THE UTILIZATION OF VARIOUS TYPES OF HEALTH PERSONNEL (DOCTOR, NURSE, MIDWIFE, AND AUXILIARIES) IN THE MANAGEMENT OF PEOPLE USING DIFFERENT BIRTH CONTROL METHODS IN HOSPITALS, CLINICS, HEALTH STATION HOME SETTINGS

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Population increase, besides being an economic, cultural and social problem, is also an important public health problem. Family planning is one of the public health model problems in which team work is fundamental and where multidisciplinary approaches are required.

In the discussion of the utilization of various types of health personnel in the management of people using different birth control methods, at different levels, four dimensions have to be considered. These are concerned with :

I.—The Settings.

II.—The Methods.

III.—The Phase of Service.

IV.—The Personnel.

Various factors interact to govern the relations of these four variables. Among these factors are the following :

1. Whether the clients come to the health station in the form of hospital or clinic, or the health personnel are directed to offer service on domiciliary basis.

2. Availability of the health services at a convenient time and place for the users whether these are fixed health stations or mobile ones.

3. Availability of the personnel at different levels and type of services with their proper preparation or specialization.

4. Attitude of the community and clients to male and female health attendants and their availability.

5. Acceptability of the available methods by the prevailing cultural, economic, religious and legislative factors.

6. Facilities for transportation for both the subject to reach health stations or for the health personnel to reach subjects at places of residence. This requires proper roads and available mobile units.

7. Attitude of the community for the methods of contraception with regards to sex usage.

8. Whether we are dealing with developing or developed countries. In many of the former countries, there are national programs that usually adopt certain birth control methods, certain approaches to the commuinity, certain types of personnel and special settings for services according to local circumstances.

9. A program is greatly modified to fit for the available facilities and budget. This is an important bearing factor and makes the programs different from one country to another.

10. The type of community we are dealing with, e. g. urban or rural, population distribution, population density, cluster, degree of maldistribution, supply of manpower, etc.

In the following sections, a discussion of the four variables will be presented with the particular reference to various countries experience. A survey in a table form will follow to try to fit the personnel at the different levels of settings, stage of service and the contraceptive method used.

SECTION 1 :

THE SETTING

The place of service can be classified into :

1. Hospital.

2. Clinic :

(*a*) Family Planning Clinics.

(*b*) Other Specialized Clinics.

(*c*) Physicians Consulting Rooms.

3. Community :

(*a*) Health Stations.

(*b*) Mobile Teams or Units.

(*c*) Domiciliary Service.

(*d*) Pharmacies.

1. Hospital Services :

An in-patient service for family planning in the form of sterilization or abortion conducted by specialists. The patient may be admitted for other maternity services and could be handled by the nurse, general practitioner or the specialist according to the recommended method of contraception to be used.

2. Clinic Service :

This is essentially an out-patient clinic according to the following levels :

(*a*) Special family planning clinics as separate clinics or part of out-patient clinics in hospitals.

(b) Many other specialized clinics can play a role in family planning, e. g. venereal diseases clinics, cancer detection clinics, nutritional clinics, pregnancy test clinics, T. B. clinics, etc. Such clinics can either offer service directly to the attendants or give health education with regard to the value of family planning for the particular group and referring them to special family planning clinics. The physicians, nurses or other personnel as medical social workers can actively participate in this job.

(*c*) Physicians consulting room : in many countries, like Korea, the family planning program includes the utilization of private physicians in their consulting rooms to participate in inserting I. U. Ds. The close doctor-patient relationship in private practice is an ideal context for family planning care at all the phases of the service. In Egypt, almost half of the oral contraceptives used are advised by private clinic doctors.

3. Community Service :

(*a*) Community Health Stations :

In contrast to the previous two settings, the community service is related to these health stations that are linked to special community groups, and are responsible for their health according to the type of service they present, e. g. M. C. H. centers, health offices, rural health centers, industrial health service clinics, etc. Such health stations can offer family planning service as part of their total health service functions. Here, recruitments of clients and evaluation could be more easily achieved compared to settings I and II, since there is a fixed population served by the health station.

(b) Mobile Units or Teams :

These can be operated as family planning mobile clinics alone or as part of other health services, e. g. maternal and nutritional care. Such mobile units have been used extensively in some Asian countries, where local health stations in rural areas are not existing and where there is difficulty for the subjects to reach the station nearby.

