Nqutu — the malnutrition story

On the initiative of the Natal Branch of the Black Sash, a study was carried out on malnutrition in a rural district of KwaZulu. The findings reported here by LAWRENCE SCHLEMMER and PETER STOPFORTH are the result of investigations of members of the Black Sash, Prof John Reid, Prof Hilstan Watts, Dr Anthony Barker and the staff of the Charles Johnstone Memorial Hospital, Nqutu.

The privileged public in South Africa is generally aware that poverty and ignorance are causes of, or factors associated with, infant and child malnutrition. This broad knowledge, though valid, is however a somewhat blunt weapon with which to attack ubiquitous undernutrition and malnutrition among Black populations. There is a compelling need for the association between deprivation and malnutrition to be defined in order to allow a fuller understanding of the problem and, as a consequence, to clarify the remedial alternatives.

With this view in mind and as a consequence of the initiative of the Black Sash in Natal as well as that of Prof John Reid and Dr Anthony Barker, a study of medical examinations conducted at the Charles Johnstone Memorial Hospital at Nqutu, a rural district of KwaZulu, was undertaken during 1972.

During that year 4 833 case records of examinations of African children aged five years and younger were compiled. These case records were subjected to computer processing in the Institute for Social Research and constituted the data of our original report.

The data included in the case records reflect the expert clinical observations by nursing and medical staff at the hospital as well as socio-economic information elicited from the guardians of children examined. During 1972, 536 or 11 per cent of the 4 388 patients examined were admitted as in-patients to the hospital.

The case records do not constitute a representative sample of infants and young children in the district. Visits to the hospital arose variously as a result of routine post-natal examinations and because of illness or suspected illness and trauma conditions (burns, limb injuries, etc.). There is therefore a defined bias toward the sick child. Nevertheless, case records represent approximately 30 per cent of the 14 000 to 15 000 children of 0 to five years in the district.

Our findings relate to undernutrition, florid malnutrition and socio-economic variables associated with the disorders. In the course of our analysis we were able to show that stunting (low height for age) is a more stable indicator of undernutrition or malnutrition than low weight for age; both based on the generally accepted standards defined by the Boston percentile distributions.

Below is an indication of the general incidence of undernutrition among patients examined:

	Weight below 3rd Boston Percentile	Height below 3rd Boston Percentile
All cases	27%	39%
Trauma cases only	10%	30%
"Healthy" cases only	20%	33%

Cases of trauma which occur fortuitously are very salient because they are likely to constitute a representative sample of children in the area. The results for this group of children, together with the incidence of stunting among healthy children, make it difficult to escape the suggestion that over 30 per cent of all children in the area are undernourished.

Furthermore, children in the age group two years and over manifest a higher incidence of stunting than younger children (50 per cent for all cases and over 40 percent among trauma cases). However they are viewed, these statistics are indicative of widespread stunting of children in the community.

Dr Davel, writing in the South African Me-

dical Journal has said that for every single case of mainutrition diagnosed, eight or nine potential cases lie hidden. In our study we discovered that nine per cent of the 4 833 patients examined were diagnosed as suffering from a specific malnutrition disorder—mainly Kwashiorkor, Marasmus and Pellagra.

If we accept Davel's standard, then about 3 000 to 3 500 cases of potential malnutrition lie hidden in the district.

This would mean that up to 25 per cent of infants and children five years and under are threatened by the chance of succumbing to a state of florid malnutrition. As this estimate is crude the incidence might well be somewhat lower but even allowing for a wide margin of error, the situation obviously is a cause for deep concern.

The distribution of disease among patients studied is as follows:

Malnutrition	9 per cent
Respiratory disease	31 per cent
Gastro-enteritis	12 per cent
Healthy babies examined	25 per cent

Trauma and infectious diseases are also prominent.

Our study allows some insight into the socio-economic conditions underlying the incidence of health and disease outlined here. The following are the more salient features, very briefly assessed.

Agricultural production is very depressed in the Nqutu district. Overwhelmingly, cash income is derived from the remittances of migrant workers. Three and a half per cent of the families from which cases are drawn were not in receipt of any cash income at all.

