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Human Resources for Health in Sri Lanka – present and the future

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Human Resource for Health (HRH) is an essential pre-requisite to the efficient functioning of the health system of any country. Of all resources for health, human resources account for a significant proportion spent on the provision of health care to the people. The contribution made by human resources for health development, especially in the developing countries where overall resources are scarce, is considerable. The availability of competent health manpower in adequate numbers for the delivery of health care has been one of the significant reasons for the substantial achievements Sri Lanka has made in the health field.

The country has a long history in the development of health manpower. Training of doctors commenced in 1870 with the establishment of the Ceylon Medical College. Training of nursing personnel started in 1878 with the commencement of the School of Nursing in Colombo. Subsequent years saw the establishment of schools of training for other categories of health personnel. However, it was only in the year 1926, with the establishment of the first Health Unit in Sri Lanka at Kalutara, that systematic and organized training of preventive health staff started.

In Sri Lanka, health care is provided by many technical categories of health personnel. Of the technical categories, the important ones are:

1. Doctors (grade medical officers and specialist medical officers)
2. Dental surgeons
3. Assistant and Registered Medical Officers
4. Nurses
5. Midwives
6. Public Health Inspectors (PHIs)
7. Pharmacists
8. Medical Laboratory Technologists (MLTs)
9. Physiotherapists
10. Occupational Therapists
11. Radiographers
12. School Dental Therapists
13. Ophthalmic Technologists
14. Cardiographers (ECG recordists)
15. Encephalographers (EEG recordists)
16. Microscopists
17. Dispensers
18. Entomological Assistants
19. Public Health Field Assistants
20. Speech Therapists (undergoing training)

Discussing all aspects of human resources for health will be a daunting task. In my presentation, I wish to highlight the following areas: -

- Human Resource Planning
- Health Manpower Production (Training)
- Health Manpower Deployment
- Professional / career development
- Continuing education, and
- Strategies for the future

1. Human Resource Planning

Human resource planning is the most fundamental step in the human resource development process. HRH planning should be an integral part of overall health planning. Human resource planning is about considering existing and expected personnel by occupational category, by numbers, by location, and by specialty. It should be based on the national political framework, health policies and plans to achieve predetermined health targets and, ultimately health status objectives. It should also take into account: the demands of the people; the needs based on epidemiological, demographic and other factors; losses of manpower; standards to be achieved; the resources available for production and management of human resources. The HRH planning process should necessarily include further steps such as cadre determination and cadre approval by the Treasury. These steps are closely connected with budgetary allocations.

There are several deficiencies in the HRH planning process in Sri Lanka. HRH planning is not done in the overall context of health planning. Planning is not adequately based on health needs, demands, health objectives, future manpower losses and resource availability. Health manpower planning is adversely affected by *ad hoc* and biased decisions made by those responsible to establish new health facilities or expand the existing ones, without giving much consideration to the existing policies and plans.

I can quote one example of the consequences of inadequate HRH planning, from my field of responsibility. As there was no long-term plan to recruit and train paramedical categories of health personnel, recruitment and training of these categories were not done for several years. The

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schools of training were underutilized during this period. However, with the sudden intake of large numbers of students in all categories to schools, training at present is done under enormous difficulties, sacrificing its quality.
Action has been taken by the Department of Health Services, to revise and develop where necessary, norms and cadres for different categories of health personnel. This exercise is going on right now in the Department.

2. Selection of students for training

Until this year, selection of students was done on the results of a selection examination conducted by the Department of Examinations. The aggregate marks scored by the students were sent to the Department of Health Services, which conducted interviews for those eligible to select suitable students for training. The Department of Health Services had no control over the conduct of the selection examination. Release of results by the Department of Examinations was usually delayed. In fact release of results of the last examination was delayed by over 2 years. To overcome this problem, the Department of Health Services now conducts selection examinations.

Students are selected on a district basis according to an accepted ethnic ratio formulated by the government. Depending on the number of vacancies existing in the district, students with the highest aggregate of marks from the district are selected according to this ethnic ratio. For example, if the district ethnic ratio is five Sinhalese to three Tamils, the five Sinhala students and the three Tamil students having the highest aggregate marks are selected from the district. This system can give rise to a situation where the aggregated marks of a student not selected from an ethnic group may be higher than the marks of a student selected from another ethnic group.