(*c*) Domiciliary Service :

This is carried out by the personnel of the local health stations or other personnal under its supervision, at the subjects own home.

(*d*) Pharmacies :

In many countries pharmacies have long been an important source of non prescription contraceptives like jelies and foam tablets. In some countries, oral contraceptives are distributed by pharmacists without prescription.

SECTION II :

THE BIRTH CONTROL METHODS

1. Conventional Methods :

Such methods include the use of condoms, cervical cap, jellies and creams, diaphragm, vaginal foam tablets, safe period, coitus interruptus ... etc.

These methods were widely used before the introduction of the more modern methods, i. e. the pills and I. U. Ds. However, they are

still in use by many couples. Some of the national programs, e. g. Pakistan Family Planning Program, have adopted the use of condoms besides other modern ones for eligible couples under certain conditions.

The use of these methods do not need medical beckground on part of the personnel offering the service.

2. Hormonal Methods :

The oral contraceptive pills, with or without ovulation suppression, are very much popular in use universally. They need a primary evaluation of the health status of the subject going to use before the primary intake. However, very few contra-indications are known and the health status evaluation can be easily made by the paramedical personnel before the usage.

Parenteral hormonal compounds have been recently introduced and may be very promising, facilitating the worry for continual daily swallowing of the oral pills and limiting the chances of failures.

The injectable contraceptives are given intramuscularly every month, 3 months or 6 months. Such method was highly accepted in rural areas in most developing countries. The nurse can run and supervise such injectable programs.

3. The Intrauterine Contraceptives ; (I. U. D.) :

The introduction of the I. U. D. as a birth control method has been internationally accepted. The loops have been used widely, especially in developing countries of Asia, Africa and South America, where national crash programs have been initiated to control population crisis.

In many of these national programs, the loop is considered more applicable, compared to pills, since a single motivation is required for the clients, there is continuity of use so long as the loop is in situ and fewer follow-ups are required over more spaced periods.

The main 3 problems concerned with I. U. D. are :

(i) Need for a specialist or trained medical doctor to introduce the I. U. D. This has been solved by many countries, especially in Pakistan, by training nurses or nurse midwives or special family planning health visitors to

introduce I. U. D. The reports published show that their efficiency in doing the job is high and complication or expulsion rates are not much different from medical doctors.

(ii) Side effects mainly in the form of prolonged bleeding. The continuous search to modify the size, design and material of I. U. Ds. are showing promising results to cut such side effects to a minimum.

(iii) Probability of Pregnancy, Recent studies by Zipper and Tatum (10 & 11) to introduce the copper devices have shown lower pregnancy rates, lower expulsion and lesser bleeding. In many countries, as well, therapeutic abortions are practised by physicians to such unplanned pregnancies and this has been recently legalized in Turkey. (8)

4. Sterilization :

Male and female sterilization (5), whether by the surgical or non-surgical methods, are sure and safe methods. However, such methods have not been properly accepted by both the health agencies or communities because of its irreversability. Recently, both on experimental (4) and human level, attempts for temporary blockage of tubes or vas deferens have been done with promising results. Such advances will make sterilization a more popular method.

5. Abortion :

As a method of birth control, it is forbidden by law in most countries. It is only legalized in Japan, some Eastern European countries and recently in the United Kingdom and certain States in North America. In the Soviet Union, abortion legalization has hardly any effect on birth rate. (2)

Abortion is usually carried out by surgical methods as D. & C. or intrauterine vacuum evecuation. Recently it is carried out medically by prostaglandin.

SECTION III :

THE PHASES OF SERVICE

The phases of service (9) can be classified chronologically into :

1. The Contact Phase :

This is the phase at which the community is approached through different channels and means of health education in order to reach

eligible subjects. It is closely similar to case finding programs in other Public Health Programs.

A wide variety of personnal could be used in this phase ranging from the medical doctor to the nurse to the social medical workers and many other auxiliary paramedical personnel.

2. The Start or Action Phase :

This phase is concerned with the offering of services for the first time to the client after being prepared through the media of the contact phase.

The proper handling of subjects is of the utmost importance to prevent dissatisfaction which will spread the unfavourable news to others. Necessary clinical or laboratory investigations have to be done for the proper selection of the method that is most suitable. Arrangements for future follow-ups are to be made during this phase of action.

The personnel involved varies greatly according to the method to be used and the setting of the service.

3. The Continuing Care Phase :

This is actually the follow-up phase, where arrangements for future check-up, further supplies of contraceptives ... etc. are being practised. Management of side effects, pregnancies due to failure of contraceptive methods, etc. are also made.

