Achieving Health for All
by the Year 2000
Midway reports of country experiences

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Division of Strengthening of Health Services,
World Health Organization,
Geneva, Switzerland
Achieving health for all by the year 2000: midway reports of country experiences.


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ISBN 92 4 156132 7 (NLM Classification: WA 540.1)

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Preface

Hiroshi Nakajima,
Director-General, World Health Organization

Fifteen mid-term accounts of progress—and setbacks—in the implementation of the vision of health for all by the year 2000, as expressed at Alma-Ata in 1978, make up this book. They make a mixed picture, reflecting the fact that, for most countries, the last decade has been one of continuing economic difficulties. It cannot be denied that prosperity and peace are important underpinnings for lasting improvements in health. Nevertheless, health services that are appropriately planned, funded, and managed are important in mitigating the effects of economic recession on the poorest members of the population, and in ensuring that economic growth is accompanied by widespread improvement in health.

Implementation is where the real challenges lie. The reports included in this publication show how individual countries have adapted the primary health care approach to meet their own special, and evolving, circumstances. There are no general blueprints here for other countries to select from, but there may be parallels, similarities, hints and lessons in these accounts which offer insights and suggest possible solutions to problems. The promotion of such an exchange of experience is one of the mechanisms used by WHO in working with countries towards health for all.
Introduction

The Alma-Ata Conference in 1978 was an important milestone in the struggle for health. The conference was organized in response to widespread dissatisfaction with existing health services. Despite great efforts by countries and WHO in the late 1960s and early 1970s to improve and extend services, large numbers of people, particularly in the rural areas of developing countries, remained with no access to health care. Primary health care was seen as the route to health for all.

What is the challenge? Primary health care as outlined at Alma-Ata calls for three developments: universal availability of essential health care to individuals, families, and population groups according to need; involvement of communities in planning, delivery, and evaluation of such care; and an active role for other sectors in health activities. Each of these developments has far-reaching implications for health services. To make essential care universally available, for example, calls for a more equitable and efficient use of health resources. The conference provided a green light for implementing primary health care, but passing resolutions is one thing, implementing them quite another. There can be a big difference between what is planned nationally and what is done locally. This book provides a picture of what has actually happened in 15 countries. The various chapters outline the evolution of policies and plans and describe their implementation and outcome, particularly at local level.

Several red lights have also been encountered. First there were questions asking, in effect: what is all this about? How does primary health care differ from what we are already doing? Is it second-rate care for the poor? By calling for more community participation and action, does primary health care enable governments to avoid difficult decisions on reallocation of resources? Will resources continue to be used in favour of certain population groups while governments preach self-help to the underserved communities? Or does the implementation of the principles create a force for change that makes it imperative for governments to provide more support to underserved communities?
Controversy on these issues has resulted in a better understanding of the unsatisfactory nature of existing health care programmes, which serves as a strong determinant to develop policies and plans to rectify the situation. Many countries have defined not only their targets but also concrete programmes to achieve them. The WHO European Region, which comprises mostly developed countries, is leading the way in this respect. This is a good indicator of the success of the primary health care movement, as serious reservations were initially expressed regarding its relevance to the developed countries. Experiences in four industrial countries with different socioeconomic settings—Canada, Finland, Hungary, and the Netherlands—are documented in these chapters. The light has changed from red to green.

The next serious check to primary health care is money. It has been said that from the point of view of a sound economy, the Alma-Ata conference could not have come at a worse time. Development efforts in many countries have been seriously affected by the burdens of interest on external loans, deteriorating terms of trade, deadlock in the North–South dialogue, decrease in rural agricultural production, economic adjustment policies, and poor management of the economy in general, compounded by rapid population growth. Reassessment of spending priorities has tended to turn attention away from the “social” sectors in favour of the “productive” ones. Given that the proportion of government resources devoted to health in poor countries is already small and not deployed in the most cost-effective way, the challenge in some of these countries is to maintain the levels of development already reached. New sources of finance and improvement in the use of existing resources hold out the hope of gains in primary health care without additional central government funding.

Another red light has to do with weak management. Even if additional health resources were made available to the health budget from inside or outside the country, very little improvement in primary health care would be realized if they were used in the same way. Most health resources go to providing unnecessarily sophisticated curative health care which is becoming more and more expensive to those who have access to it. Little money is left for health promotion, disease prevention, and the provision of curative care to the rest of the population.
The litmus test for commitment to primary health care is the willingness to try to improve this situation. Some strategists claimed that primary health care called for too many things to be done. Priorities should be chosen. Who should be left behind? The children? The old? As the debate continued some even suggested that priority should be given to selected disease problems rather than to individuals. The challenge was to ensure that strategists and health workers were attuned to the principles of primary health care and guided by them in their analysis of problems, the setting of priorities, and the implementation of programmes. How was this to be achieved? How were leadership and managerial skills, accountability and monitoring at the central and local levels to be developed? Indeed, how were the health workers themselves to be motivated and their continuous support assured?

Despite these problems the “locomotive” moves on. This is the general conclusion of a meeting convened by WHO in Riga, USSR, in March 1988. The theme of the meeting was “From Alma-Ata to the year 2000: a midpoint perspective”. The meeting found that levels of health as measured by mortality rates have improved in all countries. Improvements in some of the indices used, such as the number of children under five who die per 1000 live births, have been spectacular in the industrial countries and also in some developing countries. Predictions to the year 2000 show that the improvements will continue. But a worrying geographical rift came into focus. Africa and southern Asia are not keeping pace with the rest of the world. Some 40 countries in these two regions will still have under-five mortality rates of over 100 per 1000 at the end of the century unless special measures are taken. Concurrent with the organization of the Riga meeting it was decided to invite public health experts in 15 countries to write an account of their experiences in the application of primary health care. The countries chosen were representative of the various stages of development to be found in the different regions. They were Burkina Faso, Canada, China, Egypt, Ethiopia, Finland, Hungary, Indonesia, Malaysia, Mozambique, the Netherlands, Nigeria, Papua New Guinea, Sri Lanka, and Thailand. Of these, Burkina Faso, Ethiopia, Mozambique, and Papua New Guinea are among 40 developing countries with very high child mortality.

In order to make the accounts as lively and realistic as possible, it was suggested that, besides indicating the broad
national strategy and achievements, the authors should focus on practical experience at district level, placing that experience in the context of national developments and policy. The contributors were also requested to put more emphasis on implementation and outcomes, rather than on intentions and processes. The concluding section attempts to distil some general lessons from these reports.

WHO's hope is that the publication of this selection of country achievements and prospects, together with appraisals of underlying factors facilitating (or inhibiting) successful implementation of primary health care, will serve several purposes. Information of this kind provides an idea of the present global health situation and the problems being encountered, as well as of the corrective activities being undertaken and their impact. It could also be useful in the identification of areas of primary health care needing intensified global action. Perhaps most important of all, the innovative activities described might stimulate action in other countries.
Burkina Faso: building on the successes

B. Michel Sombié
Director of Studies and Planning, Ministry of Health and Social Action, Burkina Faso

Burkina Faso is one of the least developed countries in the world, with a per capita gross national product of about US$ 210. The population numbers 8 million, of whom 85% are engaged in a largely traditional kind of agriculture heavily dependent on the rains, which have been very erratic in recent years. The soils are lateritic and poor, supporting a savanna vegetation. Most of the watercourses are seasonal.

Industry is not well developed, and the proportion of children attending school in 1985 was less than 25%. Many schools have been built in the five years since the revolution, and a dual-vacation system has recently been adopted to make the best use of the places available. Adult literacy campaigns in the three main national languages have reached 20,000 people.

In the economic crisis that has affected all developing countries, Burkina Faso has been faced with enormous difficulties even in maintaining the health service it inherited from the colonial power, despite the declared intention of every government since independence to safeguard the people's health, especially in the rural areas. The current health situation in Burkina Faso is far from satisfactory, yet a comparison with the situation in 1978 shows that significant progress has been made.

The health situation in 1978

In 1978 the population was estimated at 6 million. The annual report of the Ministry of Public Health for that year stated that there were three main public health problems — communicable
diseases, nutritional deficiencies, and lack of clean water and sanitation.

The country was divided into 10 health sectors, each managed by a chief medical officer who coordinated all health activities. The infrastructure comprised two national hospitals, three regional hospitals, 39 medical and health centres at the area level, 156 district health centres and maternity centres, 167 dispensaries, and 31 maternity centres. The health staff in service during that year comprised 101 doctors, 5 dentists, 15 pharmacists, 74 health assistants, 338 state nurses, 736 registered nurses, and 165 midwives. Table 1 shows the number of cases of various diseases. An estimated 50% of the children examined by health personnel suffered from some degree of malnutrition.

To combat these major endemic diseases, health services were made available from treatment centres, and vertical programmes were administered by mobile units (mass immunization teams and units for maternal and child health care, surveys, and leprosy control), but all these activities worked in isolation from each other.

Immunization campaigns, for example, reached small numbers of people because information about them was distributed through administrative channels. There was very little public education, and the population was simply requested to take

Table 1. Cases notified by the health facilities, 1978

<table>
<thead>
<tr>
<th>Disease</th>
<th>Number of cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>371,730</td>
</tr>
<tr>
<td>Measles</td>
<td>9,213</td>
</tr>
<tr>
<td>Onchocerciasis</td>
<td>8,359</td>
</tr>
<tr>
<td>Schistosomiasis</td>
<td>15,080</td>
</tr>
<tr>
<td>Trachoma</td>
<td>13,070</td>
</tr>
<tr>
<td>Leprosy</td>
<td>48,005</td>
</tr>
<tr>
<td>Meningococcal meningitis</td>
<td>1,359</td>
</tr>
<tr>
<td>Trypanosomiasis</td>
<td>62</td>
</tr>
<tr>
<td>Treponematosis</td>
<td>2,327</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>149,828</td>
</tr>
<tr>
<td>Intestinal parasitic diseases</td>
<td>47,044</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>426*</td>
</tr>
</tbody>
</table>

Source: Ministry of Public Health
* Probably an underestimate, since 1060 cases had been notified in 1977.
advantage of the services that were being provided free of charge. The figures for immunizations in 1978 were as follows:

- smallpox: 682,746
- measles: 109,257
- BCG: 235,600
- yellow fever: 184,196
- DPT: 669
- tetanus: 202,549
- poliomyelitis: 47,375

The figures do not specify how many subjects completed the vaccination courses requiring more than one dose.

Table 2 provides an estimate of mortality rates per 1000 population, by age group, for the principal diseases.

As regards water supply, between 12% and 17% of the population had reasonable access to water. In 1976, approximately 1.75% of the population had running water in the home and 1.1% used stand pipes.

Because of this worrying health situation, the Government enthusiastically welcomed the primary health care approach adopted at the international conference at Alma-Ata in September 1978.

Table 2. Mortality rate per 1000 from the principal diseases, by age group, 1978

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>0–1</th>
<th>1–4</th>
<th>5–14</th>
<th>15–44</th>
<th>45–64</th>
<th>65+</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measles</td>
<td>26.1</td>
<td>26.1</td>
<td>4.6</td>
<td>0.4</td>
<td>0.1</td>
<td>–</td>
<td>5.7</td>
</tr>
<tr>
<td>Malaria</td>
<td>40.5</td>
<td>4.9</td>
<td>0.5</td>
<td>0.6</td>
<td>1.8</td>
<td>6.0</td>
<td>3.2</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>19.2</td>
<td>13.4</td>
<td>2.1</td>
<td>2.3</td>
<td>7.4</td>
<td>17.8</td>
<td>5.6</td>
</tr>
<tr>
<td>Pulmonary diseases</td>
<td>11.2</td>
<td>1.4</td>
<td>0.3</td>
<td>1.9</td>
<td>8.0</td>
<td>16.0</td>
<td>3.1</td>
</tr>
<tr>
<td>Abdominal diseases</td>
<td>7.8</td>
<td>2.1</td>
<td>0.6</td>
<td>1.0</td>
<td>2.8</td>
<td>–</td>
<td>1.8</td>
</tr>
<tr>
<td>Meningococcal meningitis</td>
<td>4.5</td>
<td>1.8</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
<td>2.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Heart disease</td>
<td>2.6</td>
<td>0.7</td>
<td>0.3</td>
<td>0.7</td>
<td>2.9</td>
<td>5.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Pertussis</td>
<td>11.9</td>
<td>1.8</td>
<td>0.3</td>
<td>0.1</td>
<td>0.2</td>
<td>0.7</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Source: Ministry of Public Health
Health policy since 1978

Even before the Declaration of Alma-Ata the Government had asked WHO to provide technical assistance in the preparation of its national health programme, and primary health care was chosen as the strategy for health development. The programme, covering the period 1980–90, was approved by the Council of Ministers on 14 March 1979.

