

UNDERGRADUATE PEDIATRIC EDUCATION IN INDIA

Children form a sizeable proportion of the total population and infant and under five mortalities are the highest amongst all age specific mortalities. It is, therefore, imperative that an undergraduate is as well versed as possible in the important aspects of child health. Further, child birth is a universal phenomenon and knowledge of proper care for the newborn is essential. Pediatrics, thus has the unique distinction of being the only discipline in medical education which deals with both the normal and diseased aspects of the population. Therefore, it is logical that training to undergraduates in Pediatrics is imparted in both the preclinical and the clinical phases of the medical curriculum. With the current emphasis on Maternal and Child Health in the National Health Policy(1), as well as the desired strategy on the control of population, a considerable stress has to be laid on the development of the normal child and its variations. This emphasis is further augmented by the importance of development in the prenatal period and early childhood in the commendable statements of the National Education Policy(2).

In the light of above, the formative phase of a budding pediatrician should be directed towards a complete utilization of the developmental potential of a child. Medical education in Pediatrics at the undergraduate level should ensure the same, by attending to the minor and major problems encountered during this process,

and take care of the clinical aspects. As a result of these, right type of manpower with the desired expertise should be developed in the shortest time, in sufficient numbers, in order to provide adequate coverage to the 20 million new children, being added annually to our gigantic population.

In keeping with this, appropriate modifications are called for in the curricula and teaching programme of Pediatrics, at the undergraduate level. On one hand, such modifications will provide a firm scientific base for functions in providing Primary Health Care, and on the other, it should help in utilizing fully, the benefits from the current technological explosion in medicine and allied fields.

A strategy to achieve the above will require a considerable degree of rethinking to provide an unqualified thrust on normal development and growth in prenatal and postnatal phases, its variations and deviations, along with a reorientation of the schedule for adjusting the time allocation for various activities, adding an exposure to sociological managerial aspects, assist in development of skills in communication and strive for evaluation of performance, rather than didactic knowledge in the examination, at various levels. These will require an upgrading of the status of Pediatrics to a major subject in the undergraduate curriculum. This measure is a vital factor in acquisition of the expertise for implementation of the curriculum, in order to have the required reinforcements in clinical competence with educational technology, communication and operation research.

A remodelled curriculum for Pediat-

rics, may be considered in two distinct units, namely: (a) Development, growth and its deviations, to be taught in the pre-clinical period; and (b) Clinical aspects with emphasis on common health problems of children, their recognition, management and prevention.

(a) Development, Growth and its Deviations

This unit can be constituted by integrating relevant portions from the curriculum of embryology, genetics, nutrition, biochemistry and physiology, with related portions from clinical aspects. This will cover the development in preconceptional (genetics), prenatal (embryology), neonatal, infantile and early childhood stages, and provide appropriate linkage of biochemistry, nutrition and clinical aspects to the dynamic sector of prenatal development. Time allotted in the preclinical phases for sections on embryology, genetics, nutrition and preventive medicine can be tailored to make the desired provisions for this innovative course. Faculty for this unit will be drawn from all the related disciplines and can provide a meaningful and utilitarian blend of basic sciences and clinical disciplines in this context.

A prototype curriculum for teaching human development in an integrated manner has been developed, assessed and communicated to the faculty of various medical colleges by the Government of India under a WHO collaborated project(3). Under this project, curriculum teaching modules and teaching aids were developed in three medical colleges, tried and evaluated. Prototype of teaching aids in form of a set of 270 slides were distributed to different medical colleges, during workshops organized at regional levels. Possibly this is the opportune moment to follow the leads of this project into a meaningful modification

of teaching of human development in an integrated multidisciplinary manner. The initial experience of this project has demonstrated the feasibility and effective nature of a team work between pediatricians and preclinical teachers.

Besides integration of different disciplines, this approach has the advantages of starting a clinical exposure in preclinical years, utilizing the preclinical department manpower in such teaching and contribute to defining growth norms and monitoring of growth on a wider perspective, introduce social dimensions in medical training and contribute to control of population through improved child survival and healthier growth of children. Moreover, this approach will provide an opportunity to a student to handle a large number of babies of all ages, dimensions and temperament.