The records of clients are updated continuously whether for follow-up for supplies or health status, ... etc. Procedures to close the file for cases who die or get into menopause are also practised.

In this phase, many of the health personnel are involved. The medical doctor or nurse may be involved into the periodic check-ups. The public health nurse, other paramedical personnel or the medical social workers are concerned mainly in the follow-up of both the users and the defaulters. The office nurse is also engaged in the clerical works related to the keeping of files of the subjects. Clerical personnel may relieve doctors and nurses of record-keeping. This is highly recommended in countries where there is shortage of such health staff.

The statistical personnel of health services have also been engaged in recording the evaluation of services.

SECTION IV :

THE HEALTH PERSONNEL

The health personnel engaged in family planning activities include a large team from different educational levels and specializations. A trial to give a model of the personnel, their functions will be attempted which is by no means ideal. The job description is variable for the same person between one country and another.

The Medical Doctor :

He or she is graduated from a medical school. Doctors, whether practising on private basis or attached to health agencies, are classified as follows :

(a) General Practitioner : with no further training or studies after graduation.

(b) The Trained Medical Doctor : who has attended special training programs or courses making him or her eligible to carry the application of certain methods of family planning, e.g. I. U. D. insertion, vasectomy, etc. Training may also include the procedure of the contact and continuation phases.

(c) Specialists : Depending on the field and their use in family planning, they can be classified into :

(i) Deeply Involved :

1. *Gynaecologists and Obstetricians :*

Most fit to carry the complex methods and management for sterilizations, I. U. Ds., infertility cases, immediate postpartum programs, etc.

2. *Public Health Specialists :*

Involved in the program planning, Health education, motivation, studies of social, cultural attitudes to family planning, evaluation ... etc.

3. *Administrators :*

Responsible for organization of function at different levels, supervision of continuity of supplies of contraceptives, studies for cost ... etc.

(ii) Partially Involved :

These are other medical specialists who may have a role in bringing the attention of the subjects to practise family planning for medical reasons. Pediatricians can play a vital part in referring mothers for family planning for the health of the baby and themselves. Surgeons, paychiatrists, internists, etc. can do the same job. On the other hand urologists can be invoced in conducting vasectomy operations.

Certain factors can affect the role played by physicians in family planning programs in the different countries. These include the sex of the medical doctor, as most Pakistany women would not accept a male docter for any gynaecological examination, whether the job is a part time one. In the Egyptian program, they utilised the doctor of the already present health centers as part-timers to run out the family planning services ; in the afternoon, following the official working hours. On the other hand, certain functions like administrators and public health workers are better carried out by full-timers who can devote themselves to the different phases of the service.

2. Nurses :

The nurse has an important role in conducting the different phases of the service. She may be :

(*a*) A University graduate.

(*b*) Nurse midwife,

(*c*) Pubic health murse,

(*d*) General duty nurse,

(*e*) Auxiliary nurse.

The role played by each depends on the degree of education and training attained by them.

(a) The University Graduate Nurse :

Can be utilised for administrative work and training of the auxiliary nurses. She is most fit, after medical doctors, to introduce I. U. Ds.

(b) The Nurse Midwife :

Works mainly in maternity hospital and M. C. H. centers and can assist in motivation, supply of conventional contraceptives and may be pills, and follow-up of subjects during the periodical visits.

Nurse midwives should be prepared particularly in postpartum programs can have an important role in conducting the various phases of the service. In several countries, including Korea, Pakistan, nurse midwives have been trained to provide full management including insertion of I. U. Ds., the results have been on a par with those achieved by physicians. to refer cases with complications to more specialized personnel.

(c) The Public Health Nurse :

Participates in family planning activities by providing health education and motivation to the community, distributing certain contraceptive supplies, following up certain cases and studying drop-outs. They have a role, in referring cases to clinics, especially that thay have a chance of meeting and discussing matters with participants during the home visits.
Nures midwives should be prepared to refer cases with complications to more specialized personnel.

(d) The General Duty Nurse :

Will assist the physician beside her role in the educational, councelling activities and keeping of records.

(c) The Auxiliary Nurse (Aid Nurse) :

These also assist the nurse midwives, the public health nurse, and doctors in carrying out their activities. In certain Asian countries, they are given a important role, if they work in small distant rural health centers where more specialized family planning services are not available. This role can include : helping to identify, contact and list eligible couples ; distribute contraceptives, help to provide follow-up services for women using I. U. Ds. and for sterilized individuals.