To provide health coverage for the population, the programme provided for the progressive establishment of a five-tier health service comprising:

- one primary health post in each village,
- one health and social action centre for every 15,000 to 20,000 inhabitants, serving a maximum radius of 20 km,
- one medical centre for every 150,000 to 200,000 inhabitants,
- ten regional hospitals, and
- two national hospitals.

This health development strategy has been continued by subsequent governments. In a policy speech of 2 October 1983, the health and social service objectives were summarized as follows:

- access to health care for all,
- the establishment of maternal and child health care,
- stepping up of immunization campaigns to combat communicable diseases,
- health education for the masses.

It was also stated that these objectives could be met only if the people themselves were committed to them. The scene was therefore set for a more equitable distribution of health resources and a more conscious participation by the community.

Structure of the health service

The adoption of the primary health care strategy was followed by a reorganization of every level of the health service in Burkina Faso.

The Ministry of Health is in charge of government health policy. It comprises eight boards dealing with administrative
and financial affairs, research and planning, vocational training, health supplies and the traditional pharmacopoeia, health and sanitation education, promotion of immunization, epidemiological surveillance, and maternal and child health.

The Ministry of Health is also linked with the Occupational Health Office, the National Pharmaceutical Supplies Association, national organizations such as the Red Cross, intercountry organizations such as the Onchocerciasis Control Programme, and the Organisation de Coordination et de Coopération pour la Lutte contre les grandes Endémies (OCCGE), and international organizations including WHO.

Each province of Burkina Faso has a Provincial Health Board responsible for the planning, organization, implementation, supervision, and evaluation of health activities.

The Provincial Health Board comprises 10 departments dealing with maternal and child health, epidemiological surveillance and immunizations, health and sanitation education, health supplies and the traditional pharmacopoeia, nursing and obstetrics, primary health care coordination, occupational health, school and university health, statistics, and administrative and financial affairs.

The health services are financed mainly from the national budget, which pays all wages and salaries and ensures that the services operate. Apart from the allocation of certain amounts to the Provincial Health Boards, management of the national budget is centralized. The operational budget is divided among the provinces according to a quota based on population size. The provinces express their needs to the Administrative and Financial Affairs Board, which acts accordingly. Allocations for fuel and spare parts are managed directly by the Ministry of Finance.

The national budget returns 75% of the income from medical charges to the Ministry of Health, and that sum, too, is distributed among the Provincial Health Boards. Some Provincial Health Boards have initiated money-earning activities such as traditional pharmacopoeias, and others benefit from external finance donated by nongovernmental organizations or arising from bilateral or multilateral aid. The population itself makes an appreciable contribution.

Information support has developed considerably since 1985. Under the auspices of the Research and Planning Board, the old data-gathering media have been adapted to meet information
requirements. The Research and Planning Board summarizes and analyses reports produced by the Provincial Health Boards. It gives training in health statistics to personnel working in the provinces and supervises them in the field. The recent computerization of the service should improve health information and lead to more rational management of the health service.

Each province plays its part in operating the five-tier health service defined by the national health programme. This structure was revised in 1984, when staffing levels and the capacity of health units were reduced in accordance with the country's resources.

**Primary health posts.** These are to be found in every village. Each is run by a village health worker and a traditional birth attendant, both chosen from the community they are to serve and trained in the nearest health centre. Although volunteers, they are given some support from their community through its health committee. The post is provided with drugs, equipment for deliveries, a wheelbarrow and shovel for sanitation, and a bicycle. These workers carry out simple activities such as the treatment of malaria and diarrhoea, the application of dressings, normal deliveries, and giving advice on hygiene.

**Health and social action centres.** These comprise a dispensary with two beds, a maternity unit with four beds, and a room for educational activities. Each serves a population of 15,000 to 20,000. It should be run by a team of five, but this is rarely the case in practice. Each centre conducts preventive, curative, and promotional activities, taking into account the eight components of primary health care, and supervises the primary health posts within its area. A number of simple dispensaries and maternity units will be expanded into health and social action centres in the course of the 1986-90 five-year plan.

**Medical centres.** There is a medical centre in the main town of every province, serving a population of 150,000 to 200,000. At this level there are a number of specialist services such as laboratories and dental clinics, and a doctor should be available, but the medical centres are not all staffed as yet. Each centre has 12 beds for general patients and 8 beds for childbirth and is equipped with a utility vehicle, motorcycle, or ambulance for transferring patients.

**Regional hospitals.** Ten regional hospitals are planned for the whole country, each serving a group of provinces with a total population of 500,000 to 600,000. A regional hospital has 140
beds and serves as a referral centre for patients from the medical centres and the health and social action centres. It offers mainly treatment and a number of specialist facilities such as surgery, ophthalmology, and laboratory testing.

**National hospitals.** There are two national hospitals, one in Ouagadougou, the capital, and the other in Bobo Dioulasso, the second largest town. They are the referral centres for all the health units in the country, and all medical specialities are available there. They are also training centres for doctors and paramedical personnel.

It is by constant improvement of this system that progress, however modest, has been made.

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**The progress achieved**

In order to provide health facilities where people can reach them, the construction of health and social action centres in rural areas has been given priority over the construction of large hospitals (see Table 3). Planning of the infrastructure has enabled us to avoid and correct regional disparities. Since it has been impossible to satisfy the demand for construction of health and social action centres owing to shortage of human resources, each province has been allotted a quota in proportion to its population. At the end of the five-year plan in 1990, each province should have one health and social action centre for every 16,000 inhabitants.

The policy of setting up one primary health post in every village brought essential services to the population. In the primary health post, people receive simple treatment for malaria, diarrhoea, and coughs, assistance with childbirth, and advice on hygiene. In recent years there has been a redistribution of the limited human resources in order to improve the efficiency of rural health units. Each province now has at least one doctor, one pharmacist, and one midwife—categories that had previously been concentrated in the towns.

On completion of training, all health personnel must serve for at least two years in a rural area, and the Government has increased the allowances for rural service. It is also pursuing a policy of providing acceptable accommodation for all administrative personnel in rural areas and urban fringe areas, by
building residential quarters and providing lodgings in the health units.

Drugs and technical appliances are distributed among the provinces according to quotas based on the size of the health zone. The same applies to the budget for running costs. Medical charges are waived for the destitute when drugs are available.

Since 1984 the Government has given fuel to the provinces to enable them to transport the poorest patients to referral centres when necessary. Burkina Faso is at present obliged to send certain patients abroad for treatment. This service, which costs the State a lot of money, is provided free of charge to peasants, while wage earners and businessmen help to pay their own fares.

In the course of the decade, special emphasis has been placed on improving health coverage. The development of the health infrastructure and the number of health personnel testify to this (Tables 3 and 4). The average radius of the area covered by a health unit was reduced from 15 km in 1978 to 12 km in 1986. This does not take account of the primary health posts, which have been established in great numbers. By 1986 the number of these posts exceeded the number of villages because they were also set up in some urban districts.

In 1978 the country’s health facilities had a total of 3622 beds, one for every 1557 inhabitants; this has risen to 5948 beds in 1986, one for every 1360 inhabitants. The number of places available for hospital inpatients was 8248, or one place for every 980 inhabitants.

One of the main priorities of the 1986–90 five-year plan is the reinforcement of existing health and social action centres and

Table 3. Development of the health infrastructure, 1978–86

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>National hospitals</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Regional hospitals</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Medical centres†</td>
<td>41</td>
<td>41</td>
<td>41</td>
<td>41</td>
<td>42</td>
<td>58</td>
<td>59</td>
<td>51</td>
<td>54</td>
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<tr>
<td>Health and social action centres</td>
<td>156</td>
<td>189</td>
<td>222</td>
<td>243</td>
<td>257</td>
<td>253</td>
<td>281</td>
<td>317</td>
<td>366</td>
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<tr>
<td>Simple dispensaries</td>
<td>167</td>
<td>167</td>
<td>167</td>
<td>167</td>
<td>234</td>
<td>135</td>
<td>126</td>
<td>166</td>
<td>154</td>
</tr>
<tr>
<td>Simple maternity units</td>
<td>31</td>
<td>37</td>
<td>104</td>
<td>128</td>
<td>130</td>
<td>155</td>
<td>29</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Primary health posts</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>964</td>
<td>1074</td>
<td>1184</td>
<td>7857</td>
<td>5704</td>
</tr>
</tbody>
</table>

Source: Ministry of Health

† Until 1978, medical centres were not distinguished from health centres for subprefectures.
Table 4. Numbers of health personnel in public health units, 1978–86

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>101</td>
<td>107</td>
<td>110</td>
<td>127</td>
<td>138</td>
<td>149</td>
<td>180</td>
<td>189</td>
<td>265</td>
</tr>
<tr>
<td>Dentists</td>
<td>5</td>
<td>8</td>
<td>9</td>
<td>14</td>
<td>16</td>
<td>17</td>
<td>16</td>
<td>20</td>
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<tr>
<td>Pharmacists</td>
<td>15</td>
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<td>23</td>
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<td>Health assistants</td>
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<td>168</td>
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<td>State nurses</td>
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<td>Specially qualified nurses</td>
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<td>157</td>
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<td>179</td>
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<td>854</td>
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<td>Laboratory technicians</td>
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<tr>
<td>Roving health officials</td>
<td>–</td>
<td>148</td>
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<td>148</td>
<td>193</td>
<td>206</td>
<td>244</td>
</tr>
</tbody>
</table>

Source: Ministry of Health

medical centres to enable them to operate properly (rehabilitation of the buildings and provision of further supplies and staff). The Ministry now has a capital investment budget, which it never had before. Seventy-nine health and social action centres have been strengthened in this way since 1986.

It is clear from Table 4 that there have been notable increases in the numbers of doctors, dentists, pharmacists, and health assistants and that there has been a satisfactory growth in the numbers of staff in other categories. The proportion of the population for whom surgical facilities are available has increased with the advent of the regional hospitals and medical centres equipped with operating theatres and the availability of professional staff.

The three major promotion and prevention programmes are health education, immunization, and maternal and child health (including family planning). The effectiveness of these programmes can be improved by training, the integration of activities, and better coordination.

Special emphasis was placed on the postgraduate training of doctors and the retraining of paramedical personnel working in the field. A national training and retraining plan was developed, and in 1987 well trained national and provincial teams of instructors began to put it into effect. All the central and provincial health directors were trained in management and planning at national seminars. These programmes should now begin to be truly effective.
Improving coordination

The Research and Planning Board coordinates health activities within the Ministry of Health and carries out liaison work between the Ministry and its partners (nongovernmental organizations and bilateral and multilateral funding bodies). All health development programmes are submitted to the Board, which assesses their relevance to and conformity with national health policy and the health development plan. All central and provincial health directors meet twice a year to discuss major health problems and harmonize their points of view and methods of work.

The Ministry of Health calls all its partners to an annual conference at which it summarizes its health policy, the progress achieved in its major programmes, and the assistance received from its partners. This is followed by a general discussion, in the course of which each party has the opportunity to ask for clarification, explain its own difficulties, and make suggestions.

The Ministry of Health also collaborates increasingly closely with other development sectors and has established a dialogue with them on health-related aspects of economic development programmes. It has organized several provincial seminars on primary health care for teachers in order to introduce the subject into schools. It has also organized a national seminar on sanitation with the principal ministries concerned—namely, those concerned with water resources, land administration, the environment, and tourism. The Ministry of Health is now working in close collaboration with the Ministry of Water Resources to build reservoirs; it sits on the Governing Board of the National Office of Water and Sanitation. It has thus been able to have drinking-water control laboratories built to monitor the water distributed by that Office.

The Ministry of Health, in conjunction with the Ministry of Water Resources, has completed a model project on the provision of water-supply points and the training of community health workers to ensure the hygienic use of water. Moreover, health staff in the field collaborate with demonstrators from the Ministry of Agriculture, supporting them in the health aspects of their activities, as in cookery demonstrations and advising chloroquine for pregnant women. Finally, it should be noted that the resounding success of such operations as “vaccination task force” and “one village, one primary health post” were
achieved thanks to the establishment of interdisciplinary and intersectoral committees at all levels.

Community participation

The population has only recently become involved in the health planning process. It began with the People’s Development Plan in 1984 and continued with the preparation of the five-year plan in 1985–86. At that stage, examination of health needs started at the village level. These needs were limited to the establishment of a health infrastructure and stocks of drugs. Village needs were grouped at district level and those of the districts were formulated at the provincial level by multisectoral committees. They were then submitted to the Ministry of Health, which, taking account of regulations and the availability of human resources, submitted a realistic five-year plan to the National Plan Committee. The substance of the agreed plan was explained to the people at a Plan General Assembly. This explanation was an important way of defusing frustration.

There has always been participation, and it has appreciably increased since the revolution thanks to the philosophy of self-reliance. Large numbers of people trained by the Committees for the Defence of the Revolution participate in large-scale socio-economic development activities in general, and health activities in particular.