(b) Clinical aspects

The central theme of the clinical component should aim at acquiring the capacity to apply the requisite knowledge to common clinical problems, develop related skills and corresponding judgement for performing the basic tasks involved. Both the instructions and evaluation must be directed towards competence to perform the essential tasks. In other words, a task oriented approach is called for.

In addition to the customary medical components of the curriculum, it is desirable to include knowledge about family, society and human relationships, organization and management, documentation and information handling, learning teaching and communication, immunological support to the baby from the mother and leadership.

Unfortunately, learning by an undergraduate is totally examination oriented for several reasons. However, traditionally,

Medical Education in India has always treated Pediatrics as a mere appendage of General Medicine, in relation to curriculum, instructions, staffing and examinations. It is paradoxical that with 18 weeks of teaching time being allotted for it, Pediatrics has not been able to get the status of a separate examination subject in all but two universities; although other subjects with much lesser allotment of time are enjoying that privilege. In view of the pivotal role of Maternal and Child Health in the population control activities, and the urgency of having experts' knowledge in the discipline, it will be in fitness of things and national interest to accord the status of a major teaching and examination subject to Pediatrics at the undergraduate level. Neonatology should form an important component of Pediatric Education.

To derive a full benefit of the existing set up and proposed modifications, it is imperative to have a complement of teachers, with the right skills and competence for teaching. Though some of them have an inherent aptitude for teaching, yet most of them require some grounding into educational technology. This exposure should strive at developing teachers to function as Teacher Managers. A teacher manager is capable of good planning, successful implementation, suitable monitoring and meaningful evaluation of teaching activities, develop the suitable kind of teaching material and impart such expertise to his junior colleagues. Such an expertise has a special role in Pediatrics, since any medical person dealing in Pediatrics has to elicit full co-operation of the mother in care of the child, by communicating with her and teaching some of the essentials to her.

No doubt that for undergraduate teaching in the subject, we have the basic infrastructure, a time honoured system of

teaching clinical postings and an examination pattern supported by a good strength of teaching faculty. However, in the content of changing health scenario and current emphasis on priority areas a considerable modification and reorientation is called for in these sectors. Curriculum contexts need modifications in form of increased practical work, stress on newborn care and normal development, a sense of directions must emerge in its relationship to other disciplines. The teaching method can be made more effective and result oriented. Evaluation systems can be geared towards assessing competence, proficiency and skills rather than mere knowledge. Overcoming these bottlenecks is not difficult and requires a concerted effort at all levels.

In the Eight Five Year Plan, we are at the threshold of a Reorientation of Medical education in relation to the needs. For the discipline serving nearly half the population of the country, relevant changes in the medical curriculum and examination as indicated above shall go a long way, not only in achieving the country's goal of Health for All by 2000, but will also ensure full utilization for the inputs into medical education and health care. This is likely to be a significant step towards providing the desired direction to the strategy for the control of population so desperately needed by our country.

Indra Bhargava,
*Director, Serum Institute of India
Research Foundation and
Professor of Anatomy,
Bharati Vidyapeeth Medical College,
Pune 411 028.*

REFERENCES

1. National Health Policy Statement, Ministry of Health and Family Welfare, Gov-

- ernment of India, New Delhi, 1983.
2. National Education Policy Statement, Ministry of Human Resource Development, Government of India, New Delhi, 1978.
 3. Bhargava I, Anand C, Bhardwaj A. Curriculum for Human Development: An Integrated Approach, Ministry of Health and Family Welfare, Government of India, New Delhi, 1987.
-

NOTES AND NEWS

CME PROGRAMME ON ADOLESCENT MEDICINE

The 10th Annual CME Programme on "Adolescent Medicine", is being organized by the Lake Side Education Trust, 33/4 Meanee Avenue Road, Bangalore 560 042 as per details below.

Date — Sunday 26th July 1992
Venue — Sir C.V. Raman Institute
Conference Hall,
Sadashivnagar, Bangalore 560 080.

For Registration please contact:

Dr. H. Paramesh,
Managing Trustee

or

Dr. M. Ravi Baliga
Organizing Secretary
Phone: 566723/566738