A Practice of Social Medicine

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SOCIAL MEDICINE may be regarded as a practice of medicine concerned with health and disease as a function of group living. It is interested in the health of people in relation to their behaviour in social groups and as such is concerned with care of the individual patient as a member of a family and of other significant groups in his daily life. It is also concerned with the health of these groups as such and with that of the whole community as a community.

Concern with the health needs of larger communities and territorial groups such as cities, regions and nations is also an important area of social medicine in which the public health physician is involved. Special interest groups have been the focus of attention of yet other practitioners of social medicine. Children at school, university students and occupational groups are among the more important of these groups for whom special health services, oriented to their specific needs, have been developed. Less formal groupings are now receiving increasing attention by those concerned with community health services, such as the family, in which the relationships between the members have intimate and enduring qualities. Other significant informal groups, in which face-to-face relationships are characteristic, are friendship groups, play groups of children and the neighbourhood community, in rural village or urban neighbourhood.

These primary groups are a significant area of interest to social medicine. The old-time village doctor might well be regarded as a practitioner of social medicine whose major area of practice was within these groups. It was no doubt his close relationship with the families of the communities among whom he practised that gave meaning to the title 'family doctor'. His action in relation to family and community health was based upon his life experience in the community, the familiarity of daily association giving him an understanding of people's needs. Like other aspects of his practice, which have advanced along scientific lines, so too have the family and community areas been developed further, more especially by studies in social medicine. The practice of the Institute of Family and Community Health in Durban placed much emphasis on these more personal aspects of the practice of social medicine, and might therefore be regarded as a modern development of the family and community doctor.

With a broadening of interest in patients' habits, study of their feelings and beliefs is becoming an increasingly significant part of the physician's examination. As intrinsic elements of each person's learned experience they not only determine his general behaviour and hence influence his health but more specifically they determine what he does to promote health, to prevent illness and the action taken when he is ill. To whom he looks for care when sick is determined as much by his framework of knowledge and his perception of the meaning and nature of the particular illness as it is by the availability of various services. When doctors and their patients are of the same culture group, patient-doctor relationships are founded upon a reciprocal understanding of expected behaviour. The way in which a patient talks of his complaint, the selection of the various confidences divulged, the physical examination and the discussions which take place between the patient and doctor are part of this cultural1y conditioned personal relationship. Nowhere perhaps does this become

Reprinted from *A Practice of Social Medicine: A South African Team's Experiences in Different African Communities*, edited by Sidney L. Kark and Guy W. Steuart, pages 3-40, E & S Livingtone Ltd, All endnotes are from the original article.

more apparent than when a medical service developed in one society is introduced to communities of differing cultures. Experience of this kind was an outstanding feature of the Institute of Family and Community Health.

The Communities

The Institute has provided intensive experience of practice among differing social and culture groups, through its constituent health centres, established in various communities with the objective of providing such experience. Beginning over twenty years ago in the rural Zulu-speaking district of Pholela, Natal, the main centres were later developed in the city of Durban and its immediate environs. The communities served by these centres included Africans of varying tribal groups, but predominantly Zulu; 'Coloured' people, whose ancestry includes remote and more recent admixture of European and other race groups of the country; White ('Europeans') who are mainly English and Afrikaans-speaking descendants of European settlers or more recent settlers from Europe themselves; Indians, descendants of immigrants from India, mainly Hindustani and speaking Tamil, Hindi or Telegu, and a smaller Moslem community.

The neighbourhoods in which they lived varied considerably and included a well-housed White community mainly of World War II ex-servicemen and their families; special municipal housing projects, one of which housed a recently urbanized and rapidly growing African community; another was a sub-economic project for poor Indian families; a third was a separate neighbourhood of substantially built homes for Coloured people. These three projects, providing segregated accommodation for each of the 'race' groups, were in marked contrast to two other areas in which the Institute had established its services. The one was an old suburb of southern Durban in which lived Indian, Coloured and African families under conditions varying from well-constructed houses to large numbers of shacks, and the other was outside the northern outskirts of the town, where settlement was relatively uncontrolled and where large numbers of migrant Africans lived alongside the more settled families of Indian market gardeners. In addition to these neighbourhood communities, the Institute's services extended to the working men and women of a number of factories in Durban.

Differences in colour, of which all South Africans are acutely aware, were associated with differences in language, religion and ritual, family living, and, most often, with differences in educational and economic status. In addition to these more evident differences were those within the colour groups themselves. African communities of rural Pholela and highly industrialized Durban offered a contrast often greater than that between the slum dweller and the well-housed African in town, and in many ways greater than that between the various colour groups. Another important influence on the nature of the service provided and the way in which the community used the facilities, was the degree of community integration. This was well evidenced in the differences between a well-established community with continuity of neighbourhood family living of three generations and more, and the recently settled families in a new housing project. The one with its highly developed network of relationships and well-established ways of co-operation was in marked contrast to the other feeling its way towards becoming a community.

Neighbourhood Health Centres

Seven health centres were established to meet the needs of these communities. Each of the centres was essentially a neighbourhood community service, which offered its facilities to the families living in a particular neighbourhood. The object was to stimulate family and community interest and educate towards improving health, preventing disease and seeking suitable care when ill. The one exception to this family approach was that of the Institute's industrial health centre which set up demonstration projects in several industries.

The services provided by the health centres of the Institute varied for the different communities served while resembling one another in their basic

conceptual framework. The scope of the service depended to a considerable extent on the needs of the particular community, and appraisal of a community's health needs included study of its own perception of these needs. Distinguishing between the felt and unfelt health needs of a community was thus associated with the equally important consideration of the framework of knowledge in which the particular need was perceived and hence the action taken by individuals, families or the community to meet the problem.

Family Health and Medical Care

Cultural determinants of health and of the way in which the sick were cared for became apparent in the early experience in Pholela, our pilot health centre project. The importance of cultural change and variation in relation to the health of individuals, families and communities, was a reality experience of daily practice. Awareness of their own function in the process of cultural change led the staff to an appreciation of the need for health education as an important element of the service they provided. Thus in the continuing relationship of doctor and nurse with their neighbourhood of families, a process of health, education, which went well beyond the mere giving of information, became a most significant element of treatment. Assisting patients and their families towards an understanding of the relationship between various aspects of their life situation and their state of health provided a foundation for desirable change in behaviour.

Among the distinctive features of the Institute's practice was the team of doctor, nurse and health educator who provided the service to a neighbourhood of homes. The same doctors and nurses attended to individual family members during health and illness, combining promotive, preventive and curative service. Continuity of care of the families by this team introduced personal relationships between the families and their doctors and nurses, of the same kind as those the old-time family doctor had in his village or neighbourhood practice.

Family care constituted a central point of interest in the clinical and public health practice of the Institute. Care of the individual patient was the usual starting-point of this family practice, the objectives being: firstly, the immediate interest of the patient himself. Study of the patient's family life situation is very often essential in understanding the processes involved in determining his condition and in the consideration of the prognosis and the care programme. This objective is one which is common to all doctors in clinical practice, whether in the preventive or curative field, general practitioners or specialists.

The second objective of an individual case study in our practice was consideration of the possible implications of the findings for the health of others with whom the patient relates, more especially his family. This was regarded as the first step from individual case study towards a family study. The objective of this family study was that of elucidating the pattern of health of the family as a group of closely related and relating members. This type of study we referred to as 'family diagnosis' and we came to regard it as having as much potential significance for family care as does clinical diagnosis for care of the individual patient and epidemiological study for care of the community. In fact, family diagnosis has important attributes of both clinical and epidemiological diagnostic skills. The data required for a family diagnosis, namely, examination of the family members, their home and neighbourhood of living, were usually obtained during the course of a physician's family practice in which he had a continuing responsibility for the care of his patients. Associated with this type of responsibility was a continuing relationship with the families of his patients and the groups with which these families and their individual members function. The diagnostic focus on a group such as the family involves study of the reciprocal health implications that family members have for one another and the health significance of their shared experience. As such, family diagnosis has epidemiological qualities. Having both personal-

clinical and epidemiological qualities, family diagnosis may be regarded as a special aspect of clinical epidemiology.