The masses participate mainly in the construction of small facilities. When it comes to the health and social action centres, the Ministry finds itself obliged to slow down the rate of building since it does not have enough staff to run them. The state no longer presents a settlement with a ready-made centre; the people themselves always contribute, bringing sand or gravel and providing unskilled labour. The same goes for the building of wells, latrines, and dams. The vaccination task force of 1984 also enjoyed exceptional popular participation, thanks to the Committees for the Defence of the Revolution and the intersectoral committees.

During the “one village, one primary health post” operation, each village contributed 5000 CFA francs (US$18) and built its own health care hut. Each village then paid for part of the training of its own community health workers and arranged for their upkeep while they were on duty. The people have taken
part in various hygiene operations and contests such as the cleaning of the town in which they live and the unblocking of drainage channels. Today the Ministry of Health is trying to involve the people not only in the planning and building of health facilities but also in their management. This process is already under way in the village health committees.

Decentralization of decision-making

In addition to administrative decentralization, a certain autonomy of action has been granted to the provinces. Each Provincial Health Board presents its annual plans and has its own cash fund. The available funds are divided among the provinces, and each Provincial Health Board expresses its needs up to the limits of its allocation.

For personnel management, the provincial directors of health are members of the Appointments Committee. Personnel assigned to a province come under the authority of the provincial director of health, who sends them where they are needed in the field. Leave is now granted at the provincial level.

Health education

Great use is made of radio and television programmes. The subjects are dictated by the current epidemiological situation. In 1983, for example, programmes on yellow fever were made when an epidemic was affecting several provinces of the country. In 1984 the Health and Sanitation Education Board contributed to cholera control. Programmes on primary health care were made in four national languages.

Another method much used is the screening of educational films in districts and villages followed by talks and discussion aimed at certain target groups (young people, prostitutes, bar-men). In 1984, the Health and Sanitation Education Board produced six educational films. One, entitled Hygiene in the city, was purchased by the WHO Regional Office for Africa. Other devices that have proved useful are the coining of slogans for radio and the press, the making of calendars in which every page corresponds to a given theme, the preparation and printing of posters
and leaflets to educate target groups of newly literate people, and the preparation of placards, T-shirts and wrap-around cloths bearing messages informing the people of an impending health activity such as “vaccination task force” and “one village, one primary health post”.

A theatre forum has been initiated by the Burkina Theatre Workshop. This is a form of theatre in which the audience can participate. It was used in the campaigns to promote the vaccination task force and is now being used in family planning campaigns. Each year the Health and Sanitation Education Board organizes a national health week on a theme chosen by WHO. The Board is also moving into research. In 1987 it conducted an ethnolinguistic and health survey in the Dagara area with a view to preparing a health education manual for the newly literate people in that region.

Sanitation

The sanitation work carried out by the Health and Sanitation Education Board includes the study of technical dossiers in collaboration with the Ministry of Public Works, the construction of showpiece latrines, the preparation of the people for the setting-up of health facilities, the quality control of water in collaboration with the Ministry of Water Resources, the disinfection of wells and cesspits, disinsection, and deratting on demand.

In 1987 the Board organized a seminar on the promotion of sanitation, which brought to light all the basic sanitation, public hygiene, and drinking-water supply problems and redefined the areas and forms of action and coordinated action to be taken by the parties concerned.

Safe water supply

In view of the serious problem of water, the government set up a Ministry of Water Resources in 1984. Many modern water outlets have been made in rural areas, and most urban and urban fringe areas (23 in 1985) are equipped with a piped drinking-water system.
Indeed, according to the Ministry's 1985 statistics, 55% of the population of urban and urban fringe areas had access to drinking-water supplies. In rural areas, 70% of the population had access to 10 litres per person per day.

The Ministry of Health makes its contribution to water quality through the Health and Sanitation Education Board which participates in water projects for villages. It prepares health committees to maintain the water supply points (ensuring drainage, protection against animals, advice for storage of water in the home, and so on). Village committees have also been formed to manage and maintain the pumps to ensure the supply of clean water.

The Ministry of Health has prevailed on the National Water and Sanitation Office to decentralize its water quality control laboratory so that drinking-water quality can be guaranteed at all levels.

Maternal and child health and family planning

The planning, organization, and coordination of maternal and child health and family planning activities come under the remit of the Maternal and Child Health Board. The first task of this Board on its creation in 1984 was to revise the national maternal and child health programme so as to include family planning. This programme should help to reduce maternal and child morbidity and mortality, promote healthy reproduction, and encourage the physical and psychosocial development of the child and adolescent in the family. The government's commitment to family planning has resulted in the abrogation of a law of 1920 forbidding the advertising and sale of contraceptive products.

Since its inception, the Board has stressed three points. Firstly, it believes in the necessity of integrating maternal and child health and family planning activities in health units, where pre- and postnatal consultations are held and the growth of young children is monitored. Secondly, it places great importance on coordinating the activities undertaken by several non-governmental organizations (the Burkina Faso Family Welfare Association, the Family Welfare Clinic, etc.) and by other ministerial departments. For this purpose it organized a seminar for all those involved, which produced agreement on methods of work and standardization of the forms of data collection and
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monitoring. Thirdly, the Board has encouraged the training of health workers with a view to decentralizing maternal and child health and family planning services. Several midwives and doctors were sent abroad to learn the latest techniques (awareness training, diagnosis of sterility, insertion of intrauterine devices, etc.). Those in charge of programmes in the provinces have been given training in management and supervision. The process of decentralizing the services has been assisted by the strengthening of health units. A number of provincial health centres have been allocated equipment and qualified staff so that they can be used as referral and supervision centres.

The Maternal and Child Health Board has taken a number of steps to remove obstacles to progress in this field. They include the sponsoring of studies on behaviour, attitudes, and practices in the target population, on complications arising from the use of oral contraceptives, on irregularities discovered in the biological tests carried out before prescribing oral contraceptives (i.e., blood sugar, cholesterol, and total lipids), and on the failure rates of different methods of contraception.

A conference in 1987 examined the results of these studies. It proposed the abolition of the biological tests in view of the insignificant number of biological irregularities discovered. This would make oral contraceptives more accessible to women in rural areas.

The Board also took part in operational research on maternal mortality and undertook three study trips to neighbouring countries for an exchange of experience.

At present, maternal and child health and family planning services cover only 30% of the target population. This is a low proportion in view of the maternal mortality rate of 7–11 per 1000 reported from the provinces.

**Nutrition**

The Maternal and Child Health Board maintains a nutrition department, which deals with nutritional education and supervision and nutritional rehabilitation. It conducts nutritional surveys in the field to determine the prevalence of a number of nutritional deficiencies (such as vitamin A deficiency) and proposes programmes to remedy the situation. A control programme for vitamin A deficiency is under way at present.
The laboratory of the nutrition department determines the nutritional value of local foods and monitors their quality. It detects malnutrition early by measuring levels of serum albumin, vitamins, and folic acid. A toxicology and food technology centre is being set up.

The nutrition department supervises the nutritional rehabilitation centres, which were established to combat entrenched malnutrition. They are attached to the health centres and tend increasingly to use products that mothers can obtain locally. A problem at present is that of preventing nutritional education sessions from turning into food distribution sessions.

**Immunization**

The mass vaccination campaigns undertaken since the colonial era have continued into recent years. The reports on these campaigns provide information on the number of doses injected but not on vaccination coverage. The Expanded Programme on Immunization was launched for the first time in 1980 in the town of Bobo Dioulasso, but by 1981 only 2% of children had been fully vaccinated.

In 1984, the vaccination task force conducted a two-week campaign thanks to the help of friendly countries and non-governmental and international organizations, as well as an unparalleled mobilization of society by the Committees for the Defence of the Revolution. The vaccines administered were against measles, yellow fever, and cerebrospinal meningitis. Immunization coverage was increased to 60–70% of children between the ages of 9 months and 14 years. In 1985, the Expanded Programme on Immunization was relaunched to consolidate the gains made by the vaccination task force. The Government decided to initiate the programme in all provinces and to equip the health and social action centres accordingly. The devolution of decision-making gives the provincial health directors great responsibility for the implementation of the programme.

Statistics available at the end of 1985 bear witness to a low coverage rate, especially for vaccines that have to be administered in several doses: the rate was 9% for DPT-polio as opposed to 33% for BCG.

In 1986, African Immunization Year, the Ministry of Health, with the help of WHO, UNICEF, and its bilateral partners,
organized "vaccination open days", which aimed to accelerate immunization activities by integrating them with the everyday activity of the health centres. These open days resulted in better awareness of the vaccination centres and persuaded people to go to the centres of their own accord.

The national survey on vaccination coverage conducted in March 1987 provided the following results:

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>66.6%</td>
</tr>
<tr>
<td>DPT–polio 1</td>
<td>78.3%</td>
</tr>
<tr>
<td>DPT 2–polio 2</td>
<td>57.3%</td>
</tr>
<tr>
<td>DPT 3–polio 3</td>
<td>34.3%</td>
</tr>
<tr>
<td>measles</td>
<td>67.6%</td>
</tr>
<tr>
<td>yellow fever</td>
<td>62.6%</td>
</tr>
<tr>
<td>children completely vaccinated</td>
<td>25.6%</td>
</tr>
</tbody>
</table>

Much remains to be done if we are to achieve the goal of 85% vaccination coverage by 1990.

The results described above have been achieved thanks to integration of the immunization programme with the activities of the health units. In December 1987 there were 284 vaccination centres, 34 of them urban. Vaccination as an established routine practice began in the centres at Ouagadougou, and children can receive any vaccination at these centres every working day. The establishment of the centres continues apace; 164 more are planned for 1988. However, each province still has mobile teams to cover those who cannot be served by the centres. Fifteen provincial vaccine depots and five regional depots have already been built to store the vaccines closer to the vaccination centres.

Special emphasis has been placed on staff training. Following their training in 1987, the provincial directors and the provincial heads of the Expanded Programme on Immunization have been trained in planning and supervision. They in turn will train the other staff. Similarly, those in charge of the medical centres, the health and social action centres, and a number of maternity units have been trained in immunization methods and the repair of equipment. One cold-chain maintenance worker has also been trained for each province.

The popular structures that channel information and propaganda (Committees for the Defence of the Revolution, Union of Women of Burkina Faso) are aided by the village
health workers, who are important links in the chain of public information.

Prevention and control of endemic diseases

For a long time, endemic disease control was the work of mobile teams, but nowadays there is a tendency to integrate control activities with general health work.

Leprosy

The leprosy control programme enjoys the constant support of the Association of Raoul Follereau Foundations. Each provincial director administers the budget he or she has prepared. Leprosy control comprises:

- screening for the disease in health units or by mobile teams of leprosy specialists,
- outpatient treatment conducted by roving health workers who follow treatment circuits,
- hospitalization of serious cases (plantar perforations, reactions to drugs) in leprosaria, where the patients engage in gardening or animal husbandry when their condition improves,
- checks on the progress of patients by leprosy specialists when they make their rounds, and
- the annual organization of "World Leper Day", which is funded partly by collections.

Since 1982 multidrug therapy has been used in a number of provinces and is gradually being extended to others. Surgeons from the Institut Marchoux in Bamako (Mali) come periodically to perform operations on certain patients.

Thanks to this sustained programme, the prevalence of leprosy has dropped from 48,000 cases in 1978 to less than 23,000 in 1986, the latter figure including 1,581 new cases.

Pulmonary tuberculosis

Control of this disease is coordinated by the National Tuberculosis Control Centre. The screening strategy consists in taking
samples of the sputum of anyone who has been coughing for over two weeks. Diagnosed cases are treated in hospital departments until their sputum becomes negative; they are then treated as outpatients.

A pilot tuberculosis control project was conducted in 1984–85; it consisted in training microscopists and equipping a number of centres with diagnostic material.

The Ministry of Health has developed a national pulmonary tuberculosis control programme. However, the cost of treating one patient has been estimated at 22 000 CFA francs (US$ 80), and the programme is short of funds. Furthermore, the country does not have enough qualified specialists. An effort must be made in tuberculosis control to avoid a resurgence of the disease. During 1985 there were 723 new cases and 4547 existing cases.

An attempt was made to integrate the tuberculosis control campaign with leprosy control, but this proved to be impracticable.

Malaria

This is the most widespread endemic disease in the country. Prevention consists of sanitation work, health education, and the administration of chloroquine to pregnant women. Generalized chemoprophylaxis has been abandoned in accordance with WHO recommendations. At present feverish patients are routinely treated with chloroquine.

Posters prepared by the Health and Sanitation Education Board inform the public of the facts on malaria and its treatment. The Ministry of Health has launched a large-scale campaign to persuade health workers to prescribe only chloroquine for curative treatment, in order to prevent development of resistance to new drugs.

The malaria control project, currently restricted to the capital, uses spraying with malathion or temephos and is testing curtains impregnated with permethrin.

