

Chapter 14

Health for Some or Health for All?

The strategy for basic services, whose broad outline the 1975 UN General Assembly asked Unicef to fill in more precisely, received a full elaboration for the Executive Board session of March 1976. From philosophical, practical and programmatic perspectives, Unicef drew together the available information on how different attempts had been made in different locations and under different political circumstances to use some version of the basic services approach to transform the lives of the poor. The number of those living in conditions of absolute poverty was now 900 million, according to the World Bank, of whom 700 million were in the rural areas and 200 million in the urban slums. The dimensions of need, and the widening gap between the fortunes of the haves and the have-nots made ever more urgent the search for ways of reaching into their lives with some definite means of improvement.

Of all the services which could do most for children, and were most sought after by families and parents, the most important was a service that provided health. It was the clause 'for child health purposes generally' in its founding resolution that had allowed Unicef to transfer its attention from postwar emergency relief in Europe to development co-operation in the least well-off countries of Asia, Latin America and Africa. Whatever the determination since the early 1960s not to omit from the scope of its assistance the full range of the child's needs, the child's state of health and nutritional well-being remained, and always would remain, Unicef's quintessential concern. Although basic services envisaged a package of interlocking ingredients including water supply and sanitation, child nutrition, activities to improve the situation of women and girls, village technology and ways of filling the learning 'gap', the essential stimulus was above all the need to improve health services, particularly maternal and child-health services.

In many ways, the strategy for basic services was a direct extension in other areas of 'alternative approaches to health care', an analysis and a set of recommendations prepared under joint WHO and Unicef auspices during 1973 and 1974. The standard system of health-care delivery, which

in most developing countries was essentially a facsimile of the Western model adapted for the specific health hazards of a tropical environment, had not escaped the challenges confronting the entire apparatus of international co-operation for development during the late 1960s and early 1970s.

Just as rising costs and expanding populations were putting under great strain the capacities of developing-country governments to meet their citizens' aspirations for educational qualifications, so were they in danger of falling further and further behind in meeting their needs for health care. In a meeting of the WHO/Unicef Joint Committee on Health Policy in Geneva in 1972, yet another disheartening review of the slow rate at which health care was reaching people led to a decision that WHO should examine existing experiences with alternative models of health services and try to come up with a more flexible formula. The realization was growing that, alongside the world economic crisis, the world food crisis, the environmental crisis, the population crisis and the educational crisis, there was also—for many of the same reasons—a world health-care crisis.

During the 1960s, many public-health professionals in the Third World, some of them members of the international health community working either for WHO or Unicef, began to have serious doubts about what was happening in the name of health care in many countries. Like the educationalists contemplating the content of their curricula and examination syllabuses, the public-health specialists began to feel a sense of acute discomfort about how badly suited to the social and economic context of most Third World communities was the type of service they were delivering. At a time when heart transplants and other breakthroughs in medical technology were stunning the world and opening up visions of conquering the most technically complex medical problems, millions of people—more than three-quarters of the people in many countries—were outside the reach of any modern health care at all. The kinds of sickness that they, or more usually their children, were suffering and dying from—diarrhoeas, fevers, measles, whooping cough, tuberculosis and influenza—no longer constituted any serious threat to their counterparts in the Western world and were viewed there in the most pedestrian terms. Yet mothers in many parts of Africa, Asia and Latin America frequently lost one or more of their children to a number of quite easily preventable or curable maladies, whose hazards were greatly increased by an unclean water supply, lack of proper sanitation, poor nutrition, or a combination of all of these.

Since the early 1950s, when Unicef first began in earnest to help developing countries expand their maternal and child-health services by equipping maternity wards and MCH centres and training midwives and paediatrics personnel, many countries had nearly doubled the numbers of their networks of health centres and subcentres. This was an impressive

achievement; but in overall terms it had done no more than make a slightly larger dent in what remained a vast problem of potential or actual ill-health. The expansion of services had still scarcely reached mothers in the remote countryside; for them things had changed little since the heyday of the disease-control campaigns. Their encounters with medical services were still mostly confined to the rare occasions when they were told to bring their children to the chief's compound for a vaccination, or malaria-sprayers came by and drenched their homes with DDT.

Most of the fruits of government expenditures on building up the national health-care network were to be seen in the cities, where hospitals named after princesses and presidents built in the architectural image of the medical Hiltons of the industrialized world required the equivalent of a whole district preventive health budget just to keep their operating theatre lights, their laboratory equipment, their boilers and their X-ray machines in running order. Anomalies abounded: in one country which constitutionally declared health a fundamental human right, eighty per cent of one province's health budget went on one teaching hospital, while in outlying areas, there was only one general purpose dispensary to serve half-a-million people.

If the hide-bound educational system of schoolroom and paper qualifications unsuited to the realities of rural life was in a state of crisis, so was the health-care system it helped to bolster. Graduates of medical colleges identical in syllabus and surgical technology to their *alma maters* in the West did not want to live deep in the bush and practise their skills in hospitals with no fancy equipment and often not even a regular supply of electricity to provide hot water or power a refrigerator.

The caseload of coughs, colds and gastro-enteritis, and the lines of mothers with squalling children, might pack the hospital verandah from dawn to dusk. But the doctor had not received a fellowship to a famous university teaching hospital to give out syrups and instruct mothers to feed their children body-building eggs that they could not afford. Those who tried often found themselves overcome by mounting helplessness. As they dispensed pills and food supplements to mothers with scrawny infants, they knew that they would come back as long as their babies were still alive.

Long-lasting cure was very difficult to effect in a place where poverty and ignorance were the underlying diseases. The doctors' only weapon was disease prevention and health education for the mothers; but even for these they were ill-equipped. A course in advanced paediatrics does not help a doctor to convince a woman in an advanced stage of pregnancy that she should not give birth in a draughty and unhygienic hut; nor persuade the expectant mother with a year-old child that if she does not make up a special nutritious food mix for the first-born when the second arrives and then deprives him of the breast, he will soon show symptoms of kwashiorkor.