The third objective of family studies carried out at the Institute was to assess the rôle of the family in determining the health of the communities for which we had responsibility. The well-established role of the family in the transmission of various infections was naturally an important area of investigation in communities in which acute infectious diseases as well as tuberculosis and syphilis were rife. The same approach was used in our considerations of the epidemiology of various malnutrition syndromes, more especially kwashiorkor, rickets and pellagra. These studies were followed by epidemiological interest in the family in relation to chronic illness, including behaviour problems in children, psycho-neuroses and other mental disorders, and in the very challenging health problems of foetal and infant survival and growth.

When the families being cared for in a family practice constitute a neighbourhood, the community implications of the service become immediately apparent. The family practice becomes directly concerned with community health and the rôle of the doctor as family physician and community health adviser provides a single foundation in practice for the association of preventive and curative responsibilities.

The educational aspects of the practice were not confined to individual patients nor to particular families in their homes. While doctor and nurse were directly concerned with education of individual patients or with particular groups such as expectant mothers, mothers and babies, or special groups of sick individuals, it was found that action by families is often better stimulated by an educational programme functioning through various groups within the community. The fact that the neighbourhood community was the unit of service allowed the Institute to develop comprehensive community health education of this kind. In doing this it had to train such personnel itself and eventually developed the community health educator as a special professional category, with special training. The health educator worked with functioning groups within the community, ranging from informal family or friendship neighbourhood groups to the more formal community organizations such as rate-payers' associations, boards of management or parents' committees of schools. His major functions were to improve health knowledge and to stimulate those processes of communication in a community which might lead to action promotive of health.

The team of family physician, nurse and community health educator together provided a foundation service which included care of the sick, prevention of illness and promotion of health. Dentistry was the only clinical speciality service provided by the Institute itself. The need for other speciality service was met mainly by specialized staff of various hospitals in Durban and later, when the Medical School was established, by various departments of the School. This made a profound contribution to the quality of care which the Institute was able to provide.

Measurement of the progress of families in a particular family practice and of the community's health as a whole was a feature of the service which the Institute developed for its own practising sections. A special group of health recorders was trained for the purpose and in this way it became possible to measure the changing state of health of the various communities and to evaluate the Institute's programmes.

Foundations for Action

Whatever the field of medicine, standards of practice rest to a considerable extent upon the accuracy of the diagnosis of the patient's state. This, together with careful evaluation of progress, constitutes the foundation for action. In social medicine, this foundation diagnosis is provided by the scientific study of the state of health of the group under consideration, with the object of relating it with other characteristics of the group and its habitat.

What pathology and physiology have meant in the development of scientific diagnosis of the

individual patient so epidemiology is coming to mean in the study of those processes determining the health of a group. As such, it is the foundation science of social medicine. Epidemiological method is most often required in the study of a particular disease process. Until comparatively recent years, it was mainly utilized for the investigation of infectious diseases. The methodology developed in studying the epidemiology of these diseases has now been applied to study of other disorders.

Case Illustration: Family Pathology in the Epidemiology of Kwashiorkor.

Study of those families under our care which had children with kwashiorkor, provided the starting-point of a number of investigations into the social pathology of this condition. Kwashiorkor was the commonest serious clinical syndrome of nutritional failure encountered among young children of the African communities in which we practised. In each community there was a considerable drop in the occurrence of cases within several years of the establishment of the service. Based upon special surveys of their dietary habits, carefully planned programmes of education were directed towards the improvement of nutrition in line with each community's own approach towards the feeding of infants and children. Change in feeding habits was no doubt a major factor associated with decrease in the occurrence of kwashiorkor. In addition, the majority of cases that did occur during the early period responded well to home treatment. Results of such treatment were as good as, if not better than, hospital-treated cases.

Despite this encouraging trend, however, kwashiorkor remained a problem. The clinical impression was that although the number of cases was less than formerly, an increased proportion were becoming more difficult to manage successfully at home. Further investigation of these 'hard core' cases indicated that the family-life situation of many was an important determinant of the occurrence of this disease and of the problems in management.

Three case examples of nutritional failure in children which occurred in our Durban practice illustrate the importance of maternal deprivation of different kinds in the etiology and treatment of such failure. One of the cases is an Indian child, and two are African children. The significant features which emerge may be briefly summarized here :

Case 1. R. B., a Hindi-speaking Indian girl, aged 7 years when first seen by us, had the following history:

Her mother died when she was about 1 year old and her father remarried some time later. Before his re-marriage she and her elder stepsister, seven years older than herself, lived alone with their father. Her relationships with her stepmother were very poor. Physical violence and other manifestations of rejection were marked.

At the age of 4 she was admitted to hospital as a case of primary tuberculosis. She was in hospital for one year and then transferred to a tuberculosis settlement for a further period of nine months. On her return home, now aged 6, poor relationships with her stepmother were aggravated by her inability, or possibly unwillingness, to speak her home language. The language of the hospital and the settlement was English. Her stepmother reported that her behaviour was 'bad'. She said, too, that the child had phases during which neither she nor others in the home could elicit a response from her, and that she had developed 'dirty' habits, having little or no control of urination or defaecation. This was thought to have caused the skin rash that developed.

It was at this time that we first saw her and diagnosed her as a case of maternal deprivation, associated with emotional disturbance and kwashiorkor.

Since then her story over the next five years included an episode of classical pellagra and later a prolonged phase of marked emotional disturbance associated with undernutrition. Despite considerable improvement in her clinical state, associated with improved relationships within the home, her prognosis for an adjusted life is considered to be poor.

It is of interest that her elder stepsister, also deprived of her mother in early childhood, was malnourished and had a very marked microcytic hypochromic anaemia (haemoglobin, 2.2 gm. per 100 cc.) at the age of 15 years. When she was nearly 18 years old she ran away from home and had not been traced four years later.

Case 2. T. S., a little African girl, was first diagnosed as a case of kwashiorkor at the age of 2½ years.

She was the fifth child born in this family. Only one of the four preceding children had survived. The others had died in infancy.

Born in a Durban hospital, following the mother's difficult pregnancy, with ante-partum haemorrhage and toxaemia, her birth-weight was 10 lb. 3 oz. At the age of 7 months she weighed 18 lb. 9 oz. Weaned at the age of 8 months, her growth rate declined and at 14 months after an episode of diarrhoea, she weighed only 18 lb. 12 oz. One year later she weighed 26 lb. but at 2 1/2 years her weight had dropped 3 lb. and she was a case of kwashiorkor.

The deaths of the previous children appear to be related to the unsettled life of the mother and the father. In moving from one home to another, from rural area to Durban and then in Durban itself, one child was sent to the mother's maiden home, and another to the father's home on different occasions.

While the movement itself is of significance, and appears to be related to economic and housing problems in Durban, there are other features of importance. The mother had a carcinoma of the right parotid gland. First diagnosed in 1949, when she was pregnant with her second child, it had necessitated hospital treatment and she was seldom free from pain. Despite this she continued to work, doing washing and ironing, which kept her away from home on many days of the week. It would appear that throughout her married life she has been a working woman.

The mother's continued employment away from her home, despite her own serious and painful illness, and despite the loss of her previous children, suggested the possibility of her unwillingness to accept her maternal rôle. Supportive of this is the way in which she sent her children in their early infancy to the homes of their grandparents.

In this regard an interesting feature emerged in her life history. Her own mother died when she was very young and she had no memory of her. Subsequent to her mother's death she was cared for by an aunt who came to their home, and then by her stepmother, of whom she still speaks adversely.

It is suggested that economic circumstances, and the mother's physical illness, contributed to the deprivation of normal maternal care in this family. The mother's own deprivation in early childhood may well be an important factor to be taken into consideration.