Trypanosomiasis

This disease is under active surveillance. Two provinces still have an alarming incidence of the disease; in 1986 there were 16
new cases in Burkina Faso. An attempt to set up detection posts on the frontiers with countries that have foci did not produce results. A mobile surveillance unit has therefore been set up in each of the two provinces concerned, as well as a national unit. Whenever a case is diagnosed or even suspected, the unit conducts an entomological and immunoparasitological survey in the village concerned.

Onchocerciasis

The Onchocerciasis Control Programme is a fine example of international solidarity. Eighty-four per cent of the territory of Burkina Faso is covered by this programme. There is no more transmission, and the country is now confronted with the problem of bringing the programme to an end and undertaking the economic development of the areas that have been freed from the disease.

The gains the programme has made must be defended by keeping the *Simulium* flies under surveillance and treating existing cases. This control programme is integrated with malaria, trypanosomiasis, schistosomiasis, and other control programmes.

The diseases listed above are only a small sample of the problems encountered, which now include AIDS. A control programme for this disease, based essentially on public information, is being organized.

**Supplies of essential drugs**

The Government's policy on pharmaceuticals has three major aims—to make essential drugs geographically and financially accessible to the majority of the population, to rationalize the prescribing of drugs, and to begin national production.

The registration of pharmaceutical preparations began in 1982, a procedure that enables the Ministry of Health to monitor the arrival of new pharmaceutical preparations. Work has been going on since 1981 on the preparation of provisional lists of essential drugs for each type of health unit. A national list of
essential drugs has also been prepared by a committee that includes hospital staff and public health doctors and pharmacists. After its adoption it will be revised periodically.

The National Pharmaceutical Supplies Association, which is partly Government-funded, was set up in 1985. It purchases wholesale a limited number of drugs that are used in large quantities, and it orders a certain number in generic form. These wholesale purchases have brought down the prices of drugs and standardized them on the national market.

Under the development programme of 1984-85 and the current five-year plan, several drug outlets and repositories have been set up. Between 1985 and 1986 the number of outlets rose from 24 to 29 and the number of repositories from 170 to 294. The “one village, one primary health post” campaign in 1986 brought drugs still closer to the people in the form of drug kits containing chloroquine, acetylsalicylic acid, dressings, etc.

Special emphasis is placed on traditional drugs, and a traditional pharmacopoeia service has been established. Steps have been taken to promote traditional medicine. Pharmacopoeia groups have been created in which traditional healers in all provinces participate, and preparations based on medicinal plants are being used in a number of health units to remedy coughs, diarrhoea, acute viral hepatitis, and other illnesses.

The Ministry of Health collaborates in research on natural substances to improve the preparations. A national committee on traditional medicine and the traditional pharmacopoeia meets periodically. In November 1987 the first national seminar on traditional medicine took place at Ouagadougou, with participants coming from several countries in the region.

Attention is also being given to the production of modern pharmaceuticals in Burkina Faso. At present only one small unit for the production of large-volume injectables is operating, but preparatory studies on a unit to supply the national market have been completed and construction should begin soon.

Problems encountered in the implementation of primary health care

Although the implementation of the primary health care strategy has met with some success, it is faced with many difficulties.
Resources are inadequate at all levels in spite of the Government's efforts. The staffing levels required for optimum running of the health units have not been met, and this has hindered the integration of activities. Shortage of funds moreover curtails the services the health units can offer.

The Ministry of Health has difficulty in supporting the costs of projects originally financed by external resources.

The concept of primary health care has not been properly assimilated by all health workers—or indeed by the population as a whole. In the eyes of many, primary health care is limited to the services offered by community health workers.

Not all managers of health units have been trained in health service management. Job descriptions have been prepared, but they have not been publicized and applied. Health workers are not guided by rules of procedure in their activities, nor are they regularly supervised.

Since resources have not been adequately decentralized, there is no incentive for those in charge of units to engage in microplanning for their own areas. The information collected for management purposes is not used effectively.

Personnel can be promoted only through competitive examination, yet promotion is practically the only means of motivation. This results in a rapid turnover of health workers, which mars the continuity of activities and results in a wasteful repetition of training.

Bureaucratic slowness impedes the progress of many health projects. The Ministry of Health depends on other ministries for its construction and equipment programmes, and this dependence and long budgetary procedures sometimes result in the loss of funds, which are voted annually.

The indivisible nature of the treasury is a fundamental principle in the management of public funds; it means that all income must be paid into the treasury. Because of this, all attempts to win a degree of autonomy in the management of health units have been unsuccessful so far. Centralized budgetary controls have caused shortages of essential drugs and materials even when funds have been available.

The vaccination task force must be counted a success, but it was not without flaws. Provision was not made for an immediate follow-up to deal with the backlog so that future vaccinations could be administered routinely in the health units. Instead it became necessary to resume awareness training with “vacci-
nation open days” and to accelerate the establishment of health units.

The “one village, one primary health post” operation was carried out too quickly, without sufficient advance publicity. The community health workers did not have sufficient training, and what training there was emphasized cure at the expense of prevention. The health and social action centres were not ready to assume their role in the training of community health workers. Moreover, the health posts were not working properly and continue to suffer from the same problems today. They have not yet succeeded in encouraging the people to support the community health workers. Some communities do look after their health workers, each family providing a measure of cereal or helping with the work on the health worker’s land, or making a cash contribution, but people in other villages think that the health workers are supported by the State. The bicycle the health worker is given is seen as a great privilege. If community health workers abandon their posts it is partly because they are not looked after.

A general objection to the large, one-off operations is that they upset the initial programming of activities at the provincial level.

Some difficulties arise from the level of socioeconomic development of the country as a whole. For example, health activities are hampered by the low level of literacy.

The weaknesses of the health system are many. In the short term, it will be necessary to concentrate on developing services at the district level and improving the referral structures. Such development calls for an increase in human resources and some degree of autonomy in management. Since the National School of Public Health, which trains paramedical personnel, is working at full capacity and can take no more students, decentralization is being studied. The curricula are being revised to make them better suited to the concept of primary health care. The first doctors trained in Burkina Faso graduated at the end of 1988. In the course of their training they will have been confronted with the realities of the health situation.

Since the people’s income is so low, the health units cannot be self-financing and so cannot enjoy full autonomy, but the Ministry of Health is making a study of the recovery of costs of health facilities in one province. The aim is to develop a system whereby the health facilities will be able to finance themselves
in part. This will involve organizing the health units so that they can provide the population with integrated health care and developing a scale of charges that the population can afford. It will then be necessary to develop an adequate system of financial management at the local level for the proper use of the funds collected.

The referral structure of the health system is far from adequate. Essential material is frequently out of stock in the national hospitals, so they cannot function properly as referral centres. These shortages are due only in part to the inadequacy of the budget; they have more to do with cumbersome budgetary procedures. For this reason the Ministry of Health has asked the government to grant partial autonomy of management to hospitals, enabling them to use their income directly. The state would retain responsibility for wages and costly equipment. These provisions are designed to solve the problem of the operating costs of health establishments.

The Government’s social policy will operate more efficiently after the recent decision to amalgamate the Ministry of Health with the former Ministry of the Family and National Solidarity, which did much to inform the people of developments.

In the medium term, the Ministry of Health will be able to take advantage of the adult literacy work undertaken by the Government and will be able to communicate its educational messages more clearly. In the long term, all citizens must be brought to understand that they are the makers of their own health.

The way ahead

Burkina Faso is grappling with immense health problems. In order to resolve them, it has chosen the strategy of primary health care, which it is striving to put into effect. The work of the last 10 years gives some grounds for satisfaction. There has been an appreciable increase in health coverage, especially in rural areas, an improvement in planning and the establishment of an embryonic health information system, the beginning of an integration of activities that will eventually allow each health unit to offer a range of services, and better intersectoral collaboration and a more conscious commitment from the people to take charge of their own health.
The components of primary health care, especially those dealing with prevention, are being given special attention. The next step will be to build on the successes, develop facilities at the district level, and strengthen referral structures.

In Burkina Faso we believe that health is the most precious resource and the key to socioeconomic development. Health is the citizen’s right, but the health sector cannot develop without the conscious participation of the people.
Canada: maintaining progress through health promotion

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Canada’s attempts to achieve health for all by the year 2000 will be described in general terms for the country as a whole, but the way in which the policy is being carried out in practice will be illustrated by focusing on developments in Toronto, the home of the “healthy cities” project.

Canada is the second largest country on earth but has only 25 million people and a population density of only 3 per km². It is a federal state, with 10 provinces and two federally administered territories in the sparsely populated north. The government is a parliamentary democracy. The two largest ethnic groups in the population are those of British and French extraction, but many other groups are strongly represented and are encouraged to retain their language and culture under a policy of multiculturalism. Native Indians and Inuit constitute about 2% of the population, concentrated in the north, and are a disadvantaged group in terms of income, educational level, health, and other measures. About 75% of the population is English-speaking and 25% French-speaking. The population is relatively young, with only 10% aged 65 and over, but the proportion is expected to increase to 18% by 2021 (1). Although the level of schooling is very high, a recent survey revealed that roughly a quarter of the adult population is functionally illiterate (2).

Canada has a mixed economy, with the state owning significant parts of the transport and energy sectors and participat-
ing in other sectors to a varying extent. The economy has traditionally been based on primary products (agriculture, forestry, mining, fishery), but manufacturing is fairly highly developed. The per capita gross national product is over US$ 10 000, making Canada one of the most affluent countries in the world. Annual inflation exceeded 10% during the 1970s, but more recently has fallen to about 5%. The economy stagnated during a recession in the early 1980s, but growth has now resumed in some regions. Unemployment is a chronic problem, affecting roughly 10% of the overall work-force but reaching close to 30% in some regions or population groups.

**Toronto**

Toronto is the capital of the province of Ontario, the most populous province, and is one of the most multicultural cities in the world. The City of Toronto (population 600 000) constitutes the inner core of Metropolitan Toronto, a federation of six local municipalities. The 2.2 million people of Metropolitan Toronto comprise nearly 10% of the entire population of Canada.

Until the 1950s, Toronto had a reputation as a quiet and somewhat puritanical provincial capital. City government was run for the most part by an “old boy” network. Since then, Toronto has undergone a period of unprecedented cultural, social, and physical change. A huge influx of immigrants arrived from all over the world, and today fewer than half the people of Toronto have English as their mother tongue. In addition to the profound change in cultural composition, there emerged in the late 1960s and early 1970s a young, well-educated middle class that moved into and renovated the older downtown neighbourhoods.

At the same time, Toronto was becoming a large and prosperous city, the financial hub of Canada. The inner core of the city has been transformed, with many tall office towers and increasingly expensive housing. Toronto has become known as a safe, clean city, variously referred to as “a livable city” and “the city that works”. However, that “livability” may be threatened by overdevelopment and a high cost of living.
Evolution of health-for-all policies in Canada

Canadians have a tradition of using government to achieve social objectives, through such programmes as unemployment insurance, regional economic expansion projects, and universal health care insurance. The country therefore has a highly developed welfare system. The expensive human services like health, social services, and education are primarily the responsibility of the provinces, but the Federal Government has the bulk of the taxing power. So Canadian political history is a story of finding acceptable ways of transferring federal funds to the provinces.

The main focus of health policy has traditionally been health services. A major hospital building programme was undertaken in the 1950s and 1960s, and several medical schools were established or enlarged in the 1970s. During the 1960s Canada developed a comprehensive health insurance programme, which now covers nearly 100% of the population (a few people are missed in the two provinces that charge premiums) for virtually 100% of hospital and physicians’ services. It does not include sick pay (although most employees have this as a benefit of their employment) or coverage for most dentistry, drugs, or aids like crutches. The programme is concerned only with paying for health services, and not with their actual provision. Most hospitals are voluntary institutions and most doctors independent fee-for-service practitioners. Costs are approximately evenly split between the Federal and Provincial Governments and have been reasonably well controlled at about 7.5% of the gross national product until 1981 and at about 8.5% since then. In 1985 health costs amounted to around US$1200 per capita per year. This is the most popular social programme in Canada.

In Canada the term “primary health care” usually refers to the services provided by the general practitioner (family physician), but it will be used here to include public health, home nursing, and health promotion services as well. About half of all physicians are in primary care. Although patients are not formally assigned to doctors, the majority of the population can identify a specific doctor as their family doctor or personal physician.

Each province has a ministry of health, which is responsible for public health and which operates the health care insurance
plans and certain mental health services. Some of the larger provinces have established regional health planning councils. These councils have varying amounts of authority, but do not have direct control of resources. For example, Ontario's district health councils are purely advisory in nature, are limited for the most part to commenting on new (not existing) programmes, and do not cover the whole Province.

Canada does not have an integrated district health “system”. So while the range of services offered is wide, their coordination is often a problem. Indeed the term “district” is not clearly defined in Canada; geographical boundaries vary for different purposes, even within the health sector. Toronto will be described as a fairly typical example.