By the mid-1960s, some of the doctors who had studied tropical medicine in prestigious institutes from London to Calcutta and gone to, or returned to, the developing world to practise began to lift their eyes from the petri dish and ask themselves what they should do to make existing health-care policies more appropriate to the real health needs of the people. Derrick Jelliffe, Professor of Child Health in the Unicef-endowed chair at Makerere University Medical School in Uganda, convened a conference in 1964 with the assistance of WHO and Unicef to discuss with like-minded colleagues the many shortcomings of the health-care systems in which they performed. The title of the conference was 'Hospitals and Health Centres in Africa', and it covered everything that went on inside both types of institutions and what they supervised outside their own perimeter. Many of the participants were to become important figures in the subsequent revolution in attitudes towards the delivery of health care in developing countries: Jelliffe himself; David Morley of the London School of Hygiene and Tropical Medicine; Maurice King, a lecturer in microbiology at Makerere. King spent much of the next two years editing the papers presented at the conference into what he described as a 'Primer on the Medicine of Poverty'.

One of Makerere's recent medical graduates described to the conference the conditions he confronted in a district hospital: 'I would say that my problems were mainly these: overwork, lack of equipment, lack of staff, shortage of drugs, the absence of anyone to consult with, shortage of beds and the lack of diagnostic facilities. I had to look after the medical, surgical, maternity and children's wards. I used to see the outpatients; I had one major operating day each week; I had to collect blood for transfusions, do many police post-mortems and often attend court. In other words, I was needed in several places at the same time, and this used to make life a little bit difficult.

'We did not have any Balkan beams but I asked a carpenter to make one; he made two, but we did not have any pulleys so I asked the orthopaedic surgeon at the national hospital for some, but he could not spare any. I could not obtain any scalp vein needles, nor enough of the big ones for taking blood. There was a pressure lamp in the theatre which attracted flying arthropods; these frequently hit the lamp and fell into the operation wound . . . There was one laboratory assistant, but he could not do a blood urea, a blood sugar, test for urobilinogen in the urine, or count reticulocytes. He was also very busy and could not cope with all the stools I wanted him to look at . . . We were very short of beds; there were lots of floor cases, and often two children in the same cot. The premature babies had to be nursed in the general ward . . . There was no fence around the compound and visitors came in at any time.'

This description of conditions of work in the less well-appointed health institutions of the Third World was familiar to thousands of doctors who had served in similar or worse, and hardly raised an eyebrow in the

ambience of the Makerere conference. King quoted it in his 'Primer on the Medicine of Poverty' because it helped to explain to those who did not know and could not picture trying to run a health service under such circumstances why it was almost impossible to make the existing health-care system function effectively, and why no competent medical practitioner would choose to serve in such a hospital unless he or she was a dedicated and highly-motivated individual.

King's 'Primer', which remained for some years a seminal work, argued that lack of financial resources and personnel not only presented a formidable challenge to medical care in developing countries, but gave it a distinctive quality. A doctor with 100,000 potential patients, not 3000 as was usual in an industrialized country, simply could not approach his tasks in the same way. Equally, if the money available for drugs, syringes, instruments, theatre equipment, blood transfusion, hospital furniture and laboratory supplies was one-fortieth of that available elsewhere, it could not be well spent if spent in the same manner.

Whatever medical resources existed must be applied to benefit the entire community. Tropical medicine, the branch of medical science developed by the old Imperial powers to deal with the specific health problems of their colonies, equipped its practitioners to diagnose and treat diseases unknown in cooler climates: yellow fever, trypanosomiasis (sleeping sickness), onchocerciasis (river blindness), schistosomiasis (bilharzia); as well as malaria, cholera, tuberculosis and smallpox, which had now retreated from the wealthier countries. But the vast majority of the case-load was more directly caused by poverty than by anything to do with the climate. The medical care dispensed by doctors, hospitals and health administrators must conform with prevailing social and economic reality. At the moment, it did not; but rising demand for cures, injections, pills and all the accoutrements of modern medicine together with population increase meant that staff and services were hopelessly overburdened. The results were inefficiency, poor quality and demoralization. King argued for a rethink and redesign from first principles of everything the members of his profession were doing in developing countries in the name of health—from training curriculae through medical technology and hospital architecture to treatment of the under-fives.

What was needed was a systematic plan for the deployment of medical resources, not a motley collection of hospitals, mobile outreach, MCH centres and disease campaigns, some of which tripped over each other and many of which left large populations untouched by one or any of their ministrations. In 1965, WHO came up with a design for what it described as 'basic health services': a minimum standard of medical care, incorporating disease prevention alongside curative services, and working in the closest of partnerships with MCH.

Cleaning up village paths, weighing and immunizing babies—activities

which were critical to the 'medicine of poverty' but whose health-promoting qualities were not so well understood by uneducated villagers—would piggyback on the popularity of cures, first aid and midwifery. The diagrammatic model of the basic health service looked like a planetary system, with the hospitals at the centre, a group of health centres dependent on them—and their satellites, rural health units and health posts, dependent on the health centres. Manned by a small team of professional health workers, the peripheral unit would directly serve the population around it—at its weekly under-fives and antenatal clinics, in its handful of beds for expectant mothers and others who needed nursing care—by instructing all its customers in hygiene, nutrition and preventive health, and by visiting their homes.

This planetary system offered a coherent plan for gradually extending medical facilities to reach everyone in due course with at least a basic health service in their own vicinity. The responsibility for simple curative work, MCH and health education in villages and schools was to be vested in the satellites. Cases of serious illness or major accident could be referred up the line from the village to the health centre and, if necessary, further up the line to the operating theatre in the hospital. Each link in the chain had its own functions, with the central administering hospital assuming responsibility for curative work outside the competence of the intermediary or peripheral units, and for co-ordinating and supervising the whole health infrastructure, including laboratory work and training programmes. The adoption of this health service model, at least as the target to be aimed for, was an important step in the direction of the ideas which, a few years later, were to crystallize into an alternative health-care approach.