Until this year the minimum educational requirement for selection of paramedical personnel was a pass at the General Certificate of Education Ordinary Level (GCE O/L) examination. From this year, the requirement has been increased to GCE Advanced Level (A/L).

One disadvantage inherent in this selection procedure is the inability to determine the commitment and the desire to remain in the profession they have selected. Some students come for training merely to get the monthly stipend they receive during the training period. These students either follow university courses during the training or leave the training after selection, depriving other students from being selected. The system of bonding has not had much effect.

3. Health Manpower Production (Training)

I wish to confine my address on the subject of health manpower production, to the training of categories of health manpower other than doctors and dental surgeons. Undergraduate and postgraduate training of doctors and dental surgeons is the responsibility of the universities under the Ministry of Education and Higher Education. In fact, you may remember that, the subject of Medical Education was exhaustively and competently dealt with by one of our Past Presidents, Prof. Dulitha Fernando in her presidential address. Enhancement of clinical teaching was discussed by Prof. Narada Warnasuriya, the President of the College of Paediatricians of Sri Lanka, in his induction address.

Pre-service or basic training of all other technical categories of health manpower is the responsibility of the Education, Training and Research Unit of the Department of Health Services. Until the time of creation of the post of Deputy Director General of Education, Training and Research -DDG (ETR) on a recommendation of the previous Presidential Task Force, health manpower training was carried out in an uncoordinated and disorganized manner with many people being responsible for the training. There was no focal point or an accountable unit.

Teaching is a science and an art, which demands effort, time and skills of many persons and other resources. Teaching has to be learnt. Giving a lecture is not training. Unfortunately, this fact has not been realized by many responsible people in the health system. They feel that training is a simple task that can be performed easily by anybody. This sad situation has affected training adversely. For the production of competent health manpower in adequate numbers, many facilities and resources are required. These resources are not always forthcoming, as people responsible for providing them are not aware of the complexities of training.

(i) Manpower Policy and Plan

I have already stressed, the need for having a comprehensive HRH plan. When such a plan is

available, training can be organized systematically. The training schools and the trainers can develop their own training plans and training calendars based on the HRH plan. The HRH plan will also guide the training institutes to identify their long-term manpower and infrastructure development strategies. Having a well-designed plan is of no use, unless the implementation is done according to the plan. Our past experience shows many instances of deviation from this principle.

(ii) Infrastructure Facilities for Training

Several basic infrastructure facilities are required to conduct training satisfactorily.

- Space
- Furniture and equipment
- Library facilities
- Hostel facilities for students
- Residential facilities for trainers
- Recreational and other welfare facilities (play ground, indoor games, radio/television, canteen etc.)
- Transport facilities

At present, many of these facilities are either lacking or grossly inadequate to serve a large student population. There has not been a simultaneous expansion of these facilities though the student load has increased considerably, over time. Due to the lack of adequate classroom facilities to conduct lectures for large batches of students, lectures are conducted outside the normal schools of training, causing inconvenience to students, trainers and the institution where lectures are conducted. Available equipment is insufficient for students to practice skills.

Use of library facilities by students will enhance student learning. Similarly, the use of library facilities by teachers will help to improve the quality of teaching. Many of the school libraries have several shortcomings. Inadequate space for reading and reference, shortage of furniture, insufficient numbers of text books, journals and magazines especially in Sinhala and Tamil to serve a large student population, lack of facilities for photocopying and duplicating and non availability of qualified librarians are some of the problems. The situation has somewhat improved over the last couple of years due to the support provided by the Japan International Cooperation Agency (JICA) to the schools of nursing. The member libraries of the Health Literature, Library and Information Services (HELLIS) network have benefited by sharing resources. The department allocation too has been increased considerably, during this period.

Provision of residential facilities to students has a positive effect on learning by way of providing more time for studies, learning through more peer interaction and by giving opportunity for sharing and engaging in recreational activities. Unfortunately many schools do not have student hostels and the schools that have facilities cannot cater to the high demand. Outside accommodation is almost impossible to find in some areas and when they are available they are expensive and not conducive to basic living, especially for female students. The situation is more or less the same for trainers as well, resulting in loss of morale and motivation among teachers.

Recreational facilities such as play grounds, facilities for indoor games, radio and television and canteen facilities are either lacking or inadequate, in most schools.