**Toronto's health care system**

Roughly one-third of the provincial health budget, or US$8.3 billion annually, is spent in Toronto. The Metropolitan Toronto District Health Council is responsible for advising the Minister of Health on the development of the health care system and for actually developing and coordinating it by gaining the agreement of the principal participants. Established in 1980, the Council has 24 unpaid members, half of whom are “consumers” and half “providers”, together with a permanent staff of 12, including four planners. The members are appointed by the Ontario Minister of Health, but the council is not directly accountable either to the community or to the municipal government.

The Council's task has been made difficult by the existence of a very strong hospital system. The 10 large teaching hospitals in downtown Toronto constitute a provincial and national resource and have tended to operate autonomously, often dealing directly with the Ministry. Similarly, the community hospitals and chronic hospitals in Toronto, numbering more than 20, are also essentially autonomous, each with its own board of directors. It sometimes proves difficult for the Ministry itself to control their activities, and it has not been unusual for hospitals to run up a deficit and then wait for the Ministry to pay it, or to purchase equipment that has not been approved. The District Health Council has produced reports on trauma, emergency
services, and other specialized hospital programmes, but there is no overall strategic plan.

The District Health Council is even less able to plan and coordinate the work of physicians. Virtually all physicians in Toronto are private entrepreneurs, reimbursed on a fee-for-service basis by the provincial health insurance plan. They are free to set up practice wherever they wish and to practise as they see fit, as long as they comply with hospital by-laws and the standards of the College of Physicians and Surgeons. There are a small number of community health centres and health service organizations where physicians work on a salary or capitation basis, but they serve fewer than 2% of the population. They are small (usually 2–4 physicians) and mostly serve low-income and other underserved groups. An effort is being made to expand the number of such centres, especially to meet the needs of the multicultural communities of Toronto and of the Indian and Inuit peoples. However, given the large number of physicians already in Toronto and the opposition of the medical profession, these centres are unlikely to become a major part of the health care system in the foreseeable future.

Public health services in Toronto are provided by six local municipal Departments of Public Health, each with its own Board of Health and Medical Officer of Health and consequently its own philosophy and programmes. While the main public health programmes are laid down by provincial legislation, additional services are provided by each municipality. The municipalities provide 60% of the funding and the province 40%, so per capita expenditures vary widely across Metropolitan Toronto.

Both acute and chronic home care is provided by an independent organization, Metro Home Care, which is funded by the province and run by a Board of Directors appointed by the province. In addition to its own medical, nursing, and other staff, it contracts for services from a variety of community agencies. The District Health Council has worked to develop a better coordinated system of chronic care.

Mental health services are provided by family physicians and psychiatrists in private practice, by general hospitals through outpatient clinics and inpatient units, by specialist psychiatric facilities, and by a large provincially run psychiatric hospital and its several satellites. De-institutionalization has resulted in something of a crisis in providing accommodation,
work, and community facilities for ex-psychiatric patients, and the District Health Council has played a role in developing a better-coordinated community mental health service.

Nursing homes are community care facilities for the chronically ill (principally the elderly) who require skilled nursing care and are no longer able to live at home. They are mostly private for-profit institutions (although a few are operated by religious groups or other non-profit organizations), receiving reimbursement from the Ministry of Health. The District Health Council has helped to establish a central registry for identifying vacancies and assessing and placing patients. The frail elderly may be placed in homes administered by Homes for the Aged, an organization operated by the Metro Department of Social Services with funding from the Ministry of Community and Social Services.

Laboratory services are mostly provided by private laboratories, which are reimbursed by the provincial health insurance plan on a fee-for-service basis, and by hospitals. The private laboratories have a fair degree of autonomy in deciding where to establish themselves and what services to offer.

Ambulance services are provided by Metro Ambulance, operated as a department of Metro government but funded by the Ministry of Health.

In addition to the publicly funded health care system, there is an extensive private system that includes dentistry, psychology, chiropractic, midwifery, private home care services, nursing home services and the services of “alternative” practitioners like naturopaths, homoeopathists, and herbalists.

A wide range of community and social agencies exists to advocate or provide care for various population groups, defined by age, religion, health problem, etc. Some of these derive most or all of their income by selling services to the government, while others raise funds from the public. A voluntary Social Planning Council exists in Toronto, as in most communities, to coordinate the activities of these agencies.

Assessment of the “health services” approach

The Canadian health care system is widely acknowledged as an excellent one. The health care insurance system is an undoubted
success, and human and physical resources are at least adequate. Metropolitan Toronto illustrates both the strengths and weaknesses of the system. For almost the entire population of Toronto, Metro's health care system provides high quality health care services that would be the envy of most other cities and countries in the world, while the District Health Council has made important contributions to improving and rationalizing the system.

But serious problems remain in planning and coordination. As in other Canadian communities, the health care system in Metro Toronto is fragmented, with a wide variety of responsible organizations and sources of funding. For the most part the components of the system are not directly accountable to local political bodies, to the community, or to the District Health Council. It is thus not surprising that there is, in effect, no coordinated health care system and no real capacity for strategic planning. Some district health councils in Ontario have had more success in developing a district health system, but they are not faced with the size and complexity of Metro Toronto (which has a larger population than six of the 10 provinces) or the power of the hospitals and the medical profession.

The challenge that the District Health Council and the Provincial Government now face is how to maintain and improve the existing system and how to meet the serious problems that will emerge as the population ages, as the ethnic communities in Toronto become more effective in voicing their demands, and as the cost of services escalates.

Evolution of the health-for-all movement

The Lalonde report of 1974, A new perspective on the health of Canadians (3), marked the start of a new approach to health and health policy. That document set out four groups of factors that influence health—environment, life style, human biology, and health services organization—and argued that further improvements in health would require greater emphasis on the first three. Subsequently the Department of National Health and Welfare established a Health Promotion Directorate (the first in the world), with a contributions fund to support community agencies in health promotion projects. Several national pro-
grammes were introduced, mainly dealing with risk-factor reduction, such as those directed at tobacco and alcohol use and at improving physical fitness.

The 1980s saw a change from risk-factor reduction to newer health promotion concepts similar to those espoused by the European Office of the World Health Organization (4). Again the Federal Government provided leadership and coordination. At the First International Conference on Health Promotion, held in Ottawa in November 1986, the Minister of Health and Welfare released Achieving health for all: a framework for health promotion (5), the most important federal statement on health promotion since the Lalonde report. This discussion document presented three challenges to the health of Canadians—reducing inequities, increasing the emphasis on disease prevention, and increasing the people's ability to cope with chronic illness and disability. It suggested three mechanisms to meet these challenges—self-care, mutual aid, and healthy environments. Finally, it presented three strategies—community participation, strengthening community health services, and healthy public policy.6

The document represented a fundamental change in the Department's thinking and has been used to organize many of the Department's activities since then. Although no major additional funding has been provided for implementation of the new approach, three new risk-factor programmes have been introduced (directed at tobacco use, driving while impaired, and drug abuse). Furthermore, the Department has funded the Canadian Healthy Communities Project, a "Strengthening Community Health" secretariat, a national health promotion survey, a series of literature reviews on the elements of the health promotion framework, and a national consultation on health promotion research.

In Ontario, a Premier's Council on Health Strategy has been formed to advise on health policy, with membership comprising eight cabinet ministers and 24 members from the health field and the public. The orientation of the Council is indicated by its four standing committees: health goals, healthy public policy, health care system, and integration and coordination. This recognition

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6 Healthy public policy is a key concept in health promotion: recognizing that policies in other sectors can have a major influence on health, it seeks to make those policies more health-enhancing (6, 7).
that health concerns transcend the remit of the Ministry of Health and the prominence afforded the Council by the chairmanship of the Premier are reasons for optimism.

We shall now consider developments in the Department of Public Health of the City of Toronto, which has been at the forefront of Canadian developments in local public health and health promotion for the past decade.

**Health for all in Toronto**

The Toronto Board of Health was established in 1884. Between 1910 and 1929 the Medical Officer of Health was Dr Charles Hastings. Under his guidance, the Department of Public Health attained an international reputation and grew to include a large staff and a wide variety of departments dealing with industrial hygiene, plumbing, housing, social services, and welfare in addition to the more usual public health activities. Hastings was widely concerned with the social and physical environments of health, with poverty, poor housing, lack of education, poor working conditions, and other social ills.

In the ensuing years, while the Department continued to be large and well funded and its reputation remained good, its energy and influence waned somewhat. Especially in the period following the Second World War, with the ascendancy of the medical model and health services, public health declined in Toronto as it did elsewhere.

It was revitalized by social developments in the early 1970s. Faced with the dual threat to neighbourhoods posed by high-rise buildings and urban expressways, newly active and aroused neighbourhoods elected a reform-minded city council in 1973. Since the Board of Health is appointed by the city council, one of the consequences was the appointment of a reform-minded Board of Health. The Board soon found itself embroiled in an environmental health issue—the pollution emanating from a lead smelter situated next to a downtown neighbourhood. In attempting to deal with this issue, the Board of Health found that it lacked some of the powers it felt it required and dis-

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*a This section is based on a case study presented by one of the authors (TH) at the Second International Conference on Health Promotion, Adelaide, South Australia, April 1988 (8), and on a chapter of a forthcoming book (9).
covered that the Department of Public Health lacked the expertise, community skills, and managerial capacity to deal effectively with such issues.

The consequence was the establishment in 1976 of the Health Planning Steering Committee. This Committee, with representatives from the Board of Health, the Department, and various interest groups, examined the role of the Department of Public Health and of municipal public health in general. The Committee’s 1978 report (10) drew attention to the social, political, economic, and environmental contexts of health and called for major changes in the Public Health Department. These changes included strengthening the Department’s planning and research capabilities (in particular moving to data-based planning), enhancing the Department’s health education resources and skills, introducing community development and health advocacy as legitimate roles for the Department, and reorganizing the Department’s management.

In 1979 a 16-person Health Advocacy Unit was established, which developed a sophisticated health-status data base, organized the first accurate assessment of community health and well-being (in the form of the 1983 community health survey), undertook strategic and programme health planning, and established a resource centre. But the unit attained its greatest visibility—and notoriety—in two areas: social policy and environmental health. In the former, the unit produced a report, The unequal society (11), which took a strong position on social and health inequalities. In the latter area it challenged the chemical industry, in the process attacking the Metro Works Department and City Parks Department for their lax attitude towards chemical pollution. Moreover, it addressed these issues in a style that was provocative and media-oriented.

Not surprisingly, the unit made enemies as well as friends. In particular, some senior Department managers were offended by both its style and its criticisms of their competence. Additional enemies were to be found among other city departments that had been attacked, in the Provincial Ministry of Health, and in the conservative political party that had governed Ontario since 1942.

In the implementation of the organizational recommendations of the Steering Committee’s 1978 report (10), the Health Advocacy Unit was replaced in 1982 by Central Resources, a resource group consisting of the staff of the Health Advocacy
Unit plus consultants from the former discipline-based sections, reorganized into four resource areas: health information, health promotion and advocacy, health protection, and preventive health. This placed the functions of the Advocacy Unit at the heart of the Department’s operations, making it less vulnerable to being “lopped off” and much more integrated into the Department’s functions and activities. On the other hand, its independence and flair were considerably reduced.

The reorganization introduced a number of other important changes in the Department’s management and administration. Four semi-autonomous health areas replaced the former discipline-based sections, each serving a population of 100,000–225,000 people. Each area is jointly managed by a four-person management team (a nurse, a physician, a public health inspector, and a business manager), none of whom is “the boss”. One member of each area management team sits on the Department Management Team (selected on an annual basis so as to ensure that one member of each discipline is represented), together with one representative of Central Resources, the Medical Officer of Health, and two of his senior staff. Each area has a Community Advisory Board, appointed by local ward politicians in three of the areas and elected at a public meeting in the fourth; their chairpersons sit on the Board of Health, providing some degree of community input into Department and Board decision-making.

The Department’s programmes have also been revised (12, 13). Priority programmes have been identified in each of four content areas corresponding to the four sections in Central Resources. Those relating to health information and health promotion are essentially supportive in nature, enabling the Department to carry out its health protection and disease prevention tasks. They include such priorities as developing a good health-status data base, developing effective approaches for programme evaluation, enhancing staff skills and knowledge in primary prevention, and raising the Department’s profile. The programme delivery priorities are environmental and occupational health, parental and child health, heart disease, substance abuse, and suicide. Innovative new programmes have been undertaken in these priority areas, including a school smoking prevention programme aimed at 7–11-year-olds, a municipal by-law requiring all workplaces in the city to have a smoking policy acceptable to non-smokers, the “healthiest
babies possible” programme (which provides intensive prenatal education and support to high-risk, mostly teenage, mothers), a geriatric dental programme, a programme to reduce drinking and driving among teenagers and young adults (featuring free non-alcoholic rock concerts and simulated trials), and a comprehensive city-wide heart-health programme.