Case 3. N. M. was an African baby girl, first seen at the Institute of Family and Community Health when she was 3 months old, and in danger of developing kwashiorkor.

She was born at Eshowe, Natal, one of twins. The other child was a boy. In such cases it is not uncommon for the twins to be separated, one remaining with the mother. In this case the boy remained with the mother at Eshowe and the girl was taken by her grandmother to her home in Durban, at the age of 3 months. Her life there had been a very precarious one. The grandmother was the only woman in the family, consisting of her husband and their four sons. She was a working woman and, as a domestic servant, lived away from home with her employers, returning only over the week-ends. When employed in this way she arranged for others to care for the baby, who in her short life had had several substitute mothers. Each new arrangement corresponded with a setback in her progress, which was clearly shown by her weight record. No sooner would she start to recover from one episode related to change of care, when another arrangement had to be made.

On one occasion she was taken back to her mother at Eshowe, where she proceeded to lose weight and the grandmother brought her back to Durban saying that the mother did not love the child any more. After one period, when the

grandmother's sister had been staying at the home and caring for her, the baby began to make really good progress. Knowing that her 'great-aunt' would be leaving for her home in the near future, doctor and nurse had earnest discussions with the grandmother regarding her stopping work and fulfilling her rôle of mother-substitute. After much consideration and considerable pressure, she agreed to do this. Her own relationship with the child developed satisfactorily and was evidenced in the considerable progress in the baby's physical and emotional state.

Some idea of the baby's progress is indicated by the following extracts from her weight at different ages.

First seen: 3 months old: 9 lb. 13 oz. (when first brought to Durban)

6 months: 14 lb. 4 oz.

9 months: 17 lb. 10 oz.

13 months: 15 lb. 15 oz. (on return from her Eshowe home)

15 months: 17 lb. 8 oz.
18 months: 18 lb. 4 oz. } (In care of neighbours)

19 months: 20 lb. (in care of' ‘great-aunt')

21 months: 22 lb. (in care of grandmother herself)

These three cases illustrate a widespread problem in South Africa concerning the emotional and nutritional aspects of health.

The possible rôle of maternal deprivation in the epidemiology of kwashiorkor in early childhood is of particular significance in Africa, where kwashiorkor has become the commonest syndrome of serious acute nutritional failure. The earliest description of the syndrome in Africa was a note by Procter (1926) on its occurrence in Kenya. In South Africa, Ross (1931) described it as a new syndrome of African infants in the Ciskei. She considered the diagnosis of infantile scurvy satisfactorily described her cases. However, her description and illustrations leave no doubt that these were cases of kwashiorkor. Williams (1933, 1935) provided the first full clinical description in African children from her experience with cases in West Africa. Using a local name for the disease, she was. the first to employ the term kwashiorkor. During the past twenty years a number of workers in various parts of Africa have pursued pathological, clinical and epidemiological studies of the condition. Recent reviews by Brock and Autret (1952), and Trowell, Davies and Dean (1954), include several features of particular interest to our present consideration:

(a) *Retardation of Growth*. While this occurs in association with various forms of malnutrition and undernutrition, it is a consistent and important feature in cases of kwashiorkor. Our own studies at the Institute of Family and Community Health among African infants in Durban and in rural Pholela, and studies by others in Africa, show the following features:

(i) While birth-weights are below those of average middle-class babies in Europe and the United States of America, weight growth during the first 3-4 months is often accelerated by comparison with these children.

(ii) After. this period the rate of weight growth decelerates and by the age of 1 year African infants' weights are well below expected standards in countries like Britain and America.

(iii) Later still, during the later phases of breast feeding and following complete weaning from the breast to other foods, the deceleration is often even more marked than in the previous phase.

(b) *Weaning*. All workers are agreed that, with rare exceptions, the syndrome of kwashiorkor occurs after weaning the baby. Discussing the condition among the Baganda attending clinics near Kampala, Uganda, Welbourn (1955) states:

‘"*Obwosi*" is the Luganda word for a wasting condition accompanied by fading in the colour of the hair and skin, which occurs in babies who are weaned too soon. A common cause of premature weaning is a second pregnancy: *obwosi* is regarded as a disease of the displaced child . . . the older child fades away as the younger one

increases in strength and vitality. Africans believe that the younger child is in some way a kind of spiritual parasite upon his older brother.'

The possible significance of displacement will be considered further below.

In the cases attended by the Institute the age incidence was in general accord with the findings of others. The vast majority of cases (over 80 per cent.) occurred in children in their second and third years of life, the incidence in older age groups falling off very rapidly after 3 years of age. In a series of cases admitted to the Johannesburg General Hospital, Gillman and Gillman (1951) reported 79 per cent. as occurring between the ages of 1 and 3 years.

The significance of the occurrence of kwashiorkor at these age periods is its correspondence with the age of complete withdrawal of breast feeding associated frequently with displacement of the infant by a new baby. More common than the fully developed syndrome are relatively mild signs of kwashiorkor in the displaced child. Attention to home care of the displaced child by physicians and nurses in the course of their practice is thus not only desirable, but is also an essential part of medical care and health education directed towards improved child nutrition, and the prevention of kwashiorkor.

Cultural anthropological studies of various African groups refer to the indulgent early feeding relationship between mother and baby and the continuation of breast feeding for periods of two to three years and sometimes longer. Another feature which many African groups have in common is their attitude towards a further pregnancy when an infant is still being breast fed. Not only is it considered undesirable for the mother of a young infant to become pregnant but, should this occur, breast feeding is stopped as soon as the mother is aware of her condition.

Following a description of the typical indulgent feeding relationship among the Basuto, Ashton (1952) makes the following significant comments on the change in relationship after weaning:

'The child is prepared for weaning by his neighbours mocking him when he runs to his mother to suck. . . . The process (of weaning) is usually concluded, especially if weaning has to be ended abruptly owing to premature pregnancy, by positive action, such as the mother tying a cloth around her breasts or rubbing bitter tobacco or aloe juice on her nipples. Alternatively, the child may be taken to his grandparents till he has "forgotten" his mother.

'This event completely changes the relationship of the child with his mother and so opens the way to the use of force as well as reason. The child is now expected to be old enough to understand and therefore to obey his parents' orders and so is treated with far less consideration and coaxing than before. . . . When he cries or makes a nuisance of himself, he is shouted at and told to be quiet, is threatened with a thrashing or is left alone; if he is hungry, he is told to wait until someone is free to come and feed him.'

Krige (1936) refers to the removal of the Zulu child from his mother at the time of weaning. Traditionally it would seem that the child was removed to the mother's maiden home but it is now a common practice to wean the child by putting it in the care of the father's mother in whose hut it now sleeps away from its mother.

The practice of removing the weaned child from the mother to the mother's original home, and in many cases transferring responsibility for his care from his mother to the father's mother are of much interest in our consideration of maternal deprivation. Separation of the child from mother may vary from short to prolonged periods of time, involving a change in mother-figure at a time when the infant has learned to identify his mother as a defined person and has established his first basic intimate relationship with her.

Even in those cases where the child is not separated from the mother, a changed relationship of the kind described by Ashton (1952) can be of considerable clinical significance and is therefore worthy of the closest attention in medical practice.

With the rapid process of urbanization of African men, and now of women too, family ties have been considerably loosened. Traditional

practices of shifting the responsibility for child care have been increased and it is now common for children of very young ages to be living away from their mothers. The high incidence of unmarried unions, some of a relatively stable kind but many of a casual nature, has resulted in the birth of large numbers of illegitimate children. While in practice in the rural area of Pholela, we noted that it was not uncommon for a young woman working in a town and having an illegitimate baby there, to return home with the baby and after a short time to leave it in the care of her mother when she went back to town.

A study by one of the family physicians of his own practice among some 600 African families living in 'Hilltops', Durban, is indicative of the extent to which children were living an abnormal family life. A random sample of one in every four families was investigated by the family nurses working with him in this practice. The results (Table I) indicate the kind of family life situation of the 300 children under the age of 16 years in the 148 families visited.