They are probably not suitable for more difficult jobs like insertion of I. U. Ds., but they can refer complicated cases to the specialists.

In general, nurses could have a bigger role, specially in countries where women often find it casier to communicate with female nurses. But unfortunately, in most developing countries, physicians outnumber

nurses, e. g. the ratio of physicians to nurses is 3 : 1 in Egypt, 2 : 1 in India. (1) The usefulness of nursing personnel in such countries is enhanced when their clerical duties are reduced.

(3) Traditional Birth Attendants (Dais) :

These are lay women with some experience to attend deliveries. They are deeply related to families specially in rural areas and the low-socio-economic classes in urban areas. These untrained birth attendants can play an important role in dissemination of information, referral of women to services, distribution of the conventional contraceptive supplies and oral contraceptives on a limited scale. They may be utilised in the follow-up phase of the service. Through their records, we can reach the target for postpartum programs by the public health nurses.

When these workers are given special training they can be useful to family planning programs, particulary in postpartum approaches. The advantage of their utilization is not only to benefit from their services given, but to avoid their hindrance of the program activities. In certain countries (e. g. Egypt and Pakistan) these Dais, before joining the family planning programs, were a big obstacle to the introduction of family planning services, specially in villages. This was quite expected because the propagation of family planning ideas indirectly reduces their income from attending the births.

4. Medical Social Workers :

Although thay are originally qualified from schools of sociology, they are of great help in running the different health services, including M. C. H. centers, rural health centers, hospitals, etc. Their role include the study of socio-economic status of families, propagation of the knowledge of family planning, referral of subjects for service and their follow-up.

In industrial nations, social workers occasionally take part in contacting clients for family planning and assisting in the starting and continuation phases of services, They also can participate in marriage councelling, premarital education and care of unmarried mothers.

5. Health Educators :

These may have a medical, social, or educational background and they are trained in health education. The job of health educators presents a link between the health services and the community

establishments (schools, factories, etc.). They have proved useful in planning, organizing, and evaluating educational activities in family planning services. They play an important role in training and co-ordination of efforts with other agencies. They are also involved in the preparation, testing and evaluation of educational materials and in teaching other staff how to use them.

6. Single Purpose Family Planning Auxiliaries :

In certain national family planning programs, mainly Pakistan, (8) it was necessary to rely on female trained paramedical personnel. Two examples are : the lady health visitors (M. C. H. workers with 27 months training), and the lady family planning visitors (matriculate giris given 1 year course in family planning, concentrating mainly on I. U. D. insertion).

They are full time family planning workers involved in recording the social and medical history, providing education and motivation of the clients, distributing conventional contraceptives, assisting in screening clients for suitability of I. U. D. insertion, doing I. U. D. insertion in normal cases, conducting follow-up of I. U. D. clients, providing support and reassurance for clients and treating minor complications and refrring clients with serious complications to medical facilities. Recently, the lady family planning visitors are given additional training in antenatal and post natal care, child care and nutrition. Experience shows that with adequate supervision, these young women can perform satisfactorily in the program and are now doing 75—80% of all I. U. D. insertion.

I. U. D. retention level in Pakistan is higher for insertions done by paramedical than by medical personnel (75% for paramedicals and 66% for medical insertions.).

Successful use of paramedical personnel in I. U. D. work was also reported from Barbados, U. S. A., and South Korea. Still, this experience cannot be univercally applied all over the world, because in certain countries like Egypt, there is relative abundance of physicians from both sexes and women do not object to the services provided by male doctors.

7. Pharmacists :

Pharmacists with their background in anatomy, physiology and pharmacology can be utilized, after proper training, to help in the

A Summarr of the Utilization of Health Personnel in Relation to Setting, Method, and Phase of Service.