In 1967, after the WHO/Unicef Joint Committee on Health Policy had given its seal of approval to 'basic health services', it examined a review of MCH, now regarded as the core of overall community health. Although there were encouraging signs that progress had been made in obtaining general agreement to underlying principles, progress in putting them into effect was much more patchy. There were examples to prove that the comprehensive MCH approach could achieve all that was claimed for it: in the Penonome district in Panama, infant mortality had dropped by a quarter in three years without any extra infusion of manpower, merely by its redeployment.

But such successes had to be seen as tiny islands in an ocean of want. In many places it was not even possible to measure the impact of whatever MCH service existed: no data on births or deaths existed; no systematic health records of any kind offered a picture of mother and child population, mortality, pattern of sickness, nutritional status, treatment success rate. Without basic data, the planning of the health service, including how best to deploy resources, was bound to be an erratic procedure. At many health centres and hospitals, the lines of mothers waiting on the verandah still

overwhelmed doctors and nurses to the point where improvisation was the only rule. Without more personnel, preventive work remained a dream. Whatever its importance, it could not be carried out instead of diagnostic and curative work. Mothers came to the health centres when their children were ill, not when they thought they might be ill sometime in the future. They could not be sent packing with admonitions about washing their hands and cleaning their compounds or they would not come again.

The MCH review was discussed both by the Joint Committee and by the Unicef Executive Board. They applauded the way in which the comprehensive approach was gaining impetus. But they also deplored the standard of practice in many MCH programmes: syringes unsterilized; syrups dispensed for no clear medical reason; vaccines poorly stored and impotent; wards unswept; blankets unwashed; drugs inventories and immunization records unkept; health education non-existent. The further away from the central hospital, the fewer, less well-equipped, and less well-trained or supervised the MCH staff, the worse the picture became. Stoic and dedicated individuals wrought miracles in impossible circumstances; but in too many places, will and discipline evaporated. The other depressing realization was that, in spite of all the valuable efforts of the past years, far too few mothers and children were receiving any MCH care at all. At the present pace of setting up basic health services, generations would pass before everyone was reached.

A leap of imagination was needed. It was not tolerable to wait for generations before a baby who, by accident of birth, arrived into a world of poverty and could be saved from neonatal tetanus for the want of a clean knife and a vaccination; or that a weanling should die of diarrhoea because the parent thought that the loss of fluid from one end would be prevented if you denied it to the other; or that pills and injections costing only a few dollars should be denied a suffering child who could so easily be cured. That leap of imagination had already been taken by some medical pioneers in certain countries. It was to their example that WHO and Unicef now turned.

In spite of the hardships and the problems of providing medical care in parts of the world where the white-coated variety of the profession was a rarity, there were, as there have always been, certain dedicated individuals, some of them working in their own countries, others working as missionaries or in the tradition of Christian or voluntary service overseas, who chose to practise their calling where needs were greatest and facilities most lacking.

Such men and women took in their stride, or managed somehow to accommodate, the 'overwork, lack of equipment, lack of staff, shortage of drugs, the absence of anyone to consult with, shortage of beds and the lack of diagnostic facilities' that made medical practice in such places 'a little bit

difficult'. They were mostly people of considerable independence of spirit, and often chose, if they could, to work outside the mainstream of their country's formal health-care establishment. By definition, therefore, the contact between the intergovernmental organizations with such projects was mostly informal. The individuals involved often sought out the appropriate personnel of WHO and Unicef for advice and support of whatever kind was applicable; sometimes the organizations sought them out. Many later joined the staff of one or other, or became their consultants. But at least in the early stages of their ground-breaking endeavours, their regular sources of material and technical assistance were nongovernmental. They were often provided by the more progressive overseas voluntary agencies—fund-raising organizations such as Oxfam and others—which worked mainly in co-operation with Christian-related counterpart groups in the developing countries.

For some decades, in their own quiet way, some of these pioneers had employed the same rationale as the Chinese had applied when they invented the cadre of personnel known as the 'barefoot doctors': if there were not enough doctors and nurses, not enough resources to provide even a modified version of the conventional health system, then they would have to start from other precepts and enlist people who were neither doctors nor nurses in a radically different health-care delivery system.

The majority of actions needed for the prevention and treatment of the most common types of illness were relatively straightforward. They were the kind of things an educated mother in an industrialized society would do without the advice of a doctor or nurse: bathing the baby regularly; keeping her own hands, nipples, and anything that came in contact with the baby's food or drink scrupulously clean; feeding her children a balanced diet; applying ointments and medicaments for minor ailments. In most Western countries, there was a structural division between the curative and preventive aspects of maternal and child-health services. Since most mothers had enough knowledge both to undertake most preventive actions without prompting and to seek professional advice when they required it, there was no need to make of the mother who had sought treatment for her sick child a captive audience for a lecture on weaning foods or careful excreta disposal. In the developing world, where the average rural mother was completely unlettered and rarely sought medical help unless her child was obviously ailing, her visits to the health centre were the only opportunity provided to the doctor or nurse in charge to impart to her the knowledge of how to prevent her children getting sick or underweight in the first place.

However, a price had been paid for fusing MCH curative and preventive care in developing countries. Seriously overworked medical personnel were wasting their time giving out cough lozenges and teaching mothers how to bath the baby. Given the right training, there was no reason why lay people could not dispense certain pills and know-how to their neighbours

and the wider community—no reason why the better-informed village woman in Bangladesh or Botswana could not do the same for her children as her more privileged counterpart in the Western world.

Among many pioneers whose health projects began to attract attention were an Indian couple, both physicians: Drs Mabelle and Rajanikant Aroles. Determined to work in a rural setting where needs were acute, the Aroles established themselves in 1970 at Jamkhed in Maharashtra State. Their aim was to provide comprehensive community health care to the 40,000 people in the surrounding villages. With the approval of village leaders and government officials, and financial backing from a non-governmental group with overseas and local funding, the Christian Medical Commission, they took on a team of staff and set up a health centre. The centre was only intended as a stepping stone to a programme with a much wider catchment than any static entity could provide; it made them locally known and won them the confidence of their staff and clients.