Lack of transport facilities for students and teachers is another area with problems. Schools of nursing with large numbers of students need several buses at a time (or one bus to make several trips) to transport students to and from schools and hospitals. The cost of hiring these buses has, I am sure, exceeded the cost of a new bus. The department, due to financial constraints, is unable to purchase new vehicles. JICA has again assisted by providing buses to the schools of nursing. Similar problems are faced by the tutors for lack of official vehicles for them to travel to outside venues where lectures are conducted, and to supervise the field training and hospital training.

The end result of the above problems is an inevitable reduction in the quality of teaching and student learning.

(iii) technical support required for teaching / learning

What I have discussed so far, are the physical and infrastructure facilities that need to be in place to create a good learning environment for students. Now, I wish to highlight some extremely important technical aspects that need to be addressed, to improve the quality of training and enhance the process of learning.

(a) Curriculum development and revision

A well-designed curriculum is a basic requirement for the training of paramedical categories whose functions include many psychomotor (manual) skills. Curriculum development is a tedious process, which should be scientifically done involving many experts in the field.

The first step in the development of a curriculum is the identification of training needs of the students to be trained. The training needs will depend on what this category is expected to do after training i.e. their functions and duties. The training should enable them to carry out these functions. In other words, job functions are an indication of what we are training them for. Unfortunately, due to the non-availability of up to date and complete lists of functions or duties for certain categories, determination of training needs becomes difficult.

A curriculum should contain the following basic components :-

(1) Learning objectives, which determine what students will be able to do after training that they were not able to do before.
(2) Content or subject matter, required to be taught to achieve the learning objectives: content may be in the areas of knowledge, skills and attitudes.
(3) Teaching method best suitable to teach the identified content or subject matter.
(4) Audio-visual aids that will supplement the method of teaching, further facilitating learning of the relevant content.
(5) Time required for each teaching sessions, and
(6) The student assessment technique most appropriate to assess the achievement of the particular learning objectives.

The draft curriculum should be pre-tested before adopting it.

I would now, like to highlight some of the problems encountered in the process of curriculum development.

(i) Some curricula are not properly designed. A list of subject areas (a syllabus) is often identified as a curriculum. A curriculum is a scientific plan of teaching. No proper teaching can be done without the use of a well-designed curriculum.

(ii) Very often learning objectives are inappropriately formulated. Verbs such as 'to know' , 'to understand', 'to appreciate' are used in learning objectives. These verbs are ambiguous, not specific, not measurable and not observable. Such learning objectives can be improved by the use of verbs such as 'to describe', 'to list' and 'to discuss' for knowledge objectives and by the use of specific action verbs for specific skills such as 'to give an injection', 'to weigh a child', 'to examine a mother', 'to conduct a health education talk', for skill objectives.

(iii) Identification of the exact content required to be taught to perform a task can only be done by a proper Task Analysis. Unless, the teacher does a Task Analysis there is always a tendency to include unnecessary content.

(ii) Teaching methods used especially for teaching skills are inappropriate or inadequate. Teachers are faced with the impossible task of teaching many practical skills to a large number of students. Teachers and students are unable to find enough teaching/learning material e.g. midwife students have to compete with medical students to learn the skill of performing a normal delivery. Teachers find it difficult to provide opportunities for every student to master every skill.

(iii) AV aids are not used by some teachers. Even when they do, they are not used correctly, for example, use of the over head projector (OHP) and the preparation of transparencies.

(vi) Inappropriate techniques are used to assess students learning. Assessment technique should be objective and specific. To quote an extreme example, if the teacher needs to assess whether the student has mastered the skill of giving an injection, asking the student to write an essay is useless. He has to assess the task of giving the injection by the student. Assessing every student on every skill is impossible.

(vii) Curriculum development is not a one-time activity. Curricula have to be revised periodically. New knowledge and new skills have to be taught. Unfortunately periodic revision of curricula has not taken place in the past. Action has been taken to revise curricula and a number of them have now been revised.