Health Personnel	Setting	Method	Phase of service
1. Medical Doctor			
(a) General Practitioner	Hospital, Clinic (Special Family Planning Clinic, other clinics, and phycician consulting room.) ; community service (community health stations, and mobile units).	Conventional & Hormonal	Contact phase start phase, & continuing care phase.
(b) Trained.	Hospital, Clinic (Special Family Planning Clinic, other clinics, & physician consulting room.) ; community service (community health stations, and mobile units).	Conventional, Hormonal, & I. U. D.	Start Phase, & Continuing care phase.
(c) Specialist :			
i) Deeply involved			
1. Gyn. & Obst.	Hospital ; Clinic (Special Family Planning Clinic, other clinics, & phycician consulting room).	Conventional, Hormonal, IUD, Sterilization & Abortion.	Start Phase.
2. Public Health Specialist.	Clinic (Special Family Planning Clinic, and other clinics)	—	Contact phase, start phase, & continuing care phase.
3. Administrator	Community service (community health stations ; mobile units, & domiciliary).		—

A Summary of the Utilization of Health Personnel (*Contd.*)

Health Personnel	Setting	Method	Phase of service
ii) Partially Involved Pediatricians	Hospital, Clinic (Special Family Planning clinic, other clinics, & physician consulting room.).	Conventional & hormonal	Contact phase, & start phase.
Urologists	Hospital ; Clinic (other clinics).	Sterilization	Start phase.
2. Nurses :			
(a) University Graduate.	Hospital, Clinic(Special Family Planning Clinic, other clinics, & physician consulting room.); Community service (community health stations, & & mobile units).	Conventional Hormonal & I. U. D.	Contact phase, start phase, & continuing care phase.
(b) Nurse Midwife	Hospital, Clinic (Special Family Planning Clinic, other clinics, & physician consulting room.) ; Community service (community health stations, mobile units, & Domiciliary).	Conventional, Hormonal & I. U. D.	Contact phase, start phase, & Continuing care phase.
(c) Public Health Nurse	Community service (community health stations, mobile units, & domiciliary).	Conventional & Hormonal	Contact phase, start phase, & continuing care phase.
(d) General Duty.	Hospital, Clinic (Special Family Planning Clinic, other clinics, & physician consulting room), community service (community health stations, mobile units, & Domiciliary.	Conventional	Contact phase, start phase, & continuing care phase.
(e) Auxiliary Nurse	Hospital, Clinic (Special family Planning clinic, other clinics, and physician consulting room) , community service (community health stations, mobile units, & Domiciliary).	Conventional	Contact phase, start phase, & continuing care.

A Summary of the Utilization of Healtb Personnel (*Contd.*)

Health Personnel	Setting	Method	Phase of service
3. Traditional Birth Attendants	Community Service (community health stations & mobile units) domiciliary).	Conventional & hormonal	Contact phase, start phase, & continuing care phase.
4. Medical social workers.	Hospital, Clinic (special family planning clinics, & other clinics) ; community service (community health stations ; mobile unit, & domiciliary.	—	Contact phase, & continuing care phase.
5. Health Educators	Hospital, Clinic (special family planning clinics, & other clinics); community service (community health stations; mobile unit, & domiciliary).	—	Contact phase.
6. Single Purpose Family Planning Auxiliaries :			
Lady Health Visitor	Clinics (special family planning clinic, & other clinics); & community service (community health stations, mobile unitc, & domiciliary).	Conventional & hormonal	Contact phase start, phase, & continuing care phase.
Lady Family Planning Visitor.	Clinics (special family planning clinic, & other clinics); & community service (community health stations, mobile units, & domiciliary).	Conventional Hormonal, & I. U. D.	Contact phase, start phase, & continuing care phase.
7. Pharmacists.	Hospital, & community service (pharmacies).	Conventional & hormonal.	Contact phase, & start phase.
8. Volunteers	Hospital, Clinics (special family planning clinics, & other clinics); community service (community health stations, mobile units, & domiciliary).	Conventional & hormonal	Contact phase, start phase, & continuing care phase.

various phases of family planning services. Different groups of the community may find it easier to seek medical advice through them instead of consulting physicians. Pharmacists can help in propagation of family planning knowledge, and distribution of conventional as well as hormonal contraceptives, both oral and parentral.

8. Volunteers :

These are usually non medical personnel who are interested to assist in social and public health services. In many countries, like Mexico, Singapore, Hong Kong, and U. K., the idea of family planning was initiated and propagated by volunteer lady associations. Members of these associations are usually wives of Politically, socially or economically important persons and can help to push the programs through their interest and their husband's influences. Besides, these volunteer ladies can help through their contacts to convince more couplse by the idea of family planning. They can also distribute the conventional contraceptives. They can relieve the nurses from many of their clerical responsiblities. They can follow-up the cases and refer complicated cases to the health centers.

Volunteers and voluntary agencies, both on local and international levels, have started family planning services and sponsored them, long before governments adoapted national programs.

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