When they began to take mobile services—MCH, family planning, leprosy and tuberculosis treatment, immunization—out to the villages, the Aroles originally planned that an auxiliary nurse-midwife would be placed in each location to check up on cases, confer with mothers on child care and nutrition, round up children for immunization sessions, and make sure that practices promoting health became rooted in village mores. But they found it difficult to persuade young women to live out in the villages, and even when they did so their performance was poor. So instead, the Aroles found volunteers within the communities who, with training and supervision from the project staff, themselves could carry out the necessary functions. Before long, the use of ordinary people in the community as village health workers proved to be an inspired solution. They were cheaper since they did not require special housing or amenities. They were also much more effective.

City-trained health workers talked differently, dressed differently and had a different way of life from village people. There were problems of communication: villagers were sceptical that an outsider's dietary quirks or their insistence on drinking boiled water would not necessarily suit their own constitutions. But if someone of their own, whose judgement they trusted, tried to persuade them to change their ways, results would be different. The Aroles chose middle-aged women, respected community members whose credentials on child care would go unchallenged. Each spent two days a week being trained at Jamkhed. On a third, the mobile team would visit her community, treat cases of sickness, and go with her to call on newborns and pregnant women. She would hold meetings for child feeding, give talks on health education, and promote family planning on home visits. Her main tasks were, therefore, disease prevention and liaison with the curative work of mobile team and health centre. But she also had a kit with simple drugs, eye ointment, dressings and contraceptives. She was

paid Rs. 30 a month. The Aroles believed that job satisfaction and enhanced status was more important than a cash incentive.

The employment and training of village women was only one of the distinctive features of the Aroles' project, but it was a feature it shared with all the health-care systems and individual health-care projects examined by WHO as part of the quest for a new health strategy. And it was the cumulative evidence of the effectiveness of laywomen and laymen in community care which marked the alternative approach to meeting basic health needs submitted to the Joint Committee on Health Policy in February 1975, almost three years after WHO was first presented with the challenge. The WHO study team had sought out examples where basic health care was being delivered to at least eighty per cent of the target population at a cost per head which even a country of very limited resources could afford. They went to Bangladesh, China, Cuba, Niger, Nigeria, Tanzania, Venezuela and Yugoslavia, as well as India. They had sought approaches which were woven into the social and economic environment; they had looked for elements which would be replicable on a wide scale in other cultural, social, economic and political settings. The synthesis of these experiences, and a strategy that encapsulated their essential features, was discussed at length by the senior officials of the two organizations; both Dr Halfdan Mahler, Director-General of WHO, and Harry Labouisse, Executive Director of Unicef, put in a rare appearance at the JCHP to emphasize the importance they attached to the direction in which health ideas were moving.

The study on alternative health care and its conclusions represented a major landmark in the reorientation of health policies at the international level. It reflected the evolution which had taken place in recent years in WHO's interpretation of its mandate for furthering standards of health care and promoting the role of health ministries throughout the world; health care and health-related activities were now measured not only against internationally-agreed standards of technical excellence, but against the development context in which they were to be performed. The new strategy for health care reflected this broader view, particularly as its central tenet—the mobilization of the community to take care of as many as possible of its own health needs via the village health worker—dethroned the medical profession from its position of control over every action carried out as a function of the official health service. In this sense, it was revolutionary.

In fact, its revolutionary character was the main problem faced by this alternative health-care concept. To those without professional vested interests, the concept sounded like inspired commonsense; but to some members of the medical profession, it sounded decidedly ominous. While they might have no objection to training the lay helper to demonstrate how to bath the baby or calculate the calories, proteins and vitamins in a

weaning food mix, many doctors objected strenuously to the idea that anyone but a fully-trained health professional should handle any type of antibiotic drug, treat a malaria case, or give a vaccination. Once laymen with a few ounces of training got into the swagger of 'doctoring', it might lead anywhere. One 'alternative' health project in Savar, Bangladesh, whose director Dr Zafrullah Chowdhury was internationally well-known for bold departures, had actually trained—successfully, as it happened—semi-literate village girls to carry out female sterilizations. If such things were sanctioned by the medical establishment, argued some of its members, *ipso facto* the lay health worker would achieve something very close to quasi-professional recognition.

True, any remuneration for the lay health worker was supposed to come from the community—the client—rather than from the ministry of health; to this extent, there was no definitive recognition. But this was another mark of loss of control, a potential step backwards towards the days of witch doctors and herbal brews. To those who saw standards slipping dangerously as ignorant or unscrupulous villagers set themselves up as quacks and pill-merchants with the approval of the health-care service, the alternative health-care strategy sounded like the abandonment of everything they stood for in terms of professionalism.

This was far from the intention of the protagonists of the new concept, who did not envisage a fall-off in medical standards; on the contrary. Since much of the work done by the community health volunteer was intended to be preventive, the likelihood was that disease rates would decline and the remaining case-load of diarrhoeas, fevers and respiratory infections could be handled more effectively. The strategy envisaged the redeployment of professional medical personnel in such a way as to use a large part of their time for training and supervising the lower echelons of the service.

Village health workers would handle the mundane activities which previously swamped clinic staff and left them no time for running the kind of service which would help prevent the clinic being overcrowded in the first place. The idea of the planetary system of the basic health service, with its central hospitals, district health centres, and satellite subcentres stayed intact, and the village health workers added as an extra tier of satellites attached to the outermost edge of the formal structure. The lay person would work within the control of a supervisor, part of whose duties would be to organize extra training sessions or refresher courses as necessary, gradually building up the community health worker's knowledge and skills.

A final feature of the new approach was that health-promoting activities were seen as taking place in a number of ways other than in a clinic, or at the behest of a member—professional, auxiliary or lay—of the health-service team. If poor health was mainly an outcome of ignorance and poverty rather than the presence in a vulnerable population of virulent forms of epidemic disease, then all sorts of improvements could be health-

promoting. More cash in the pocket, a better house to live in, a clean water supply, births more conveniently spaced, the availability of cheap and nutritious forms of food, improved household utensils for storing, preserving, or preparing food, and more information about what helped or hindered family well-being; a service producing any of these helped also to produce health. In practical terms, the new approach to health care and the basic services strategy dovetailed together.