A major challenge has been the shifting of resources from “traditional” public health concerns to these newer priorities while maintaining the services still needed by the community. For example, public health nurses used to do a great deal of home visiting, and the public had come to expect this. The process of shifting to more group-oriented health promotion and disease prevention efforts has not been easy, particularly where community care services are still inadequate. Similarly, public health inspectors have had to deal with chemical hazards and occupational health problems in addition to their traditional microbiological concerns.

Community development approaches to health problems have been emphasized. The Department has 10 full-time community health workers—two in each health area, one for multicultural health, and one for community mental health. Community workers were instrumental in establishing the Multicultural Health Coalition, which has swiftly become a leader and resource for cultural groups in dealing with health problems.

Three strands in the Department’s development since 1982 are worth following in more detail: environmental health, social determinants of health, and the “healthy city” project.

The Environmental Protection Office

The Department has continued to take a strong (although less strident) approach to environmental issues. A major report on chemical contamination of drinking-water was produced (to the annoyance of the Metropolitan Department of Public Works), and there has been active involvement with several communities to investigate and deal with local environmental health problems. Environmental health has thus remained a high-profile issue in the city, consuming some 20% of the Board of Health’s agenda and frequently capturing the headlines.
In 1985, the Chairwoman of the Board of Health, a councillor who had been part of the reform movement from the start, stood for election as Mayor. She made environmental health an important part of her campaign, and the incumbent Mayor responded by promising to establish an Environmental Protection Office if re-elected. He was re-elected, and the Department of Public Health was made the lead Department in developing the new Office. Extensive consultation with other departments was carried out through a multisectoral advisory committee including the public works, planning and development, parks and recreation, buildings, housing and legal departments. Concurrently, the new chairman of the Board of Health brought together environmental groups to seek their input and support.

These efforts have meant that the Environmental Protection Office, established in 1987, has the widespread support of the city bureaucracy and the environmental movement and is able to address environmental health issues in a broad and cooperative manner. The office has a staff of 8–10 people, including research consultants, an environmental community health worker, and an environmental communications specialist. Among its concerns are the health implications of land-use decisions and of waste incinerators, contamination of the food chain by organic chemicals, development of a “community right-to-know” by-law, which will make it possible for communities to learn about toxic or hazardous chemicals in their neighbourhoods, and development of an ecosystem management approach to urban planning and development.

Social health

The 1983 report *The unequal society* and subsequent staff development and community education programmes have highlighted particular instances of low health status in Toronto and their links to poverty, hunger, homelessness, unemployment, and illiteracy. The Department has submitted briefs to provincial commissions on the need to provide adequate income support while promoting independence and empowerment, has held public hearings on the health effects of homelessness in Toronto, and has provided information to family physicians on the health effects of unemployment and on the community resources available to the unemployed.
The Department has participated in a variety of projects addressing the social determinants of health, including the Supportive Housing Coalition, Food-Share, and more recently Beat the Street (a literacy programme for "street kids"). It has also helped in the coordination of support services for ex-psychiatric patients. Its staff members have been involved in a wide variety of community health activities, including the establishment of a community garden with a group of low-income single mothers, the development of new community health centres, and the development of culturally appropriate health services and programmes.

Healthy Toronto 2000

The year 1984 marked the 150th anniversary of the City of Toronto and the centennial of the Board of Health, as well as the tenth anniversary of the Lalonde report and the 75th anniversary of the Canadian Public Health Association. The Board of Health and the City of Toronto marked these events with a major conference entitled "Beyond health care—a working conference on healthy public policy" (14). It was recognized that healthy public policy had to be addressed at the local level. Furthermore, it was clear that if the Department's mission "to make Toronto the healthiest city in North America" was to be achieved, a multisectoral and community-wide effort was called for. Accordingly, the conference was followed by a one-day workshop called "Healthy Toronto 2000", which began to explore what it would take to make Toronto a more healthy city by the year 2000. It was this workshop that inspired the "healthy cities" project of WHO's Regional Office for Europe.

Reorganization and programme development and review took up most of the Department's energy in 1985, but in 1986 the Board of Health established a Healthy Toronto 2000 subcommittee, to examine the Department's role. Among the more innovative approaches have been a series of Board, Department, and community "vision" workshops to clarify what a healthy Toronto would be like, and the identification of a broad range of social, environmental, and economic challenges to Toronto's health. A consultative document was released in the autumn of 1987, public hearings were held, and the committee's final report
was adopted by the City Council in early 1989 (15). The report identifies both a city-wide agenda to reduce inequities in health opportunities, create health-supporting environments and move towards a community-based health system, and a Departmental strategy to increase health expectancy, protect people from health hazards, and enable them to develop personal skills for health.

At the same time, informal discussions were started with senior managers from other departments (buildings, housing, management services, parks and recreation, planning and development, and more recently, public works) to explore the concept of the healthy city and its implications for city government. Considerable interest was shown, notably in the potential for the healthy-city concept to provide a broad unifying theme for the city's strategic planning and management. The group proceeded cautiously, but in late 1987 approval to proceed with a multidepartmental consultation was granted, and a three-person Healthy City office was established in 1989 to coordinate city-wide activities.

Efforts are also under way to establish wider support. The community consultation on the report of the Healthy Toronto 2000 subcommittee (15) is part of that process, as are efforts to involve social service agencies and groups throughout the metropolitan area in exploring the healthy-city concept and its benefits to them. The Environmental Protection Office provides a concrete example of multisectoral cooperation within city government in an area of high priority for the healthy-city concept.

Progress in achieving health for all

Given that most health-for-all initiatives are long-term in nature, it is too soon to expect much improvement in health outcomes. Developments in process should be more identifiable.

There have been marked improvements in the health of Canadians over the past two decades, although the extent to which these can be ascribed to health-for-all initiatives is unclear. National changes are reflected in data for Toronto. The average age at death increased between 1977 and 1987 by 3.3 years for females and by 2.0 years for males. Overall age-
standardized mortality rates declined by almost one-third, while mortality from cardiovascular disease declined by 45%, from accidents by one-half, from cirrhosis by more than 40%, and from male lung cancer by 24%. Lung cancer in females, however, increased by over two-thirds. Infant mortality declined from 10.0 to 6.5 per 1000 live births (15). Morbidity data are much sparser and do not permit longitudinal comparisons.

Reducing inequities

Longitudinal data regarding progress in reducing inequities do not exist, but it is clear that problems still exist in Canada as a whole and in Toronto. Native peoples remain the most striking example, as shown by their elevated infant mortality rates, standardized mortality ratios of between 1.5 and 2.0 for all causes, and much higher ratios for traumatic and alcohol-related causes of death. But there are also significant regional and income differences; for example, men in the lowest fifth of the income scale have 14.3 years less healthy-life expectancy than those in the highest fifth (16). Early in Toronto's health-for-all initiative, the Health Advocacy Unit demonstrated that mortality was higher in the poorest areas for all causes except cancer. No data are available to determine whether this remains true.

Improving coverage

Coverage by health services is excellent for most of the population, thanks to the universal insurance programme and the excellent supply of personnel and institutions. There is now much concern about a possible surplus of physicians and overuse of hospital beds. However, there remain problems in persuading physicians to settle in rural areas, despite various incentive programmes, and similar problems exist with the staff of specialized services, such as those dealing with mental health and rehabilitation. The supply of services is much better in Toronto, although there is a shortage of services for specific groups, e.g., people of certain races and psychiatric patients living in the community.
Effectiveness of preventive and promotive programmes

The striking reductions in mortality from ischaemic heart disease and injuries must be due at least in part to a reduction in risk factors as a consequence of preventive programmes. A good deal of effort has been directed at enhancing these programmes. The Task Force on the Periodic Health Examination (17) has done outstanding work in assessing the medical literature and recommending preventive interventions, although there has been difficulty in persuading physicians to comply with the recommendations. A parallel programme has been proposed for community health interventions. Some provinces have developed voluntary accreditation programmes for public health units, similar to longstanding programmes for hospitals.

Promoting improved coordination

Intersectoral coordination has proved hard to achieve, especially in central government. Some provinces have combined their Departments of Health and of Social Services, but perhaps the most ambitious attempt at improving coordination is the Ontario Premier’s Council on Health Strategy, referred to earlier. It is too early to assess its effectiveness. Intersectoral coordination has been much easier to achieve at local level, through informal contacts among workers and through more formal arrangements such as social planning councils.

Increasing popular participation

Nongovernmental organizations, both professional and community, are highly developed and provide effective input to the policy process. The Canadian Public Health Association has been particularly effective in educating professionals and politicians and acting as a pressure group for health. In 1986–87, with funding from the Federal Government, it undertook a series of consultations across the country on the subject of strengthening community health services. The Non-Smokers’ Rights Association has made similar contributions in the area of tobacco and health. The Federal Health Promotion Contributions Fund has enabled many community agencies to undertake
health promotion programmes and has provided a cadre of community people with a background in health promotion.

Decentralizing decision-making

In Canada there is no effective decentralization in the planning and management of health care services, except to a certain extent in Quebec. The provincial health ministries are sovereign. Although several provinces have developed regional or district health planning councils, provincial governments have been unwilling to give up fiscal authority. For example, a recent recommendation of the Rochon Commission in Quebec (18) to turn fiscal responsibility over to regional councils was immediately rejected by that province's Minister of Health. In Toronto, however, decentralization within the Department of Public Health served to release a lot of energy, to shift creativity to the four health areas, and to allow the emergence of a more diverse set of management styles and activities.

Improved integration

In general, integration has been much more successful at the local level, where people know one another and meet more frequently and informally. Quebec's Local Community Services Centres are the most highly developed example, combining primary health care with social services under a community board. Social and health services work closely together at the local level in many centres in other provinces. In several parts of Ontario, the local public health units have been made departments of the regional government, bringing them into closer contact with social and other services.

Implementing the components of primary health care

It is hard to identify the development of health-for-all programmes in the patchwork of the Canadian health system, particularly since interest in the subject is very recent and is almost nonexistent in some provinces. The activities of the City of Toronto Department of Public Health are not at all typical of the
health scene in Canada at the local level; rather, they represent the "cutting edge" of the new public health approach.

Education
Extensive public health education programmes have been developed by provincial, municipal, and voluntary agencies, dealing with such topics as smoking, alcohol and drug use, nutrition, and sexual behaviour. These have mainly used the mass media. Health education in the schools is moderately developed, and there is discussion of its possible expansion. Professional education incorporates health promotion concepts to only a limited extent. Few programmes train specialists in health promotion, and a shortage persists.

Food supply and nutrition
The supply of food in Canada is excellent, and the price low. A few years ago it was common to state that Canada's only nutritional problem was overnutrition. More recently, the existence of substantial numbers of people who cannot afford food has been recognized, and charitable food banks and soup kitchens have emerged in most major cities. It is uncertain whether these equity problems have worsened or whether they are simply more widely recognized. Discussion is just starting about changing the nature of the food supply, e.g., by reducing the amount of cholesterol in the diet.

Adequate water supply and sanitation
The vast majority of the population has a safe piped water supply, although there has recently been concern about the problems of chemical pollution. Standards of sanitation are similarly high. The Indian population, however, continues to suffer from infectious diseases due in part to inadequate water and sanitation.

Maternal and child health
Maternal and infant mortality rates are among the lowest in the world. Prenatal care programmes are highly developed. Follow-
ing concern about the increasing caesarean section rates, there is a call for more humane childbirth practices, including more natural methods of delivery, and the provision of midwifery. Canada is one of the few nations that do not recognize midwives, although Ontario is about to do so.

Immunization

Immunization rates are very high, thanks to the efforts both of private practitioners and of the public health services. The rates of communicable disease are correspondingly low. Several provinces have regulations requiring children to be immunized before they can enter school.

Local endemic disease control

Public health services for the control of communicable diseases are well developed, primarily through public health departments. Chronic diseases and injuries are now the more important endemic health problems, and the attention of public health departments is turning increasingly to them. Although Toronto is perhaps most advanced in this respect, educational and screening programmes of various kinds are being mounted in other centres.

Management of common diseases

Common diseases are managed entirely by general practitioners, to whom virtually all Canadians have access. Attempts to introduce the nurse practitioner were stalled because of lack of realistic funding mechanisms and the availability of very adequate medical manpower (19). Although the incidence of dental disease is falling, access to dental care remains a problem, since it is not covered by public insurance plans in most provinces. The use of dental services is strongly related to income.

Provision of essential drugs

Drugs and dentistry remain the only health services that are not covered by insurance plans, except for the elderly and those on
some form of income assistance. Since 1969 patent protection has been minimal, allowing generic drugs to be widely distributed. Prices have been correspondingly low. In 1987 the Government changed the legislation to increase patent protection, and this has led to widespread concern that drug prices will increase.