The mean monthly income among the balance of families emerged as R13,64. The mean household size is expressed as 2,9 adults and 4,3 children. Relating income to family size gives an amount of 6,3 cents per person for food per day.

Up to 85 per cent of breadwinners habitually live away from the area. As many as 75 per cent of breadwinners work more than 160 km away from home, indicating prolonged absence in most cases.

Educational standards among persons rearing children are very low. Most migrant fathers are labourers and the food resources in a majority of houses of patients appear to be very limited.

How then are these socio-economic conditions related to the findings regarding child health? (We relate socio-economic conditions to the incidence of measurement of weight and height below the 3rd Boston Percentile: low weight for age (LWFA) and low height for age (LHFA) respectively).

LWFA and LHFA occur at a higher level of incidence among families with no cash income. However, for the balance of families, among which cash income ranged effectively from R5 to R38,50 per month, no significant variation in the incidence of LW or LH for age emerges.

There are sound reasons for this apparent lack of variation in the health of children. A principle of saturation operates whereby high cash income is associated with more than one breadwinner in a household, but which also implies a greater number of dependents drawing on the higher available family cash income.

Further, we would suggest that the greater a family's cash income, the greater the demands on that income from a circle of kinsmen. Cash income is also reserved very often for modern material consumption of items other than food.

Other studies conducted in this Institute show that diet aspirations among Africans tend to be modest compared with aspirations for conspicuous consumption: clothes, etc. Probably of most importance, however, is the fact that even among homes with a higher level of available cash income, there is not sufficient money in absolute terms to allow "impulse" expenditure on food which would satisfy at least some basic nutritional requirements.

The distance of the breadwinner from the home is not a significant factor in the incidence of undernutrition. Where the breadwinner is working at a distance of one to 30 km away from home the figure for LWFA is only one per cent lower than that in the homes of other absent breadwinners (only 10 per cent of breadwinners work as close as one to 30 km from home in any event). However, where children are being reared by adults other than their parents, a fairly significant additional incidence of LWFA is present.

The education of the person responsible for rearing the child seems to be positively

connected with health. Higher levels of education are associated with lower incidences of undernutrition among children. The overall effect on the community, however, is small as so few persons achieve a level of education which is effective in this regard.

It appears that there is a slightly lower incidence of LWFA and LHFA among patients from homes where the breadwinner is employed as a clerical worker.

Where food resources in the homes of patients were judged to be adequate by medical personnel, the incidence of LWFA and LHFA was lower among in-patients. However, even where food resources were judged to be good, 54 per cent of those in-patients were diagnosed as LWFA. In cases where in-patients had recently consumed meat, fish or vegetables prior to admission a slightly lower incidence of LWFA and LHFA was recorded. This slight relationship did not hold in the case of skimmed milk, however.

Further to the pattern of association outlined above, medical personnel judged that in about 50 per cent of cases admitted to hospital, low cash income, lack of education and lack of dietary understanding either account for or were very relevant to the malnutrition disorder diagnosed.

The results of a small random sample survey of households in the township of Umlazi conducted by the Institute for Social Research directs attention to the vital question of knowledge and beliefs and their association with child nutrition. Only eight out of 75 women interviewed (six with secondary, two with primary education) were able to demonstrate an understanding of the connection between food, nutrition and health.

In answer to the question posed by an experienced interviewer in Zulu: "How can the food one eats affect a person's health for better or worse among children?" the overwhelming majority of subjects who were not bewildered by the probe replied variously:

it depends on the digestive system;
it depends on bile;
food may be bad for blood;
it depends on the worms you have;
it depends on the big worm; or
some food does not agree with children.

Clearly child health is not centrally associated with the nutrition value of food. As about 90 per cent of respondents in Umlazi have recourse to partial or complete reliance on inyanga's and other traditional or "spiritualist" practitioners, it is most probable that the causes of disease are conceptualised as occurring as a result of socio-spiritual disorder or as a result of toxic influences and are not related to modern concepts of disease and nutrition.

This state of beliefs and knowledge and the reliance on traditional remedial practice with respect to nutrition and health describes the situation in a modern urban setting.

One respondent summed up the disdain of many Africans for attempts by White agencies to change established or "sacred" eating practices and customs when she said: "Ask the Whites — they are preaching about it daily."