The recommendations of WHO for the alternative order in health went to the World Health Assembly and the Unicef Executive Board in 1975. Many delegates commented that the analysis and the recommendations were not only welcome, but long overdue. The truth was that the ideas the study reflected and the revolutionary solutions it proposed would have been regarded by many as heresy only a few years before. Summing up the recommendations of the Joint Committee on Health Policy to the members of the Unicef Executive Board, Labouisse pointed out that while the new strategy was a marked reorientation of health-service policy, it would not mean any drastic change in the types of assistance already provided by Unicef to MCH services. Training stipends for traditional birth attendants and nursing auxiliaries; midwifery kits, and equipment for health centres and maternity wards; bicycles and motor vehicles for mobile clinics and supervisory rounds; all these and other familiar items on the Unicef shelf would be needed in greater quantity than before. The essential difference would be the role of community involvement in the health-service structure in which they were applied. Some of the more elaborate and expensive items would be less available than in the recent past; the new emphasis on community involvement meant that the ingredients of Unicef's co-operation had taken a turn back to basics, as had those of all the apostles of alternative visions.

The first step towards a global commitment to what was becoming known as 'primary health care' had been taken. WHO had developed a strategy for providing health, not just for some of the people in the world—those fortunate enough to live in industrialized societies or their replica within developing countries—but for everyone. The next step was to persuade the governments and the health ministries of the Third World that it was a workable strategy, and to help them put it into practice.

The gradual emergence of the alternative order in health care spelt not only a greater emphasis on basic MCH—antenatal care, maternity care, and paediatric care of the young child; but it had the potential for heightening the emphasis on child nutrition.

During the 1960s, Unicef's concern about the preschool child, in particular the prevalence of malnutrition in children aged between six months and three years, had been reflected in its calls for national planning for children's

services. A determined effort had been made to push nutrition, the poor relation of health, agriculture and social services, into a more prominent position on the slate of government concerns, preferably by persuading countries to set up nutrition units within their ministries of planning. The production of food, the price of food and the consumption of nutritious food by children were subjects to be addressed on a national planning level embracing a variety of government sectors. In the decade leading up to the World Food Conference in 1974, this theme resounded through Unicef's statements on food and food emergencies.

At the same time, a parallel theme began to develop. In 1965, a report commissioned by the Joint Policy Committee on Health on the health aspects of nutrition programmes pointed out that, since applied nutrition programmes were intended to achieve health benefits among young children, they would be much more likely to achieve those benefits where they were run in conjunction with a health-service network already in place. Nutritional surveillance, nutrition education, rehabilitation of the nutritionally sub-normal: these were inseparable ingredients of any overall improvement in children's diet. No strategy for putting more good food into the mouths of young children would have much impact on their health unless their bodies were in a fit state to absorb the nutrients and utilize them.

This thesis was borne out by the experience of the applied-nutrition programme in India, which had tried to run all over the country before it was able to walk properly in its original locations. The model which had seemed so promising in Orissa and elsewhere yielded very uneven results as time went on. It was introduced in State after State, district after district, block after development block, without the modifications needed for each successive environment. In their search for the archetypal programme formula, the enthusiasts for applied nutrition allowed their unwieldy and unresponsive machine to roll on in the hope that, with some tinkering, it would yet prove to be the answer. But results did not markedly improve. As the first Decade of Development drew to a close, the puzzle of how to feed the hungry and malnourished child was still a long way from solution.

When the crises of the early 1970s prompted Unicef's Executive Board to declare a 'child emergency', the sense of anxiety about the nutritional condition of children all around the world became more acute. It seemed to many Board delegates that this, the most critical area of all, was being neglected. Year after year, in spite of the call for national food and nutrition policies, in spite of the frightening statistics which claimed that as many as 700 million children in the world suffered from some kind of nutritional deficiency with at least ten million close to starvation at any one time, Unicef appeared to be spending no more on nutrition programmes than when the emergency first began: only around twelve per cent of programme expenditure each year.

The role of Unicef in child nutrition, and the role of nutrition in national

planning for meeting the needs of children, were still questions with incomplete answers. The only sure answers were about what had been tried and, for one reason or another, had been abandoned.

The main casualty was milk and its substitutes. Unicef's long love affair with the dairy cow was over. Dairy investments, even with subsidies, had not managed on any scale to bring milk within the reach of the poor at a price they could afford. The experimental high-protein foods had not yet quit the field, but only their most ardent devotees still refused to see that their cost was prohibitive to the low-income families whose children were most in need. As far as the poor were concerned, modern food-processing technology had a role limited to the production of K-Mix-II and other special concentrates for emergency child-feeding programmes.

The days of Unicef's involvement with the mass distribution of surplus dried skim milk powder had ended with the creation in the early 1960s of the World Food Programme (WFP), which took on the function within the UN system under the wing of FAO of redeploying the world's surplus foodstuffs. During drought and famine emergencies WFP was the key provider of grains and other staples, and it also provided large quantities of foods for supplementary feeding programmes and food-for-work schemes with a rehabilitation or developmental purpose. In the disaster relief operations in Bangladesh, Ethiopia, the Sahel and elsewhere during the early 1970s, Unicef collaborated closely with WFP on supplementary feeding for mothers and children, and established a working partnership for the future.

There were some specific micro-nutrient deficiency diseases for which the FAO/WHO/Unicef approach was to try and organize the mass consumption of the missing ingredient. In certain parts of the world—northern India, Pakistan and Nepal, for example—goitre, or iodine deficiency disease, was common among women. It could cause mental retardation, other handicaps, or even cretinism in their offspring. Adding iodine to salt, an item of everyone's diet, was a remedy widely attempted. It was not, however, a very efficient remedy in a country with no mass food marketing and distribution system. In most such countries, salt mining was a cottage industry outside the reach of governmental control, and few people in the countryside bought their supply in a packet from a shop. Trying to solve nutritional problems by the processing of foodstuffs had inbuilt limitations, therefore. People's nutritional condition could not be invisibly 'fixed'. A health education campaign was needed to help people understand the need to protect themselves by buying the 'improved' version.

