals.
- ix. Assessment of provision of protected water supply and/sewage disposal in different geographic areas and
- x. Expenditure on health and cost-effectiveness studies of different medical and health care services.

d. There is a need for establishment of a national Centre of Health Statistics with a multi-disciplinary team of health and information specialists for collecting and providing all types of health information needed by health administrators.

These are some of the areas for development of information system in India for effective health planning and delivery of services.

References

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