(b) Planning lessons

Teachers should always prepare a lesson plan before they teach. It is better to have it on paper. A lesson is a small unit of the curriculum having the same components as that of a curriculum. A lesson plan helps the teacher in organizing his lesson and conducting the lesson in a systematic manner. A lesson conducted according to a plan improves teaching and facilitates learning. Another advantage of having a lesson plan is that any teacher will be able to successfully conduct the lesson using this plan, even in the absence of the teacher who normally does the lesson. Teachers need to be convinced about the usefulness of having a lesson plan in black and white. Teachers feel that having a plan in their mind alone is adequate. Planning lessons should be a routine activity of every teacher.

c. Student evaluation

Student evaluation is a significant component of any training program. At present, it is also the most difficult component to implement. Student evaluation should be both concurrent and terminal. Concurrent evaluation is useful for both the teacher and the student. Teaching and learning can both be monitored frequently through concurrent evaluation. Corrective measures if necessary can be taken, while the training is going on. As I said before, evaluation of skills is difficult. A checklist is a good tool to evaluate skills, but it is extremely difficult to motivate examiners especially the external examiners, to use them.

Another problem faced by schools is the general reluctance of external examiners to evaluate students. With the heavy service responsibilities they are unable to find time to evaluate large numbers of students. Release of results of examination is sometimes delayed for this reason. A poor rate of payment to external examiners is another reason for this reluctance.

d. Evaluation of teachers by students

The concept of students evaluating their own teachers, is still not accepted by some teachers. Teacher evaluation not only helps the teacher to improve his teaching but also assists the learner to learn better. Teachers should not consider it as a threat to their teaching capabilities. Tools used to evaluate teachers should be so designed as to bring out useful and constructive comments by students, about the teachers' teaching ability. It should never be treated as a 'fault finding' exercise. If a teaching session is evaluated, it is necessary to ensure that all aspects of the session are evaluated. It is encouraging to note that many teachers now provide opportunities for students to evaluate their teaching.

e. Trainers

Availability of well-motivated and competent teachers is essential for successful training. Every teacher must have adequate skills in teaching. Only few teachers have been trained for teaching in centres of excellence outside the country. However, most of them have been exposed to teacher training programs conducted within the country, but the opportunities available for our trainers especially for those conducting practical training in hospitals and other institutions, are few.

The principals and senior tutors of training institutes need to have managerial skills, in addition to teaching skills. Their managerial and leadership skills have to be developed through exposure to management training programs.

The level of motivation among many teachers is low which adversely affects the quality of teaching. The financial incentives they receive for teaching are grossly inadequate compared to what their counterparts get in the service sector. Lack of promotional avenues, inadequate residential facilities, poor transport facilities, low wages and inadequate opportunities available for professional development are some of the reasons for the low level of motivation.

In fact teaching has become such an unpopular profession that nobody applies for teaching posts when applications are called to select tutors to fill vacancies. This situation has posed a major threat to paramedical training. It was the other day that a friend of mine was saying, of course in a lighter vein, that if somebody wants to be a teacher then that person needs to be examined by a psychiatrist. That comment, in a way, sums up the unfortunate situation.

4. Deployment of Health Personnel

Even if health systems and organizations were able to develop the required health manpower, unless they are deployed in an equitable manner, the services provided by them will not be

distributed evenly in the total population. An essential component of a comprehensive HRH plan should be, the method of health manpower deployment according to national needs.
The production of health manpower and their initial deployment is the responsibility of the central Ministry of Health and the Department of Health Services. Except in the case of doctors and dental surgeons, the subsequent redistribution and transfers of other categories are done by the provincial health administration.
In Sri Lanka there are gross geographic imbalances in the distribution of health manpower. Health care workers prefer to remain in urban areas and better-developed districts. For example, the Western Province has the most number of every categories of health manpower. Manpower availability is quite low in the under developed, rural areas like Monaragala.
Fortunately, the present system of manpower deployment implemented by the health department has helped in solving the problem to a great extent. It is closely related to the system of selection of trainees, which I discussed earlier. The trainees selected from the districts are appointed to the same districts, after training. This system has enabled the health care workers to overcome the problem of finding accommodation and has helped in improving the services provided to the people.

5. Professional development

After basic training, paramedical categories do not have many opportunities for higher education. The avenues for professional development are few. The only category which receives post basic training is the nurses. Post basic training for nurses is conducted by the Post Basic School of Nursing in Colombo. Even for them, there are no degree courses conducted by conventional universities other than the one conducted by the Open University of Sri Lanka. The BSc (Nursing) course conducted by the Open University is a distance education programmes with minimal face-to-face teaching. In this respect we are far behind our neighbouring countries. Only a handful of our senior nursing officers have degrees, obtained from foreign universities.