The campaigns to combat night-blindness in children by widescale distribution of vitamin A were more successful; they were carried out through schools and health centres. Night-blindness was a common problem among children, particularly in parts of Asia; in the more serious cases, acute deficiency of vitamin A could lead to xerophthalmia, or total blindness.

For the want of a little knowledge and some green leafy vegetables or yellow fruit in their diet, thousands of children annually lost their eyesight. In 1971, Sir John Wilson, a champion of the blind whose affliction he shared, presented an eloquent case for mass vitamin A distribution to the Executive Board on behalf of the World Council for the Welfare of the Blind. With the technical agreement of WHO, Unicef thereafter began to provide large-dosage capsules for children in India, Indonesia, Pakistan, Bangladesh and elsewhere.

These campaigns to combat specific micro-nutrient diseases, important as they were, were not the main thrust of Unicef's concern. There were no additives or simple remedies for the child malnutrition associated with poverty. This remained the outstanding problem to which the school and home gardens and community poultry schemes of applied nutrition offered at best a partial solution.

By the early 1970s, the growing body of knowledge about the epidemiology of malnutrition and undernutrition was beginning to alter the way in which they were tackled. One important discovery was that 'the protein gap' was less critical a problem than 'the calorie gap'. A severely undernourished child needed food first, protein second; if fed protein, the child's metabolism would simply use the protein as if it were ordinary food energy. The nutrition scientists disagreed about the precise amount of protein needed, but they downgraded their previous estimates. Staple cereals—maize, millet, rice and wheat—had a reasonable protein content for adults and, supplemented with beans or other legumes, could provide for growing children. Only among people whose staples consisted of almost pure starch—such as plantains, cassava and yams—was lack of protein more serious a threat to their children's health than straightforward lack of food.

Derrick Jelliffe, Professor of Child Health at Makerere Medical College, cited evidence to support the thesis from different regions of Uganda. In the south, among the children of the Baganda people, the bloated stomachs and faded hair of kwashiorkor were often seen. The staple food of the Baganda was *matoke*, mashed plantain or cooking banana. Plantain contained only one per cent protein and was full of water and cellulose. It was therefore almost impossible for a small child to consume enough *matoke* to meet his or her full nutritional needs. The Baganda in general were much more prosperous than the Acholi people of the north; but Acholi children rarely suffered from kwashiorkor. Their staple was millet, whose protein content was seven per cent.

Applied nutrition programmes now began to concentrate on the family food supply, and on dispelling ignorance about the inadequacy for children of diets based exclusively on starchy crops. The 'backyard approach', as Jelliffe called it, did not have the space-age appeal enjoyed by the notion of cultivating micro-organisms on oil waste—one of the major new sources still being identified by the advocates of protein. But it was much more

practicable. There were very few areas of the world where some combination of familiar cereals and legumes did not constitute a perfectly adequate diet, as long as children ate enough of it.

In many places, people had arrived at a suitable blend without the benefit of nutritional science. In Jamaica, they ate rice and peas. In Mexico, frijoles and tortillas. In Indonesia, rice and soya bean. In many African countries, pounded maize or yam was served with a fish, chicken or vegetable sauce. Cassava was treated as a famine crop; no-one ate an exclusive diet of cassava if they could avoid it. The backyard approach was based on existing dietary habits. It borrowed 'appropriate' technology—improved versions of traditional techniques—to increase yields of protein and vegetable crops; store the main food crop properly; preserve food by drying; and cook it in fuel-efficient ways.

On the face of it, this new, more balanced, calorie-protein picture appeared to make the task of feeding the hungry child much simpler: far fewer children than previously imagined needed extra protein in their diet. For most of the rest of the undernourished, a little extra of what they already ate would do. In practice, however, these more modest dietary changes proved almost as hard to achieve as the more radical and inappropriate ideas they had overtaken.

Special meals and gruels had to be prepared for the weanling child; special ingredients had to be put in the toddler's food to make it different from the family dish. The emphasis was now on helping mothers recognize and overcome malnutrition in their children by methods that were within their reach, physically and financially. But this began to underline once more to those trying to put it into practice that women's lives, specially in rural areas, did not easily accommodate such changes. The lot of rural women—the fatalism of their outlook; the drudgery of their labour-intensive day; the work in the fields which took them far from home; the effort involved in hauling fuel and water, boiling gruels and pounding special ingredients—was becoming increasingly perceived as not just an obstacle, but a major obstacle to improved family health and well-being.

Every new breakthrough in nutritional knowledge, every new scientific or practical approach appeared to lead only a very limited extra distance down the path towards relieving the hunger and listlessness of the malnourished child. As the child emergency deepened, nutrition continued its journey from sector to sector, discipline to discipline, pushed from agriculture to medicine, across to population and environment, up a few rungs into planning—and still progress only inched forward. Gradually it seemed after all that its most fruitful convergence was with health. The wheel had turned another circle; not back to the outworn idea that malnutrition was a 'disease' susceptible to some kind of medical cure, but the recognition of the very special relationship between sickness and poor nutrition in the small child, particularly in the child vulnerable to either

because of poverty. Once again, the quest for alternatives helped to shed light on the dimensions of this relationship, and what to do about it.

When the Drs Arole arrived at Jamkhed in October 1970, Maharashtra was in the grip of drought. In their first contacts with village councils, they realized that the villagers' priorities were not health, but food and water. Since the Aroles interpreted 'health' in the broadest sense, and since they wanted to supply services which matched the villagers' own sense of their needs, they started with food. They obtained food for the under-fives and mothers, and the villagers organized community kitchens: a child nutrition programme had been born. Once established, the programme had to find ways of supplying its own food. Wells were dug, and those farmers who benefited gave land to grow food for the community. Meanwhile, the village health worker used the feeding programme for nutritional monitoring. She was taught by the project staff how to record the weight of the under-fives on a card and single out those whose failure to gain weight was a tell-tale sign of incipient or actual malnutrition. To these, she gave extra rations, and to their mothers extra pep talks. She could also watch out for new pregnancies, specially those where the mother's own nutritional condition might be a cause for alarm concerning her foetus.