TABLE I

The Family-Life Situation of 300 Children in a Random Sample of Homes in a Neighbourhood Family Practice

A. The percentage of Children living with Parents, other Relatives or with Foster Parents

	No. of Children	% of Total Children
Living with mother and father	162	54.0
Living with mother, but not with father	94	31.3
Living with father, but not with mother	4	1.3
Living with grandparents or great-grandparents	20	6.7
Living with other relatives	16	5.3
Living with foster parents	4	1.3

B. Further information on those Children not living with both their Parents

	Total Number	Children living with				
		Mother only	Father only	Grandparents	Other Relatives	Foster Parents
Illegitimate Children	67	52	-	7	6	2
Mother dead	11	-	3	4	4	-
Father dead	31	28	-	-	3	-
Parents separated by divorce or desertion	7	6	1	-	-	-
Father living away because of work	8	8	-	-	-	-
Attendance at school in 'Hilltops'	9	-	-	7	2	-
Miscellaneous and unspecified	5	-	-	2	1	2
Total	138	94	4	20	16	4

Of the 138 children not living with both their parents, no fewer than 58 were below the age of 5 years.

The reasons that children were not living with both their parents were ascertained. The results are indicated in Table I, B.

This analysis includes only those children who were staying in these homes at the time of the study. It excludes those children whose mothers live in 'Hilltops' but who were themselves living somewhere else. A number of children live for varying periods of time with relatives in rural areas. This suggests the need for further study of the frequency with which children are moved from one home to another and the possible relationship of this movement to the clinical state of the children.

A further significant feature which emerged in this study was that there were no fewer than forty-four children (nearly 15 per cent. of the total sample) who were not living with their mothers. Ten of these (3.3 per cent of all the children) were under 5 years of age.

The implications of this abnormal family-life situation, of which maternal deprivation is an important element, extend from the possibility of more immediate nutritional failure to later serious behaviour disturbance (Bowlby, 1952).

The implication for case management will be considered as it affects medical practice in particular. Family practice, having deep roots in European history, is the first aspect that comes to mind. Unfortunately, the rôle of the family physician in European society has been considerably limited at a time when advances in our knowledge demand that we re-orient ourselves to the family as one of the most significant determinants of individual health, and hence of public health. Furthermore, family practice as known in Europe has scarcely developed in African society.

There is thus need for the resurgence of family practice in those communities in which it was so important, and its extension to those who are rapidly being introduced to modern medicine. In this development, a most important requirement is that of training. Medical and nursing education must include a basic understanding of sociology and psychology of the standard demanded in the biological sciences, such as physiology, if clinical experience in family practice is to be fully appreciated. Understanding and knowledge of the family-life situation in its relationship to family health are integral elements of social medicine and are vital to the men and women who may become family physicians and family nurses. Not only is it of significance to those who become general practitioners, but also to many who specialize in other fields of medical practice.

The rôle of the family physician or the family nurse as adviser to individuals, families and communities places them in a position in which they can play an important part in promoting health and preventing diseases known to be associated with social pathology in the family. Furthermore, early diagnosis of such conditions as have been considered in this review allows for early treatment of the clinical disorder, including attention to the etiological factors involved.

The prevalence of maternal deprivation and other forms of abnormal family living of large sections of South African children indicates the need for extensive study of the health problems which emerge in such situations.

Two sets of disorders suggest themselves for immediate epidemiological investigation. Apparently unrelated, but considered here to have something in common in their social pathology, the disorders suggested are child delinquency and kwashiorkor. Epidemiological investigations of the health aspects of these major public health problems are worthy of the most serious consideration by those concerned with sponsoring medical research projects in Africa.

Extension of the epidemiological method to study of the processes determining the occurrence of such disorders requires

considerable elaboration of our knowledge of the social and cultural attributes of the host and of the human element of the environment. We have found the following framework of thinking helpful in the formulation of hypotheses as to the group processes involved in determining health and sickness:

1. Processes of transmission and social interaction between various members of the group (host) being studied.

(a) Transmission of the state of health: by direct biological transmission, *e.g.* genetic and intrauterine transmission;
by transmission of infection, including consideration of modes of transmission as well as varying susceptibility and immunity.

(b) Social interaction. The degree and quality of interaction, observed and expected, in family life and other intimate personal relationships, and in less intimate and secondary group relationships

2. The shared experience of various members of the group include consideration of:

(a) Cultural processes, having particular regard to the framework of knowledge, beliefs and customs of a particular culture group relevant to the condition under consideration;

(b) common constitutional attributes of the group, whether by genetic or other significant relationship;

(c) exposure to common habitat, including the group's human habitat, physical and biological environment.

Fruitful hypotheses could be tested by action programmes. These programmes included provision for the gathering of data for purposes of measurement and evaluation of change in the community's health state.

Evaluation of Programme and Appraisal of Changes

Measurement of change in the state of health of a community assumes the existence of relevant data. The evaluation of any change should be studied in relation to various characteristics of the community and its habitat. There was some variation in the amount and kind of data available for each of the communities served by the Institute but in all there was need for development of a system of collecting, recording and analysis of material for our purposes. This included information concerning the following features of the community:

1. The health of its members.
2. Demographic data.
3. Behavioural characteristics.
4. The habitat.

Much attention was given to the need for clear definition of each item of information and the way it should be obtained.

1. Information concerning the health of the community

A feature of the neighbourhood family practice was the development of the periodic health review of members in the families receiving care. This was relatively comprehensive and included consideration of the following aspects of their health:

- Specific disease processes, using the nomenclature of the International Statistical Classification of Diseases, Inquiries and Causes of Death.

- Nutritional state and physique, which included clinical appraisal of nutritional state and records of growth and maturation.

- Social adjustment and mental health, involving consideration of the individual's rôle behaviour, quality of intrafamilial relationships and social participation as well as special studies of behaviour development and intelligence.

In addition to the case material gathered in the course of routine practice, special surveys were planned from time to time in different communities. Apart from official records of notifiable diseases and causes of death, which varied considerably in the different

communities, the Institute relied on the work of its own physicians and other staff for the information needed. Supplementing the routine analysis of clinical records and the material of special surveys, a system of internal notification of various conditions was introduced. This allowed not only for more immediate action but also for more directed epidemiological studies of certain conditions, e.g. amoebic and bacillary dysentery, burns, kwashiorkor, chronic diseases.

2. Demographic data

Studies of the population of each community were aimed to provide basic information of its biological and social composition. The material was obtained through a continuing study of the families. Each family practice team was responsible for gathering the necessary data concerning the various families in its care and they were assisted by staff of the medical records section. Special record cards were designed for the purpose of maintaining accurate and up-to-date information on each community of families. The data included:

A. *Family Composition*. This comprised the following information on each member of the home:

Name, sex, date of birth, birthplace.

Race, nationality, tribe, religion.

Marital state and family relationship.

Home language.

Length of residence in the area and previous residence.

Educational standard, including the final standard of education attained, the changing standard of those still at school, and the name of the schools or other educational institutions attended.

Occupation-records concerning gainfully employed members of the family included kind and place of work, earnings and the changes which occurred.

B. *Special Notifications.* In addition to the internal notification of certain diseases which has already been referred to, the Institute established its own system of notification of births, deaths and movements of people. In some areas the Institute was able to rely on official agency registration to check its own recording, but in communities such as rural Pholela, registration of births and deaths was not required at the time the Health Centre was established. Even in Durban, where it was required, records of the recently settled African population were incomplete. The records maintained by the Institute at its various Centres were:

(i) Live births, still-births and abortions--the record showed the address and names of parents, their marital relationship (including reference to each community's own recognized unions), ante-natal care (with specific mention of results of Wassermann and Rh tests), place of confinement and attention at confinement, the baby's name, sex, birthweight and rank.