A bigger issue is the provision of dangerous drugs such as alcohol and tobacco. Tobacco is clearly the biggest modifiable risk factor in the Canadian population. The proportion of smokers in the population has been falling steadily for the past decade, although it has increased slightly among young women. Roughly 30% of the adult population now smoke. There has been steadily increasing protection for nonsmokers, by way of restricting smoking in public places and places of work. The Federal Government has several national programmes intended to control smoking, including one intended to produce a generation of Canadian non-smokers. Legislation has been adopted that will severely curtail tobacco advertising, and is being fiercely opposed in the courts by the tobacco industry. Alcohol programmes are also highly developed, but alcohol abuse remains a major health and social problem. The use of illicit drugs (marijuana, cocaine, narcotics, etc.) is also a significant problem.

Prospects for the future

It is clear that the traditional emphasis on health services has greatly improved access to care, but there is little evidence that further expenditure in this area will yield commensurate improvements in health. The recent emphasis on health promotion and on healthy public policy suggests a willingness to tackle the root causes of ill health. A broad consensus appears to exist regarding many aspects of social policy, e.g., the importance of universal social programmes and the "security net" of welfare programmes. It is to be hoped that this attitude will extend to healthy public policy initiatives.

The two greatest challenges relate to planning and implementation. A largely unplanned approach was satisfactory while the population was young and rich, but there has been no real sense of direction, and strains are increasingly apparent in
terms of cost increases, waiting lists, etc. Further progress in improving health will depend on willingness to undertake comprehensive data-based planning involving the health sector and related sectors. This would lead to development of an integrated regional or district health system, in which the parts relate effectively to one another. Health promotion and disease prevention would receive higher priority. Greater control by the community would be essential, to ensure responsiveness to community needs. In the longer term, greater attention must be paid to the impact on society of new technology (especially in communications), pollution, and changes in the nature of work and the family.

The second challenge is the implementation of the ideas that are being discussed. Health promotion in Canada has been long on rhetoric but short on action. The ideas must now be thought through, their policy implications identified, appropriate legislation introduced, and programmes established. Demonstration projects may help.

If the experience of the best districts is to be duplicated across the nation, it will be necessary to allow communities more flexibility in working out their own solutions and to provide them with the resources and support needed to pursue their objectives. The nongovernmental organizations are a powerful resource. Continued emphasis on improving the lot of economically depressed areas and populations will be required. The largest problem is clearly the health of the native populations. It is well recognized that health services will not provide the answers to their health problems, although a recent decision to turn over the management of such services to the communities themselves is a promising step. In addition, the deeper social problems have proved quite intractable. These populations present both a challenge and an opportunity for health promotion in its widest sense.

Traditionally, the emphasis in the health sector in Canada has been on health services, and an impressive array of institutions and professionals has been developed along with a comprehensive insurance plan. However, these resources have not been well coordinated, and there has been little emphasis on the determinants of health. Emphasis on health promotion began with the publication of *A new perspective on the health of Canadians* in 1974, which prepared the way for the health-for-all movement. That movement now enjoys considerable support in
Canada, especially in the public health sector and in the policies of the Federal Department of Health and several provincial departments. Toronto is in the vanguard of developments at the local level, but exciting things are happening in many other places. Thus the picture is very positive, but greater attention must be paid to the planning and coordination of programmes and to the implementation of health-for-all concepts.

* *

China has a quarter of the world’s population, so the effectiveness of the health system there has a direct bearing on the attainment of the global goal of health for all by the year 2000. Since 80% of China’s people live in rural areas the primary health care services give priority to these areas, to which the Chinese Government has attached great importance ever since the founding of the People’s Republic in 1949.

Adhering to the principles of putting prevention first, uniting Western medicine and traditional Chinese medicine, and integrating health care with mass campaigns, China has engaged in the building up of health institutions, the development of medical services, and the training of professionals. Programmes have been initiated in the prevention of communicable diseases, maternal and child health, the control of endemic diseases, and the launching of patriotic health campaigns in the whole country. In the course of economic development, the infectious and endemic diseases that seriously threaten the people’s health have been eliminated or controlled, and this has resulted in a notable improvement in the health status of the population—a radical change from the situation that existed previously.

During his visit to China in 1975, Dr Halfdan Mahler, the then Director-General of the World Health Organization, spoke highly of China’s rural health services, which he thought it would be helpful to introduce to the outside world. Following the Declaration of Alma-Ata in 1978, WHO designated as collaborating centres the primary health care centres at Conghua County of Guangdong Province, Jiading County of Shanghai Municipality, and Yexian County of Shangdong Province for the dissemination of China’s experiences and the training of
medical officers from Third World countries. In June 1982, an interregional seminar on primary health care was held in Yexian, in which senior officials and ministers from 13 countries participated to discuss the experiences gained in rural China.

A further collaborating centre on primary health care was designated in Inner Mongolia, where a workshop was sponsored by WHO in the summer of 1986 for the training of medical officers from the Third World. Among other meetings held in China were a WHO interregional seminar at Conghua in 1985 on the role of traditional medicine in primary health care, a seminar at Beijing University in November 1986 on ways of attaining health for all by the year 2000, and a meeting of directors of collaborating centres on primary health care at Xiaoxian in November 1987.

**The main achievements in primary health care**

The rising health status of the Chinese people can be illustrated through a comparison of some principal health indices in 1949 and 1985, as provided in Table 1.

By implementing the principles of putting prevention first and controlling diseases in a phased manner, the serious infectious and endemic diseases have been effectively brought under control.

In the 1950s, concerted efforts were made in this respect, leading to the eradication of smallpox and dramatic reductions in plague, cholera, schistosomiasis, malaria, and endemic goitre. Work has continued on the control of endemic and frequently

<table>
<thead>
<tr>
<th>Year</th>
<th>Infant mortality</th>
<th>Maternal mortality</th>
<th>Average life expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(per 1000 live births)</td>
<td>(per 10 000 deliveries)</td>
<td>(years)</td>
</tr>
<tr>
<td>1949</td>
<td>25</td>
<td>200</td>
<td>120</td>
</tr>
<tr>
<td>1985</td>
<td>6.37</td>
<td>25.1</td>
<td>14</td>
</tr>
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</table>
Table 2. Incidence per 100,000 population of four infectious diseases in 1959 and 1986

<table>
<thead>
<tr>
<th></th>
<th>1959</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphtheria</td>
<td>22.4</td>
<td>0.07</td>
</tr>
<tr>
<td>Pertussis</td>
<td>240</td>
<td>7.97</td>
</tr>
<tr>
<td>Measles</td>
<td>1432</td>
<td>18.9</td>
</tr>
<tr>
<td>Poliomyelitis</td>
<td>2.60</td>
<td>0.17</td>
</tr>
</tbody>
</table>

occurring diseases, with good results. Thanks to the immunization programme, the incidence of diphtheria, pertussis, measles, and poliomyelitis has been greatly reduced, as shown in Table 2.

The rural water supply before the founding of the People’s Republic in 1949 was inadequate in both quantity and quality, but by 1985 some 420 million out of the 800 million rural population had been provided with improved drinking-water, and tap-water had been made available to 30% of them.

A survey has shown that the intake of protein and energy has increased considerably from 1959 to 1982 (Table 3).

The government has devoted much attention to the building up of medical and health institutions and the training of health professionals to provide a solid foundation for the development of primary health care (Table 4).

Basic experiences in the development of primary health care

The key to the development of primary health care in China is the importance attached to health by the Communist Party and the Government. In the early 1950s they stressed the principle of

Table 3. Nutrition: average daily intake per person, 1959 and 1982

<table>
<thead>
<tr>
<th></th>
<th>Energy (MJ)</th>
<th>Protein (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>8.61</td>
<td>57</td>
</tr>
<tr>
<td>1982</td>
<td>10.38</td>
<td>67</td>
</tr>
</tbody>
</table>
Table 4. Number of health institutions, beds, and health professionals, 1949 and 1986

<table>
<thead>
<tr>
<th></th>
<th>No. of health institutions</th>
<th>No. of beds</th>
<th>No. of health professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1949</td>
<td>3,670</td>
<td>84,623</td>
<td>541,240</td>
</tr>
<tr>
<td>1986</td>
<td>203,139</td>
<td>2,562,502</td>
<td>4,445,919</td>
</tr>
<tr>
<td>Increase</td>
<td>55.4 times</td>
<td>30.3 times</td>
<td>8.2 times</td>
</tr>
</tbody>
</table>

orienting health work to the interests of workers, peasants, and soldiers. In the 1960s they issued a call to put the stress on the rural areas in health work, and that call is still regarded as an important guiding principle.

When primary health care activities were first developed in the 1970s, groups of experts and multidisciplinary committees were established. Both Party and Government placed this work on their agendas for constant consideration and integrated it into the socioeconomic development plan, ensuring its smooth development.

The “three-tier” medical service

The rural three-tier medical service network is composed of the medical and health institutions of the county, the town, and the village. It has been found appropriate to the rural situation, in which the areas are vast, the inhabitants are scattered, and medical and health services are inadequate.

Medical and health institutions at the county level not only act as training centres for health staff but also provide technical guidance. In the towns these institutions play a pivotal role in the organization of medical and health work and the development of urban primary health care services. The health centres in the villages act as a foundation of the entire system and undertake the great bulk of primary health care activities carried out in the country.

With the establishment of the three-tier network, health services have become both accessible and affordable. The attendance figures given in Table 5 show that 80% of outpatients and 52% of inpatients can be treated at the town and village
level. This is very convenient for the patients. Experience in the past 30 years shows that the three-tier network is preferably owned by the collectivity, but at the same time private practitioners are encouraged to play a supplementary role.

The decisive factor: training

The rural three-tier medical service network enables a medical contingent to take shape in the rural areas comprising the senior, intermediate, and primary medical workers.

Senior medical workers are those who have graduated from medical college and majored in medicine, public health, paediatrics, stomatology, or traditional Chinese medicine. They work mainly in the medical and health institutions at county level. A system of directional recruitment, training, and assignment has been adopted. A certain proportion of college enrolment is allocated to “directional” training, and the required academic standard is lowered a certain amount to allow admission of rural students. After their graduation, they are assigned to work in the areas from which they come. A 3-year intensified training course has been developed to meet the specific needs of rural areas, emphasizing clinical operations and knowledge of disease prevention. This type of training has been defined as a component of regular medical education and will be continuously improved so as to achieve a progressive raising of the standards of medical staff.

The intermediate medical workers are graduates from the secondary medical schools. They work at the county or town level as feldshers, nurses, midwives, laboratory technicians, and assistant pharmacists. The feldshers and midwives are assigned
to work mainly in the towns. A number of counties have established their own secondary medical schools to train professionals working in towns and villages.

The primary medical workers are selected from among local villagers. They have had a primary education, and on selection they receive a further 3–6 months’ training, though in some cases the training may last for a year. Born and brought up in the local areas and with a long and close association with the local community, they are enthusiastic about their work and welcomed by the local peasants. At the moment there are 1.2 million primary medical workers at the forefront of the rural health services. Some 700 000 of them have received refresher training and are granted a certificate of “rural doctor” after professional assessment by the health administration at county level or above. They are the mainstay of rural primary health care.

Putting prevention first

The principle of “putting prevention first” is at the heart of the health services in China. The patriotic health campaign is one way in which health activities are carried out by combining the efforts of different departments—agriculture, water conservation, culture, education, public health, etc.—as well as of the community. For instance, hygienic habits and customs can be gradually cultivated in the community through health education programmes, and environmental hygiene can be improved through the launching of activities to eliminate the “four pests” (flies, mosquitos, rats, and bedbugs) and to promote the “two controls and five improvements” (control of water sources and excreta: improvement of water wells, kitchen stoves, latrines, livestock shelters, and the environment). The incidence of endemic diseases and chronic diseases has been notably reduced by the immunization programme and the carrying out of endemic prevention activities. Schistosomiasis used to be prevalent in the south of the country with more than 11 million victims. However, after years of strenuous effort the provinces of Guangdong, Fujian, Jiangsu, and Guangxi and the municipality of Shanghai have been rendered largely free of schistosomiasis. Filariasis was prevalent in 864 counties and cities, but it has now been eliminated in 660 of them. Again, the number of
malaria victims has declined from the previous 30 million to the present 500,000, while endemic goitre, Ke-shan disease, and Kashin-Beck have been constantly declining.

Mobilization of funds

Health institutions serving a whole county are State-owned and are funded by a budgetary allocation from the State. Hospitals serving towns are publicly owned undertakings, with the State providing 60% of the budget. They are, however, independent accounting units assuming sole responsibility for their profits and losses. Health institutions in the towns are funded in various ways, some by the community, some by individuals, and some by a combination of the two.