In many of the new-style community-based health-care programmes, the volunteer workers spent a high proportion of their time on child nutrition as part of their MCH duties. From the perspective of a poor rural community, nutrition and health care were indistinguishable, even if the policy makers and district officials often tried to tidy them into different compartments: nutrition with agricultural and home economics extension; health care with medical practice. As the years had passed, the tidy compartmentalization had become much more blurred—at least at the theoretical level. From the villagers' point of view, they never had been compartmentalized. Their underlying problem was poverty; its symptoms—lack of food, water, medical care, security, cash income, knowledge, work—were computed differently in different places, regions and countries. But they were perceived by their victims as a seamless, interconnected whole, not as belonging to different 'sectors' in the way that governments, professions, academic disciplines and aid agencies are organized.

Community-based programmes, because they embrace the villagers' diagnosis as well as the experts', tend to reflect the seamlessness of the view from the village. The community volunteer, whether nominally employed as a health worker or as something else—family planning promoter, women's group leader, under-fives feeding monitor—frequently carries out almost identical tasks. In some places, the same person may be the community volunteer for several programmes conceived sectorally by the authorities, merely changing his or her hat on the day the respective officials come to visit. In the person's mind, the questions and answers do not change: merely the face of the inquiring official.

The only really significant differences of function are between those normally carried out by men, and those normally carried out by women. In a traditional rural society, sex roles are sharply defined. While the community volunteer may grow in self confidence as a result of some training and the enhanced standing it confers, it is unrealistic to expect him or her to depart radically from traditional preoccupations. Even if males and females are taught an identical curriculum, they tend to perform different tasks, identifying with those that belong naturally to their own sexual domain. Food preparation and child care are the domain of women; anything to do with land allocation, construction or engineering is the preserve of men. Male villagers are no more likely to talk to women about the virtues of breastfeeding and careful weaning than are women to organize street-cleaning parties or build latrines. This sexual divide can be awkward from an administrative point of view, and is often unrecognized by those whose enthusiasm for breaking down the sexual barriers which reinforce women's dependency is stronger than their respect for inbuilt cultural restraints. But it is a real divide, whereas the sectoral divide is artificial.

In Kasa, also in Maharashtra State, a nutrition programme based on a Primary Health Centre was initiated in 1974 under the direction of Professor P. M. Shah of the Institute of Child Health in Bombay. The project was sponsored by the Government of India, the Government of Maharashtra and the US nongovernmental organization, CARE. P. M. Shah's professional standing and existing links with WHO meant that the international health community took an interest in the Kasa nutrition project from the start.

The project was designed around the use of part-time social workers (PTSW), chosen by the communities as volunteers, and paid Rs. 80 a month. Like the Aroles, the project managers wanted the communities to employ middle-aged women with leadership qualities; but unlike the Aroles, they required them to be literate. The female literacy rate in Kasa was only ten per cent, and in some of the twenty-eight project areas there were either no literate women at all, or only a few young ones. This brought down the average age of the PTSW to twenty-two; and more than half were male. As a result of these two disadvantages, there was a heavy drop-out rate. The enthusiasm and openness of the young to change and to new ideas was offset by certain disadvantages. Their elders might not be willing to listen to their advice, which was discouraging. And many saw their new-found confidence and the pocketful of skills they had collected not as a means of serving the community, but as a first step along the route out of it.

The Kasa project not only illustrated some of the problems associated with deploying community workers successfully, but it also illustrated how overlapping conceptually were a community's health and a community's nutrition programme—and how inappropriate it was to separate them along a rigid sectoral divide. The duties of the PTSW were as follows: census-taking and record-keeping; regular weighing of children and

nutrition education; monitoring of pregnancies and family-planning motivation; distribution of nutrition supplements and vitamin A capsules; monthly chlorination of open village wells; gathering children together for immunization by the nurse-midwife. After a year's experience on the job they were allowed to treat common illnesses with simple drugs, using a manual written in the local dialect. Although this was a nutrition project, the list of duties would have been identical for a community volunteer in a health or even an environmental sanitation project.

From Unicef's point of view, the volunteer village worker in all his, and especially her, different guises was the person in whom basic services for children fused: day-care with feeding, water supply with hygiene, diet supplements with weight monitoring, maternity care with family spacing, education with self-awareness and the desire to change life for the better. Paramount among these services were Unicef's two traditional and longest-running concerns: child health and child nutrition. The evidence that poor nutrition and childhood disease compounded each other in a particularly crushing partnership was now much more widely appreciated.

If a poorly-nourished child picked up a common infection, its effect on the child could easily bring on the symptoms of classic kwashiorkor or marasmus. Any fever from which the child was suffering, the loss of fluid or food from diarrhoea, the consumption of any remaining reserves of energy in trying to fight off the disease quickly turned a mild case of malnutrition into a severe one. The disease itself, meanwhile, took a much more serious course in a poorly-nourished child, whose weakened immune system could not withstand its invasion. Many children whose cause of death would have been clinically listed as measles, pneumonia or dysentery would not have died if they had picked up the infection when well-fed. In very small infants, breastfeeding made a vital contribution to their immunity. In children between six and thirty-six months old, studies were showing that nutritional attention alone reduced illness and death from diarrhoeal and respiratory disease. Conversely, prompt treatment of the dehydration caused by diarrhoea, regular health monitoring at the MCH clinic, immunization and attention to cleanliness could prevent the onset of severe malnutrition.

The world food crisis, induced by the disastrous harvests of 1972 and 1974, had a powerful effect for a brief span of time in concentrating the world's conscience on the problem of hunger. Its causes and remedies were exhaustively discussed at the 1974 UN World Food Conference in Rome. The debate brought home to those who had not already worked it out that hunger and food shortage were to do with poverty. The lack of food in the home of labourers or peasant farmers, and therefore by implication the nutritional status of their family, had to do with one simple circumstance: their inability to translate enough of the resources at their disposal into food or the means to buy it. The weather—in the form of drought—might

play a part. But lack of land to grow food, lack of employment, lack of credit, lack of seed or fertilizer or irrigation, lack of cash income from some kind of realizable asset were more important.