A register of pregnant women which was introduced mainly in connection with the Institute's ante-natal programmes was later found to be a most useful check on accuracy of birth registration and was then incorporated into these demographic studies.

(ii) Death records included name and address of the deceased, sex, date of birth, place and cause of death, how cause was determined, probable place and source of last illness.

(iii)Movements into and out of the area of family members and others, indicating places from and to which individuals had moved. These records included temporary movements such as those of the men of Pholela homes going to the towns for work.

3. Information concerning the behavioral characteristics, beliefs and customary practices of the community

The majority of studies of this kind were planned to provide information needed for programmes of action in relation to particular

health problems. They included study of values, attitudes and framework of knowledge as well as the overt practices. As might be expected, a wide variety of studies were carried out. Among the more common were those concerned with communicable diseases and nutrition.

The people's concepts of the nature of various diseases and nutritional processes were studied in relation to their sanitary practices and dietary habits. The selective use of health services was similarly studied in association with the conceptual framework about different aspects of health and various kinds of sickness. Surveys of infant-feeding practices were associated with studies of attitudes to breast feeding and the maternal rôle as revealed in group discussions.

4. The habitat

Locating a person or family in a particular neighbourhood, the first step in a study of their environs, is normally done by recording the address. Addresses were not available in several communities and mapping the houses of various areas was required before special 'Health Centre Addresses' could be given. In many parts these addresses later became part of the local community's postal address system.

Among the more immediate aspects of environment that were studied to a greater or lesser degree of intensity in all communities were the housing, water supplies and ways of disposing of human excreta and refuse. Meteorological records were available to the Institute from the Durban meteorological station, but in Pholela it was necessary to install a small observation unit for measurement of rainfall, temperatures and humidity. The measurements were carried out regularly and after a number of years the centre became an official meteorological station for the area.

In regard to human characteristics of the habitat, we were careful to draw a distinction between the group being studied and its human habitat. Thus when the group itself was a family, its immediate human habitat was regarded as the neighbourhood community. Similarly, the city or rural region was regarded as the human habitat of a particular neighbourhood community or village. We were more especially interested in the relationship of the group being studied with its human habitat, and the similarities and differences between the group and its habitat in respect of health, social structure and relevant aspects of their culture. .

The maintenance and analysis of the records collected was the function of medical recorders, trained for this purpose. Demographic records were maintained for the entire community of families whether they attended the Institute's clinics or not. The records thus had a twofold function: (1) for review of community health indices; and (2) for use in the daily practice of the family physician and his team.

Over the years the staff of the Institute developed a considerable store of knowledge about the community due to their frequent contact and the close relationships established with the people as patients at the Institute, with patients and families at home and with groups at various group discussions and community activities.

This relationship assisted considerably in the development of a relatively accurate set of records, thereby enabling the Institute to measure and evaluate the changing state of health of the communities in which it practised.

Examples of Evaluation

1. *Measuring the Selective Response of a Community to a Health Programme.*

Among the most important measures of a community's health are the morbidity rates. Our action programmes were based upon knowledge of such indices but we learned very early in our Pholela experience that more was involved in carrying through a successful programme. The selective response of a community to different aspects of a programme was well illustrated in this experience.

The frequent occurrence of typhoid fever

outbreaks in different parts of the district was one of the community health problems discovered very soon after the initiation of the health centre. Our 'fire-brigade' rôle in these outbreaks provided opportunity for study of other common diseases associated with insanitary living, such as gastro-enteritis of infants and dysenteric infections.

Examination of sick patients and routine examinations of expectant mothers, babies and school children, also revealed much evidence of other infections, more especially syphilis, tuberculosis and skin infections such as scabies and impetigo contagiosa. The high prevalence of clinical signs of malnutrition was a striking feature of these examinations.

Extending from these initial clinical impressions, sanitary and dietary surveys were planned. In an initial survey over a wide area with an estimated population of some 10,000 individuals only one home had special latrine provision. An African minister of the church had built a pit latrine for the use of his family.

There was insanitary disposal of domestic and animal refuse in the immediate vicinity of the homes and there were no homes systematically disposing of their refuse in compost pits for the purpose of producing organic fertilizer. Dietary studies indicated serious deficiencies in consumption of meat, milk and green vegetables. While a number of homes had home gardens in addition to their main fields, the main crops growing in these gardens were maize, beans, pumpkins and potatoes. Few homes cultivated green vegetables and of these, cabbages were the only common variety.

The action taken to meet some of the more urgent health problems included programmes directed towards the following objectives:

1. Improved sanitary status of the homes: building of pit latrines, composting of domestic and animal refuse.
2. Development of home vegetable gardens which would make use of the compost made at home.

A demonstration unit was established at the health centre. An inexpensive model-type latrine suitable for the area was built of local materials; a series of small compost pits were put into operation using domestic and animal refuse; a vegetable garden was developed by staff, patients and school children of the district. All patients attending for care at the centre were involved in discussions on these topics in which doctors, nurses and health educators participated. They were also invited to visit the demonstration garden, compost pits and latrine, and special visits were arranged for chiefs and tribal elders, school teachers, school children, families and other groups.

It soon became clear that there was a marked difference in response to different elements of the programme. There was considerable development in home gardening, somewhat less response to the home compost programme and very little response to the programme for provision of latrines.

Regular seasonal studies of vegetables growing in home gardens were carried out and the early programmes aimed to increase the quantity and types of vegetables grown in the rain seasons, leaving the more difficult problem of dry winter gardening for later development. The considerable change that took place is indicated by the following comparative figures of mid-summer gardens in the homes of one area after a period of three years (See Table page 129).

The digging of shallow compost pits and their use for disposal of domestic and animal excreta in the immediate vicinity of the home, extended gradually to an increasing number of homes. At the time of the garden survey, three years after the commencement of the programme, 21 per cent. of the 139 homes had such pits in use. Despite the energetic work of the health team, very little progress was made in construction of pit latrines in the community. A limited number of homes commenced construction but very few completed the work. It became clear that our approach in this respect

Types of Vegetables growing in the Gardens (excluding Maize, Beans, Pumpkins)	Percentage of Homes in One Neighbourhood in which the Particular Types of Vegetables were growing	
Arranged according to frequency at Intial Survey	Initial Survey (113 homes surveyed) %	Survey 3 Years later (139 homes surveyed) %
Potatoes	61	85
Peppers	12	21
Cabbage	6	50
Tomatoes	6	43
Sweet Potatoes	6	23
Peas	3	12
Onions	3	4
Carrots	2	25
Amadumbe (‘Taro’)	2	9
Beetroot	1	19
Shallots	1	12
New Varieties		
Chinese cabbage		38
Soya Beans		37
New Zealand Spinach		17
Turnips		17
and 6 other less commonly grown vegetables		

was not acceptable and we made a more careful study of the reasons.

Adults and children were found to micturate in the immediate vicinity of their huts, but defaecation, except in the case of infants and young children, always took place some distance from the homestead. Bushes were preferred, but the absence of such cover in many parts of the district led to the frequent use of 'dongas' (gullies). As long as a place was found which offered protection from the public gaze it was considered satisfactory. Modesty, and perhaps even more important, the desire to conceal the identity of the person defaecating, demanded this protection. Our examination of water supplies showed them to be contaminated with human excreta and these various sites of defaecation were the sources of such pollution. The attitude which the people had to disposal of their faeces was well indicated in the questions and statements commonly made in discussion aimed to encourage the building of pit latrines. Some of these are quoted:

(a) 'I will report this to my husband who is going to reject the pit privy idea. I, for one, cannot imagine a woman using the same defaecating place as her husband.'

(b) 'People do not want to defaecate in one place because they still think that someone can bewitch them through their faeces. Because of this belief it is hard to get them to build pit privies.'

(c) 'I like the idea, but I fear my neighbours. What do they say? I cannot be the first one.'