It is commonly known that diet and customs of eating are the social patterns most resistant to change.

If the above is true for urban Africans then how much more compelling is the need for appropriate health education among the rural people of an area like Nqutu?

Further afield, findings of a study in Britain add a further dimension to the question of poverty and its relation to child-health. Mary Brennan of the Department of Social Medicine at the University of Birmingham, has shown that social stress in the family is associated with stunting, low weight for age, poorer vision and impaired hearing among children.

The finding is consistent even when controlled for income and social class. The inference is one of neglect resulting from poor morale.

In an area like Nqutu, the effects on family morale and child care of appalling socio-economic conditions and disrupted family life must be very considerable. Given the ignorance about the causes and nature of malnutrition, the effects of poverty and social stress are magnified.

Socio-economic conditions in the Nqutu district are so depressed that variables that could be expected to affect the incidence of undernutrition and malnutrition do not seem to relate in any significant way to the extent of the problem.

For example, the upper limits in range of cash income in the homes do not exceed roughly R40 a month in the Nqutu study. The vast majority of families, therefore, even the relatively less impoverished, are trapped in a descending spiral where few priorities

can be effectively met from cash income, and in addition, food, the ultimate necessity, probably has a relatively low priority as an item of cash expenditure.

While standard of education has a marginal effect on the most consistent indicator of stunting, even five years of education (in the person rearing the child) is generally not sufficient to effect an appreciable improvement in child health.

In any event reliance on education per se to irradicate malnutrition is probably not feasible. The educative or socialising process has to be integrated with the influence of other institutions in society. No amount of dietary understanding can combat the adverse socio-economic conditions which are typically present, nor will education, in isolation, necessarily effect changes in long-established eating customs or provide the springboard to new motivations regarding nutrition and health.

The factor of dietary ignorance is, however, sufficiently powerful to be regarded as a primary influence precipitating malnutrition among children in a context of widespread and uniform poverty. Even where nutritious foods were available to the child we found that intake was probably both insufficient and too irregular to maintain health.

The obvious maluse of milk powder (usually incorrectly mixed) is an example of the very likely failure of modern inputs into a traditional system. Clearly a very fundamental and comprehensive sociologically-based approach to health is required, both in urban and rural areas of the Republic.

Traditional behaviours and institutions resistant to change have to be recognised and acknowledged. Health education should attempt to reconcile such existing norms with changes taking place in the community and with "modern" health counselling in a way that will allow new institutions to emerge.

These, hopefully, will take on much of modern form while "preserving" unique and indeed "sacred" aspects of rural culture.

All remedial action directed at improving nutrition among rural (and urban) Africans is likely to be subject to diminishing returns if it occurs in situations characterised by poor community morale and social stress. The self-reinforcing syndrome involving poor nutrition in Nqutu can be simply illustrated as:

Poverty
↓
+ lack of education
+ fragmented families
+ absent mothers and fathers
+ lack of leadership
↓
Social Stress
↓
Poor Morale
↓
Lack of Motivation
↓
Neglect
↓
Malnutrition and
Illness/Debilitation

The problem is clearly not only that of poverty. Wide social, political and cultural cleavages make the communication of health concepts very difficult.

Even Black nurses and educators may well be seen as employees of Whites; remember our one respondent's phrase: "Ask Whites—they are preaching about it daily." Given poverty and ignorance, social stress and lack of coherent, organic community leadership exacerbate an already desperate situation in terms of child health.

It certainly seems that where poverty and lack if education are pronounced, as in Nqutu, a limited alleviation of poverty or a limited increase in educational standards will operate only very marginally to decrease the incidence of malnutrition.

This suggests that community-wide deprivation has to be *effectively* combatted by far-reaching, extensive reform before any really significant results regarding child health can be expected.

Eradication of only the more severe instances of poverty and marginal improvements in health education are not likely to be sufficient to combat malnutrition if other causes of social stress remain manifest in the community.

When considering the type of basic changes necessary it becomes obvious that what is required are intensive multi-pronged community development strategies, rooted in community participation, accompanied by a significant amelioration of the causes and effects of migrant labour and enforced separation of parents and children.