This overall analysis offered Unicef and WHO few obvious channels for their own contribution. Yet they certainly could not abandon the field of hunger and malnutrition to the political economists, bankers, agriculturalists, plant technologists and civil engineers on the basis that the efforts of these groups of experts were the only ones which counted. Apart from any other consideration, such efforts might take a generation or more to show the permanent effect that everyone was waiting and hoping for. In the meantime, the fusion of nutrition with a broader definition of health care offered a way forward—perhaps at a secondary level, but at least at a level which could achieve results without the resolution of all the complex problems of poverty first. The alternative approach to health care, based upon the community worker, opened up the prospect of a network of mutually-reinforcing health and nutrition activities in the localities where deep-felt poverty was to be found.

In 1975, Dr Jean Mayer and a team from the Harvard School of Public Health presented to the Unicef Executive Board their report on priorities in child nutrition in developing countries. They strongly endorsed the new community worker approach. Primary health care and primary nutritional care were, to all intents and purposes, one and the same. This realization has guided Unicef's policy on child nutrition until the present day.

On 6 September 1978, delegates from 134 governments and sixty-seven UN organizations met at Alma-Ata, capital of the Kazakh Soviet Socialist Republic, to attend a six-day international conference on 'Primary Health Care', the name now used to designate the alternative order in health care. WHO and Unicef sponsored the conference, and it was preceded by a year-and-a-half of preparation by both organizations, including international meetings in Brazzaville, Washington, Alexandria, Manila, New Delhi, New York and Halifax. Dr Halfdan Mahler, Director-General of WHO, and Harry Labouisse, actively backed by their respective senior lieutenants, Tejado de Rivero and Dick Heyward, had committed themselves and their organizations to overcome the first hurdle confronting the new approach: international respectability.

The main document for the conference was a joint report by Halfdan Mahler and Henry Labouisse. The strength of its attack on the prevailing pattern of health care was remarkable. In both the developed and the developing countries, 'Health resources are allocated mainly to sophisticated medical institutions in urban areas', the report stated. 'Quite apart from the dubious social premise on which this is based, the concentration of complex and costly technology on limited segments of the population does not even

have the advantage of improving health. Indeed, the improvement of health is being equated with the provision of medical care dispensed by growing numbers of specialists, using narrow medical technologies for the benefit of the privileged few. People have become cases without personalities, and contact has been lost between those providing medical care and those receiving it.'

The main architects of this damning indictment of the results brought about by postwar advances in medical technology were Mahler and de Rivero. They believed that medicine had blossomed into a colossal industry with powerful vested interests, and that these interests dictated health policy unwisely and with punishing discrimination against the poor.

According to the WHO constitution, established in 1949, the protection of health was 'a state of complete physical, mental and social well-being, and not merely the absence of disease'. Health care was a fundamental human right whose fulfilment was now projected as part of the social justice demanded by the new international economic order. In keeping with this fundamental analysis, several distinctly revolutionary statements swam through the conference without opposition: 'The promotion and protection of the health of the people is essential to sustained economic and social development and contributes to a better quality of life and to world peace' (Article III, the Declaration of Alma-Ata); 'The people have the right and duty to participate individually and collectively in the planning and implementation of their health care' (Article IV).

In the course of the past few years, Primary Health Care had become an ideology. Its principles, particularly that of community participation, had taken on the force of doctrine. For nearly two decades, development had been delivered to the people, for the people, at the people. The people had not thought a great deal of it; frequently, it had not appeared to take their own views, beliefs, and realities into serious account, rather treating them as a blank sheet on which someone else's idea of progress was to be written. Now the pendulum had swung heavily in their direction. In the alternative order, the critical elements of the people's wishes, their sense of their own needs, and their resources and energies were to be not just taken into account, not just harnessed to an engine of development designed and driven by someone else, but to be an integral part of programme formulation and development, growing and expanding with the programme itself

The alternative order in health was health by the people. The role of the professionals and the government service was to provide training, supervision, logistical back-up, material aid and technical advice. These ideas, echoing the spirit of the times, borrowing revolutionary fervour from 'conscientization' and 'deschooling', gained excitement and appeal from their very antagonism to the existing structure of the medical world. Opposition could be expected from health ministries, health insurance companies, pharmaceuticals industries — and the whole business of medicine,

built as it was on quite opposite assumptions.

Alma-Ata took place because WHO and Unicef were keenly aware of the need to secure political commitment to the Primary Health Care approach. Every effort was made to counter anticipated resistance. It might be unrealistic to expect industrialized countries to recast their health-care systems; but by claiming that they should, and that primary health care was intrinsically superior, they forestalled criticism that they were trying to palm off a second-class system on the developing countries. They also suggested that any loss of income sustained by the medical industry would be more than made up by increased demand for simpler, more basic equipment and drugs. The two organizations worked hard to obtain the necessary statements of support; Alma-Ata was the testing ground.

In its own terms, the Alma-Ata conference was a triumph. It represented a watershed: the moment at which primary health care ceased being the provenance of a few brave medical pioneers in dusty villages and a group of international protagonists on their behalf, and instead became an approach to which most of the governments in the world had given their endorsement, and many ministries of health committed themselves to carrying out.

Within no more than three years of the first serious attempt to synthesize alternative health experiences, both analysis and prescription had been clasped to the international breast of a notoriously-conservative breed: administrative bureaucrats and their colleagues in the medical profession. This achievement by Mahler, Labouisse, de Rivero, Heyward and other key people on the WHO and Unicef staffs was remarkable. The Declaration of Alma-Ata required, after all, a revolutionary re-definition of health, a revolutionary re-definition of medicine, and a transformation of everything conventionally done in their name. The health establishment and the politicians from countries around the world met and agreed to all of this, at least in principle. Whatever reservations many harboured, the alternative order in health was declared. Its goal: 'Health for All by the Year 2000'.

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