(d) 'As you explain it, it appears a very good thing, providing your doctor is not starting a campaign to open more gates for government taxation. '

(e) 'We have not yet heard of a doctor who wants people not to get sick. If we keep healthy, what will help to make his living.'

(f) 'This place is going to be turned into a "compound" and be dirty, and flies will have a place to breed, like "X".’ ('X' was a peri-

urban slum area not far from Pholela. At the time this statement was made there was no local health authority there and there were no efforts to introduce sanitation services.)

The fears which the people have of the government, of their neighbours, of the possibility of being bewitched by the use of their faeces, and suspicion of the motives of the 'white man' generally, were all indicated in their discussions and arguments against the construction and use of pit latrines. Fixed ideas regarding the smell and filth resulting from extensive use of pit privies and pail latrines were a result of what they had unfortunately experienced in many towns. These types of argument were, however, used mainly by the more educated. More important was the fear of bewitchment. Faeces, being so intimate a part of the individual, are regarded as one of the common elements used by the ill-wisher in his efforts to cause harm to the ‘enemy'. This was well expressed by one of the older men at a meeting held to discuss the question of lavatory provision for the area. While he opposed the building of either pit or pail latrines, he said he would favour any system which would immediately remove the excreta from the site of defaecation. He quoted the water-borne system used by White people and their African servants. No ill-wishers could in such circumstances identify any particular individual's faeces.

While excreta were therefore regarded as a potential cause of disease, they were not considered in the same light as they were by ourselves. It was for this reason that latrine provision was not an element of the average homestead. It was for the same reason that human excreta were not used as manure or fertilizer for gardens and fields. Much change in belief systems would have to take place before any real progress in this direction could be made, unless a water-borne or other system of disposal could be developed to meet the dangers believed to be inherent in home disposal of faeces.

2. Demographic Problems in Evaluating Changing Health Status of a Community.

Selective response to programmes of action was a feature of our work in all communities. Its measurement becomes a most important tool in programme evaluation and in appraisal of change in the community's health. Concrete evidence of this change is to be sought in such indices as mortality and morbidity rates as well as changes in growth trends. The detailed attention given to the development and maintenance of health and demographic information made it possible for the Institute to do this.

An interesting problem in measuring change in a community's health was presented by several communities in which there was considerable population movement. One of these was 'Hilltops', a municipal housing project which was being expanded rapidly to house the large numbers of African families immediately prior to moving into 356 newly built flats in this area. The following features emerged:

(a) *Internal Movement.* Some 10 per cent. (36 of 356) of the homes were occupied by families who had been living in other homes of 'Hilltops'. There were two main reasons for this movement. Firstly, a number of families moved from two-roomed cottages to the three-roomed flats. Secondly, when it became known that new houses were to be available, families moved in to live with relatives or friends in the housing project in the hope that this would improve their chances of having one of the new houses allotted to them and this method of pressure was successful in a number of cases. . Eleven families living in other municipal housing projects also moved into the flats. In all, therefore, 13.2 per cent. of the newly accommodated families had already had some experience of living in municipal housing projects. When it is remembered that these projects are the best type of housing for Africans in Durban, the significance for health will be appreciated.

Living under such conditions before moving into a new home provided families with experience in marked contrast to those who came from slum urban areas on the one hand and from rural tribal homes on the other. The municipal housing projects, in providing a relatively high standard of sanitation, might be expected to reduce the high incidence of diseases spread by insanitary disposal of human excreta and refuse and by polluted water supplies. In this way the high prevalence amongst Africans in Durban of gastro-enteritis and bacillary and amoebic dysentery would be gradually reduced. The families who move from one sanitary home to another are less likely to bring these diseases into their new surroundings than those from slum or rural areas. It must be remembered that the provision of better housing, with satisfactory sanitation and clean water supplies, is not in itself sufficient to reduce these diseases. The habits of the people thus housed can readily create an insanitary environment despite the provision of facilities. The Institute's studies of 'Hilltops' indicated this important fact when pollution of gardens by children's faeces was found in a considerable proportion of the homes. As a result of the recognition of the need for education in the use of facilities, much emphasis was given to this matter by its health educators.

Another important feature of living in such housing projects results from the selection of the tenants by the municipal authorities. A first requirement was marriage, with the result that all new families consist of married couples and their children. This is very different from the conditions which obtain in slum areas, where relationship between the parents varies from marriage or stable union out of marriage, to large numbers of very loosely defined and casual unions. The social *milieu* in which these men and women and their children live is in marked contrast to that in housing projects. Many illegitimate children are born to young mothers in 'Hilltops', but there are important differences between many of these cases and those just referred to. Many unmarried mothers in 'Hilltops' are living with their parents and, furthermore, a re-establishment of traditional values was evidenced by the many mothers who expressed serious concern about the future of their daughters. In the slums, a large number of unmarried mothers were mature women or girls who had left their homes to fend for themselves in the city.

(b) *From Slums*. The majority of families who moved into the flats came from unsatisfactory homes. Of the 292 families occupying these flats whose place of residence immediately before moving into their new homes had been in Durban, no less than 245 came from unsatisfactory conditions. Many had been living in overcrowded 'shacks' in slum neighbourhoods. The most elementary sanitary facilities were often absent in their previous homes, water supplies were inadequate, and the houses themselves were often of such poor structure as hardly to afford protection from the elements. The inadequate housing and sordid conditions of many of the neighbourhoods in which they lived exposed them to diseases of overcrowding and filth, and equally significant were the implications for their emotional and social health. Public health administration, medical care and other social services were so limited that they scarcely impinged upon the individuals subjected to this stressful life situation.

The load of disease which these families brought with them into 'Hilltops' ranged through tuberculosis, venereal diseases, amoebic dysentery, bacillary dysentery and gastro-enteritis, scabies and impetigo, alcoholism, nutritional failure syndromes, emotional disturbances, varying degrees of social isolation, and attitudes towards neighbours and other people which required the urgent attention of the Institute. When it is remembered that 68.8 per cent. of the new families had lived in these conditions, to a greater or lesser extent, immediately before moving into 'Hilltops', the priority demands on the Institute's service

become more apparent.

(c) *From Rural Areas*. Eighteen per cent. (64 of 356) of families moved into flats from homes in predominantly rural areas. In most of these cases the men had been at work in Durban as 'migrant' labourers, living here while their wives and children remained at home in a rural area. This rural group brought a somewhat different orientation towards urban living than those who already had experience of family living in Durban. Their process of accommodation to living in 'Hilltops', while providing as challenging a situation as that for the slum dwellers, was of a different kind. Theirs was not the experience of sordid slum dwelling, but a relationship experience of a rural kind, characterized by kin and primary-group relationships in which illness and other disturbances were interpreted in terms of failure of human relationships, in well-established 'witchcraft syndromes', and in failure to meet one's obligations to the ancestors. The change in neighbourhood relations may perhaps be better appreciated when it is realized that a single block, consisting of four flats, might include families of this kind living together with sophisticated 'Hilltops' families and with slum dwellers. The long-term prognosis may be good but the immediate effects are of a stressful kind.

Coming from rural areas, the families were seldom used to medical care of the kind provided by the Institute. Indeed, their experience of modern medicine was often extremely limited.

The medical, nursing and health education programmes of the Institute needed to discriminate between these various groups. The variation of life experience, and hence of attitudes towards health and the use of health and medical services, and of the different health and adjustment problems involved, must be reflected in its case work and health education.

Another demographic feature of this community presented a somewhat different problem, but of considerable significance for measurement of the community's health. While very few families moved away from their homes, we had the impression that there was considerable movement of people through the homes, many of whom used the medical facilities of the Institute. A random sample of homes in the more established part of this area was studied over a period of two years.