Some of the conventional universities in Sri Lanka have indicated their willingness to commence degree courses for paramedical personnel who are already in-service. The Faculty of Medical Sciences of the Sri Jayawardanapura University is making preparations to commence a BSc nursing course. Initial planning has been done to commence a degree programme for laboratory technologists. The universities of Kelaniya and Peradeniya too, have shown interest in starting degree courses for relevant paramedical categories. These developments have to be vigorously pursued.

6. Continuing education

Learning is a continuous process. Providing opportunities for health personnel to continue their education not only benefits them in their professional development but also improves the quality of services.

In Sri Lanka, in-service training programmes are not conducted in a systematic and planned manner. Several units within the Department of Health Services and the Provincial Health Ministries conduct in-service training programmes for health care workers. There is poor coordination resulting in duplication of training, overlap of programmes and disruption of services. Their effectiveness has not been assessed. Due to deficiencies in the selection, some health care workers get many opportunities whereas the others get few or no opportunities for in-service training. In- service training provided to hospital workers is highly inadequate.

As a solution to this problem, the Health Department has taken steps to prepare a national calendar of in-service training programmes conducted by different institutes and units coming within the purview of the Health Department.

7. Strategies for the future

Finally, let me highlight some of the strategies that the Department of Health Services will implement in the future.
(i) In future, the development of Human Resources for Health will be based on a comprehensive HRH policy and a plan. The recommendations of the present Presidential Task Force shall be the policy background for the preparation of the future HRH plan.
(ii) Selection of trainees; conduct of basic training and continuing education programmers; improvement of physical and other facilities of training schools; and the recruitment of teachers will be done according to a specific plan for the

production of health manpower. This plan will be based on the overall HRH plan, mentioned above.

(iii) Existing curricula will be revised periodically based on realistic training needs of paramedical and PHC categories of health manpower. The revision will take into account the functions and tasks they will have to perform in the future. Their training needs will be identified through training need assessment surveys.

(iv) With the extensive basic training programmes conducted at present, the immediate future health manpower needs will be met to a great extent. This will result in a reduction of the training load and the schools will then plan and conduct continuing education programmes on a more systematic and organized manner.

(v) Future limitations of financial resources for training is expected in the future, foreign donor assistance will be sought to improve the facilities in training schools. JICA is already assisting the nursing schools to improve their facilities through its technical cooperation programme. The recently opened model School of Nursing at Sri Jayawardanapura hospital premises was a donation from the JICA.

(vi) On the job evaluation of health personnel after training can provide a useful feedback necessary to improve both basic training and in-service training. For this purpose a special unit has been established at NIHS, Kalutara. It will be further strengthened to undertake the evaluation of not only PHC workers but also the other paramedical categories.

(vii) A database on training will be established at Departmental level, starting with the PHC workers and then extending to other categories. The information in the database will be used for the selection of health workers for future in-service training programmes.

(viii) Every effort will be made to commence the proposed degree programmes as early as possible, by working in partnership with the universities. This will provide opportunities for health personnel already in service to develop their professional competence. Contacts have already been made with universities in the region to explore the possibility of accommodating our health personnel in their degree programmes.

(ix) Through exchange programmes with other countries our health workers get opportunities to observe and learn more developed methods of provision of heath care. Such a programme exists for our nurses with two Finnish polytechnics, which conduct programmes similar to ours. In my recent visit to these polytechnics I was able to successfully negotiate with them, the extension of this programme to other categories. Our health personnel will visit Finland without any financial burden to the department.

(x) Since there is an urgent need for trained heath manpower in the private sector and the state is more or less the sole producer of skilled manpower, the Ministry and the Department will in future train manpower for the private sector. Employment of trained manpower by private institution will be a legal requirement once the Private Medical Institutions Bill, which is going through the legal process now, comes into force. It will also prevent our service personnel working unofficially in private institutions during normal working hours. In fact the Department o Health has already commenced the training 1100 external pharmacists for the private sector. A batch of 50 cardiographer trainees is to be selected soon. This system will extend to other categories in the future.

(xi) It is necessary to establish and develop more regional training centers in the provinces which do not have them at present. In-service training will be organized and conducted by these centers for health personnel in the province.

What I have highlighted in my address are mostly the problems and issues of health manpower development. However, in spite of these problems Sri Lanka has been able to produce competent health manpower needed to provide good health care to its people.

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Thank you