During this time each of 118 homes (one in every six of the study area) was visited every two months with the objective of recording the persons in the home at the time of the visit as well as any who had been there between the study visits. The results indicated that over the two-year period 1,200 persons had stayed for varying periods of time in those homes, an average of 11.7 persons per home. The following figures indicate the findings of relevance to our present considerations:

Length of Stay	Number of Persons living in 118 'Hilltops' Homes during the 2-year Period of Study	Percentage of Total Persons
Less than 1 month	115	9.6
1-3 months	295	24.6
4-6 months	168	14.0
7 months – 1 year	110	9.2
Over 1 year – 2 years	512	42.6
	1,200	100.0

It is clear that a reality picture of 'Hilltops' is obtained when it is realized that its homes consist of a moving population with considerable variation in the composition of a home at different times (as observed within as short a period as two years). Each home consists of a core of members, averaging between four and five persons with a greater number who live

with them at different times and for varying periods. This latter concept is of particular significance when considering. the panel of patients in a neighbourhood family practice as well as in epidemiological studies. The need to have comparable data for measurement of the community's health from year to year was met by establishing criteria for residents as distinct from visitors. In the light of our demographic findings the following convention was adopted:

(1) All individuals who had lived in 'Hilltops' "for a period of one year would be regarded as residents.
(2) Families who had moved into new homes allotted to them by the municipal authorities would be included from the date of their movement into the home.
(3) Apart from babies of residents and other cases such as young children coming to live with their parents in 'Hilltops' after the latter had settled in their homes, persons living with resident families for less than one year would be regarded as 'visitors' for the Institute's family and community demographic records.

Using these criteria it was possible to analyse data providing relatively reliable information on the changing health state. In one such analysis we were particularly interested in studying the incidence of certain diseases which could be used as indicators of change in response to various programmes concerned with personal hygiene, sanitation and dietary habits. Records of these diseases were maintained over a five-year period.

During this period the occurrence of new cases of these diseases was measured in a defined sub-area of homes within 'Hilltops'. At the commencement of the study the population of this sub-area was 3,974. After five years it had increased to 5,522. The main reason for the increase was the building of additional houses in the area. Many of these new houses were sited among those originally included in our study area and because of this have been included in the analysis.

Figure 1 [page 134] illustrates the changing incidence of scabies, pellagra, amoebic and bacillary dysentery, and of early syphilis infection. The decline in incidence is not related to a decline in the use of the Institute's services, as our figures indicated an increasing use of the service by the community as a whole, including this sub-area. The chart is based upon the figures of Table II [page 134].

Teaching Functions

Throughout its history, the Institute had important teaching functions and, indeed, was originally founded with the specific purpose of training personnel to staff the various health centres of the Union of South Africa. With physicians and nurses, this was done mainly through an intensive form of in-service training as an extension of their basic professional education. With the health educators, however, since they were recruited from a variety of occupations, the training was essentially a basic qualifying course and extended eventually over three years.

From 1955, however, the Institute assumed a new teaching role in the University of Natal through its association with the Department of Social, Preventive and Family Medicine of the University's newly established Faculty of Medicine. This development of its teaching functions will be considered further here.

A Clinical Teaching Programme in Social Medicine

This is a report of a project in medical education initiated in the Faculty of Medicine of the University of Natal. While the general structure of the curriculum is similar to that which obtains at other South African medical schools, there are distinctive features which are

Fig. 1. The changing incidence of new cases of certain diseases per 1000 population in a sub-area of 'Hilltops", Durban

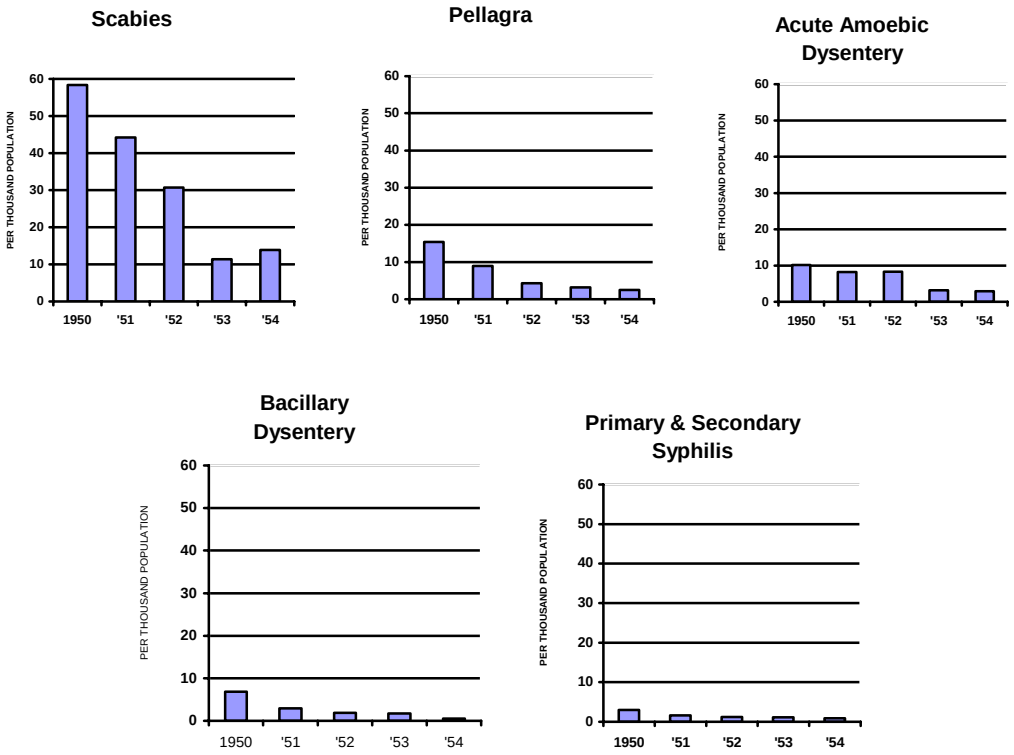

Table II. *The Changing Incidence of New Cases of Certain Diseases per 1,000 Population in a Sub-Area of 'Hilltops', Durban*

Year of Study	*Population Of Sub-Area*	*Scabies*	*Pellagra*	*Acute Amoebic Dysentery*	*Bacillary Dysentery*	*Primary and Secondary Syphillis*
1st	*3,974*	*58.4*	*15.4*	*10.1*	*6.8*	*3.0*
2nd	*4,485*	*44.2*	*8.9*	*8.2*	*2.9*	*1.6*
3rd	*4.688*	*30.7*	*4.3*	*8.3*	*1.9*	*1.2*
4th	*4.754*	*11.4*	*3.2*	*3.2*	*1.7*	*1.1*
5th	*5,522*	*13.9*	*2.5*	*2.9*	*0.5*	*0.9*

significant to our present review. The curriculum extends over a period of seven years, followed by an internship of one year required by the South African Medical and Dental Council. The extension of the course allowed for broadening the required foundation education of the student. While other universities provide for one year of study before admission to the medical school, introductory courses extend over two years in this university. In this way, Sociology, History and English have been included as required subjects, in addition to the sciences required by the Council, namely, Botany, Chemistry, Physics and Zoology.

On this foundation the course proceeds for a further two years before clinical studies are fully developed. In addition to courses in Anatomy, Physiology and Pathology, the curriculum includes a more extensive course in Psychology than is usual in this country. It is taught as a basic science, of relevance to the practice of Medicine as a whole, and is of considerable importance to the project being considered here.

An important difference between this school and others during the clinical years of study was the development of family and community care as an important area of the students' clinical experience. This was done in the form of a family-practice clerkship extending through the three years of clinical studies. It is with this particular aspect of the curriculum that this report is concerned. The Department of Social, Preventive and Family Medicine was made responsible for the course and was constituted in such a way as to allow for the kind of clinical teaching envisaged.

The University Department and its Community Laboratory. - The establishment of the department was made possible by the sponsorship of the Rockefeller Foundation. The department had clinical and other service responsibilities in communities served by the Institute of Family and Community Health. This Institute with its community services provided the practising and clinical base for the department in much the same way as do various units in teaching hospitals for departments of medical schools.

The Natal Provincial Administration, the hospital authority in the Province of Natal, was responsible for the Institute of Family and Community Health, as well as for the King Edward VIII Hospital, which is the teaching hospital of the medical school. A special agreement between the Provincial Administration and the University ensured the co-ordinated functioning of the department and Institute by the creation of a number of associated posts. Thus, the post of professor and head of the department was associated with that of head of the Institute. Similarly, various academic grades, including lecturers and clinical tutors, were associated with posts at the Institute designated 'family physician'. In this way the department had several full-time, and a number of part-time, family physicians concerned with the students' experience in family practice. When the families of a practice constitute a neighbourhood community, as they did in the Institute's practice, opportunities are offered for students to extend their experience of family practice to the appraisal of community health. The more immediate clinical teaching of family physicians was thus readily associated with community health studies in which the family physicians themselves were the main teachers. Other associated posts of the University and Institute assisted in meeting these demands. In addition to a senior lecture concerned predominantly with epidemiology and measurement of community health, there were associated posts for lecturers in health education and health educators of the Institute of Family and Community Health. Thus, the organizer of the Institute's Health Education Division was also senior lecturer in health education in the department.

Organization of Student Experience.- The students' experience was graduated to make use of the developing skills they acquired in their other clinical studies as well as in accord with their

development in this subject itself. This clerkship in Social Medicine, which included clinical studies and other practical exercises, was supported by lectures and seminar-discussions, for which two hours per week were provided over the three-year period of the course.

To provide the students with a meaningful clerkship in family and community practice we aimed to provide for the following experience:

(a) A continuing relationship with individual patients and with the groups of which these patients were members, more especially their families.
(b) Studying varied case problems with particular emphasis on common problems of day-to-day practice in a community.
(c) Diagnosis of the state of health of a group, with particular stress on family diagnosis and on appraisal of a community's health.
(d) Study of the curative, preventive and promotive health functions of a community doctor in family practice, requiring participation in care of individuals, well and sick, and in family and other group programmes.
(e) Consideration of the resources available for promotion of health and medical care within family and community as well as through various agencies.

To achieve these objectives, the clerkship required students to attend the Institute of Family and Community Health as follows:

1. One session of four hours per week during each of the last three years of their course. This was in addition to the provision for lectures and seminars already mentioned.
2. A period of four weeks in residence during the final year of study was provided for by the Faculty. It was not fully implemented but a temporary arrangement was made for students to attend at the Institute daily for two weeks.

The clerkship involved family practice and community health studies in which individual, family and community aspects of care were related. The clinical practice included at least one 'long-term' family study, as well as a number of 'short-term' case allotments which provide varied experience in neighbourhood family practice. The community implications of these individual and family studies constitute a bridge towards more defined community health studies.

Clinical Studies in Family Practice.-The allotment of a student as a student-doctor to a family for a period extending over the greater part of his final three years of clinical studies provided for experience of a continuing relationship with patients and the groups of which they were members. The significance of patient-doctor relationships emerged in this continuing contact with the individuals of the family, as did the rôle of the doctor in his relationships with the family as a group. Careful attention to the selection of suitable families and to the induction of the students in the early phase of their practice provided the foundation relationships needed for the 'long-term' family study to be a satisfactory learning experience.

Care of an individual patient constituted the student's first introduction to his family. An appointment was made for some member of the family to attend the Institute and meet the family's student-doctor. This introductory meeting was followed by others in which the student interviewed and examined several members of the family. This was done either by special appointment or, if a family member was sick at home, the clinical tutor and student would visit the patient together. During this foundation period of clinical study of the family, discussions were focused on the objectives and methods of interview. This period corresponded with the students' first experience in their medical clerkship in the wards. On this foundation we were later able to extend his physical examination to include an appraisal of growth and physique as well as of the nutritional state. Interview and physical examination were associated with observation studies of the home and neighbourhood, which we preferred the students to do after they had had a number of contacts with their families. Not only were their visits more acceptable to the families

concerned, but the fact that the study had personal significance for their patients made it more meaningful for interested students.

Supplementing their long-term family studies, the students were involved in a number of short-term studies, in which they had one or more contacts with members of a family. This offered the opportunity to study a wide variety of family health problems which were common in the community practice of the Institute. The epidemiological significance of the family was considered in relation to the particular condition of the patient, whether it was a long-term illness such as tuberculosis, a behaviour disturbance in a child, a crippling disorder, or a more acute illness like acute nutritional failure, hysterical breakdown, or one of the many common infectious diseases of childhood. In addition to observation of home conditions, students were guided in their appraisal of the family's knowledge in these conditions and in relating this to the family's habits of living, to any measures it was taking to prevent spread, and to its care of the sick and the services being used for this purpose. Such investigations were used to illustrate the need for careful family studies as a foundation for the satisfactory care of patients.

While study of a patient's life situation is necessary in all clinical studies, the family-practice clerkship required students to know more of the patient's family-life situation and to develop their appreciation of the social component of a patient's state of health alongside his physical and mental condition. Carrying these considerations further to the meaning of the diagnosis and findings for the patient's family was regarded as a foundation for a medical practice distinctively concerned with the health of the family.

The epidemiological significance of the findings in a particular patient was studied in the family as well as among other groups in the community with whom the patient or his family relate. The student's consideration of the implications of his findings for the health of others in the patient's family was followed by extending his case study from the individual patient to the family. In thus checking the impressions he had formed, he proceeded toward establishing a family diagnosis in which the pattern of health of the family was described.

Community Health Studies in Family Practice.- Within the context of the growing relationship with the families studied, the student had the opportunity to consider the implications of family practice in care of the individual, the family and the community. The more immediate, or intra-familial, correlates of a family's health gained more meaning as its place in the community became known and the need for study of the interdependence of family and community health was apparent.

The social participation of family members in neighbourhood and other community group activities provided critical information of their social health. 'Face-to-face' groups of an informal, relatively continuing and intimate nature are among the most significant. Relative isolation of an individual or family from such primary groups was studied as a state of social health with its meaning for emotional and physical health.

Similarly, the epidemiological and educational implications of participation in such primary groups were studied.

In addition to the family and primary group-oriented community health studies, the students had practical experience in other epidemiological exercises and in the use and interpretation of various community health indices. Their clinical epidemiological studies were extended to a series of practical exercises in determining the incidence and prevalence of various disorders and mortality rates of the communities in which their family practice was based. The figures examined included those from records maintained by the Institute for these communities. Student comment on the facts presented required their analysis of the material and comparison with the experience of other communities in South Africa and other countries.

Appraisal of community health was related to the action that should flow from such appraisal, and exercises in community health education followed. Again, no one procedure was used. The aim was in each case to have the students develop

a programme in order to meet a well-defined community problem. Thus, one such problem was gastro-enteritis in infancy. The students then postulated the environmental and behaviour determinants of this condition. The objectives of health education and the methods of evaluating its results were then defined, and their proposals were then compared with an actual programme designed by the Institute's Health Education Section. Finally, the students outlined the way in which the programme should be carried out, the groups to be involved and methods to be used, and again compared this with what was done under similar circumstances. Where possible, they participated in, or at least witnessed, some aspects of the project. Study of the programme and evaluation, by analysis of figures indicating changed behaviour, completed the particular exercise. This type of experience, in designing and analysing community health education projects, was closely linked with the epidemiological studies in which measurable change in the state of health of communities was related to social and cultural change.

In these various ways the students became aware of the importance of associating *what* people do with the *why* of their so doing. Their foundation studies of the rôle of the family and informal primary group in determining health were thereby expanded to the broader consideration of the significance of culture in community health, and of the ways in which modification of behaviour can be initiated within the community. Advice to patients, guidance of families, and education of the community through various groups and organizations were seen as complementary aspects of health education in which the community doctor can make a most important contribution. The insight this provides to understanding the behaviour of people and, hence, to some appreciation of the cultural determinants of health and disease has been most satisfying.

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