Mutual help

The cooperative medical system instituted in the rural areas of China is a pioneering undertaking initiated by the people themselves. Basically it is a health insurance scheme that relies partly on funds from the community and partly on individual contributions. By this system, the patient pays only part of the medical fee incurred, and the amount paid by the individual changes as the economy develops. The system thus develops faster in areas where the collective economy is more advanced and the peasants are better off. It helps to provide the kind of medical services needed by the community and ensures a reasonable remuneration to the professionals working at grass-roots level. With the change in the rural economy that occurred in the late 1970s, the cooperative medical care system was badly affected. Indeed, except in places where the economy was particularly advanced, it disintegrated.

In recent years, as living standards have improved, a number of experiments have been tried out. Meishan and Jianyang in the Province of Sichuan have been selected as pilot counties for the health insurance scheme, and a number of counties in Henan, Hebei, and Shanxi Provinces have accepted the health insurance scheme covering specific expenditures—i.e., those for immunization, maternal and child health, and oral health, which have received a favourable response from the people. Ad hoc groups have been organized by the Ministry of Public Health to
study ways of reforming the rural medical care system to make it compatible with the new economic system in China.

Traditional medicine

Traditional Chinese medicine is the outcome of the Chinese people's experience in their struggle against disease over the centuries. It has its own theoretical basis and an accumulation of practical experience that is much appreciated by the people. Moreover, China is abundant in medicinal herbs, and their application has been found to be simple and effective. Chinese medicine thus deserves to play a full part in the development of rural primary health care.

The government has devoted much attention to traditional Chinese medicine, which has been undergoing rapid development in the 1980s, particularly with regard to the number of institutions in which it is practised (Table 6). Between 1952 and 1986, the number of hospitals offering traditional Chinese medicine increased 85 times and the number of beds 510 times.

Support from urban hospitals and the army

Urban hospitals are in general better equipped and staffed than those in the rural areas. It is therefore the constant policy of the Government to ensure that the urban hospitals support the rural services. They do this mainly by training professionals for work in the rural areas and by sending urban doctors to the rural areas to help raise the expertise of the professionals there. They also undertake cooperative activities with the rural health care units in manpower training and provide financial and material support.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of hospitals</th>
<th>No. of beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952</td>
<td>19</td>
<td>224</td>
</tr>
<tr>
<td>1980</td>
<td>678</td>
<td>49,977</td>
</tr>
<tr>
<td>1986</td>
<td>1,615</td>
<td>114,226</td>
</tr>
</tbody>
</table>
Support is also given by army units, mainly to the remote, underdeveloped areas and the minority nationalities. In 1985 and 1986, for instance, more than 1200 medical professionals from army units were dispatched to various provinces where they treated 1 130 000 patients, performed more than 40 000 operations, and responded to 4400 emergency cases. Of even greater significance was the training of professionals for hospitals in the towns. In addition, the army professionals established rules and regulations, and brought about a general improvement of medical institutions. Wherever they are sent they leave behind them improved and reinforced medical institutions in the rural areas, to the benefit of the local community.

Raising the level of management

In recent years, a number of seminars and workshops have been sponsored in China by the World Health Organization on managerial techniques. They have dealt with such subjects as the formulation of health strategy; the drawing up of programmes of primary health care; the establishment of health information systems; the establishment of targets for primary health care services appropriate to the local situation and capable of being evaluated; and the formulation of managerial procedures for the development of primary health care. The findings of these seminars have been widely disseminated. They have been of particular interest to the project counties and collaborating centres in China and will certainly be helpful in the further development of primary health care.

Legislation

In certain areas of China, laws and regulations governing primary health care services are being formulated. The experience gained from this exercise will lead to national legislation that will guarantee the development of primary health care services.

Future prospects

There are only 10 years left before the end of the century. People throughout the world are much concerned as to whether the
strategic goal of health for all by the year 2000 can be attained. I, as an individual, am not in a position to give an answer, but an analysis of the present situation in China shows the existence of favourable conditions that will greatly help in the attainment of the goal.

The socialist social system and the present policy of reforming and opening the country to the outside world provide a basis for a significant advance in China's socioeconomic development, which will reach a new height at the end of the century. The gross national product is expected to be four times that of 1980. This will greatly reinforce the development of primary health care throughout the country.

The government has committed itself to contribute to the attainment of the strategic goal and is making practical plans for its realization. The reform of China's health services will give fresh impetus to rural health care.

As was pointed out during a meeting of directors of public health bureaux held this year, the following two key points must be emphasized: preventive services and the training of professionals for the rural areas.

The collaborating centres and project counties established in China will provide the knowledge and experience needed to plan the future course of health development.

It is my conviction that so long as the country maintains its strenuous efforts the goal of health for all by the year 2000 is certainly attainable in China.
Egypt: winning in spite of economic problems

A. G. Khallaf
Formerly Undersecretary of State, Ministry of Health, Egypt

Egypt has probably the oldest system of central government in the world, dating back more than 4000 years. The new concept of decentralization was implemented in 1959 and was opposed by the central bureaucracy for almost two decades. By 1980, however, local administrations had begun to enjoy some power.

Taxes and other revenues are collected by the central Government and distributed each year to the country's 26 governorates. There is no separate budget at the district level.

The modern concept of health services started early last century. The first medical school was established in 1827 and a midwifery school the following year. The health system developed in the form of hospitals in the big cities, followed by health bureaux for infectious diseases and maternal and child health services. All these services were confined to the few cities in the country while rural Egypt, where more than 80% of the population lived, had no services of any kind.

The year 1942 thus represents a landmark in health care because it was then that Parliament created a rural health service. The concept was to establish a health unit for every 15,000 people, comprising integrated outpatient services covering health education, mother and child care, immunization (particularly against smallpox and diphtheria), the diagnosis and treatment of endemic diseases, and nutrition. Each unit had an inpatient section of 15–25 beds, particularly for the treatment of endemic and nutritional deficiency diseases. The system spread rapidly, and 222 units were in service within a decade.

In 1954, a more advanced programme was introduced, aimed at the total development of rural areas. The new units, basically
like the previous ones, were part of a complex that included an agricultural centre, a social centre, and a school. The whole complex was run by a board composed of directors of the units and local citizens. Growth continued to be rapid, and 315 of these new complexes were in service by 1961. Even so, the area served by each unit was large, and to reach a unit members of the public had to travel a distance of 15 km, on average. This was a serious disadvantage, and so a new kind of unit was introduced, providing only outpatient services. The capital cost was far less than the previous models, and it was possible to build 1800 of them by 1979.

The situation in urban areas was different. At the primary health care level, the services were not integrated and consisted of centres of three different kinds. First there were the maternal and child health centres, which catered for a population of 50,000–100,000. They offered the usual services to expectant mothers and in addition family planning facilities and child care up to school age, including immunization and nutrition. Then there were the school health services, which gave each pupil a full medical examination on entrance and after two and four years. The service included immunization. Finally there were the health bureaux, which were responsible for the registration of vital events, the control of infectious diseases, immunization, environmental health, and food hygiene.

Supporting these services were the hospitals. In each district there was a general hospital of 100–200 beds for secondary care, a tuberculosis dispensary, and sometimes a fever hospital. In the capital of the governorate there was a general hospital of 400–500 beds, usually offering secondary and tertiary care, together with a chest hospital and a fever hospital. In some governorates, there was also a university hospital.

**Situation on the eve of Alma-Ata**

**Primary health care services**

In rural areas in 1978, there were 2300 health units offering comprehensive primary health care services. Most people lived within 3 km of a unit except for 95 villages (representing 1.2% of the rural population) where the units were more than 5 km away.
One can therefore say that the rural areas were adequately covered by primary health care services.

In urban areas, primary health care was available in the form of 259 mother and child centres, 172 school health units, 382 health bureaux, and outpatient clinics at more than 186 hospitals. In other words, there was a reasonable network of health facilities in spite of their fragmentation.

Secondary and tertiary care

There were some 82,000 beds available in general and specialized hospitals. In each district there was at least one general hospital of 100–200 beds. It should be noted that the State operated 91% of these hospitals through the Ministry of Health, the universities, and other State agencies. The private sector owned and operated only 6.3%.

Manpower

At the time of the Alma-Ata conference, there were ten medical schools graduating between 4000 and 5000 physicians yearly, four dental schools graduating 1000 dentists, six schools of pharmacy graduating 1700 pharmacists, two high institutes of nursing graduating 120 nurses, 150 secondary technical nursing schools graduating 5000 nurses, and six health technical institutes graduating 1000 technicians (laboratory technicians, X-ray technicians, medical records clerks, dental technicians, and medical equipment maintenance technicians).

There was an average of one physician for every 1050 people, and one nurse for 1100 people. Thus, one can say that there was an adequate supply of health personnel.

Drugs, pharmaceuticals, and vaccines

Although the drug industry in Egypt started in 1939, it was only in 1962 that it became influential, with the establishment of the Organization of Drugs and Pharmaceuticals. Several drug companies, mostly state-owned, were established and by 1978 the national industry was meeting 82% of the national needs. By 1978, smallpox vaccine and BCG were being produced locally.
Vaccines against DPT, polio, and measles were being imported in bulk and repacked locally. Immunization against smallpox, diphtheria, tetanus, polio, tuberculosis, and measles was compulsory.

**Family planning**

Family planning was started by 1953 by voluntary organizations and women’s associations. This activity increased gradually, and by 1971 these bodies were operating 400 family planning units all over the country. The government adopted a family planning policy in 1965, and since then programmes have been implemented in virtually every health unit.

**The impact of the health-for-all policy**

When the health-for-all approach was adopted in 1977 and the Declaration of Alma-Ata was issued in 1978, Egypt was lucky to have a good network of primary health care facilities supported by reasonable secondary and tertiary institutions. The problem was not coverage but how to mobilize the available resources to attain the goal of health for all by the year 2000. What was needed was to find ways and means of making the health care system more effective.

Unfortunately, the Declaration of Alma-Ata came at a time of increasing economic difficulty and Egypt is still suffering today from severe economic constraints. The health sector, as usual, was the first to shoulder the burden. The share of the health sector from the total government budget during the decade 1966–76 was between 2.5% and 5%. This share was gradually reduced to 1% in 1987. In spite of these problems there has been a general improvement in health indices, as shown in Tables 1–3.

**Strengthening rural health services**

A project to strengthen rural health services was implemented with the help of a USAID grant between 1980 and 1985. Ten districts were chosen: three in Asyût, three in Daqahliya, two in El Faiyûm and two in Behera. The objective was to improve and
Table 1. Basic health information

<table>
<thead>
<tr>
<th></th>
<th>1978</th>
<th>1987</th>
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<tbody>
<tr>
<td>Population (millions)</td>
<td>39.8</td>
<td>49.6</td>
</tr>
<tr>
<td>Urban/rural (%)</td>
<td>44.5/55.5</td>
<td>43.9/56.1</td>
</tr>
<tr>
<td>Birth rate (per 1000)</td>
<td>37.4</td>
<td>39.3</td>
</tr>
<tr>
<td>Death rate (per 1000)</td>
<td>10.5</td>
<td>8.7</td>
</tr>
<tr>
<td>Rate of natural increase (per 1000)</td>
<td>26.9</td>
<td>30.6</td>
</tr>
<tr>
<td>Infant mortality rate (per 1000 births)</td>
<td>85.0</td>
<td>44.2</td>
</tr>
<tr>
<td>Physicians/10 000 populationc</td>
<td>3.8</td>
<td>7.3</td>
</tr>
<tr>
<td>Dentists/10 000 populationc</td>
<td>0.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Pharmacists/10 000 populationc</td>
<td>0.6</td>
<td>0.7</td>
</tr>
<tr>
<td>Nurses/10 000 populationc</td>
<td>6.7</td>
<td>8.4</td>
</tr>
<tr>
<td>Beds/10 000 population (MOH)</td>
<td>1.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Beds/10 000 population (All)d</td>
<td>2.1</td>
<td>2.0</td>
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</table>

<table>
<thead>
<tr>
<th>Tentative official figures.</th>
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<tbody>
<tr>
<td>Population figure does not include immigrants, estimated to be 2 250 000 in the general census of 1986.</td>
</tr>
<tr>
<td>Ministry of Health employees only.</td>
</tr>
<tr>
<td>All hospital beds in both public and private sectors.</td>
</tr>
</tbody>
</table>

Table 2. Life expectancy at birth

<table>
<thead>
<tr>
<th></th>
<th>1960</th>
<th>1980</th>
<th>1984</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>51.6</td>
<td>54.1</td>
<td>56.4</td>
</tr>
<tr>
<td>Female</td>
<td>52.8</td>
<td>56.8</td>
<td>58.2</td>
</tr>
</tbody>
</table>

Table 3. Hospital beds, 1978 and 1987

<table>
<thead>
<tr>
<th></th>
<th>1978</th>
<th>1987</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Ministry of Health</td>
<td>55 800</td>
<td>68.1</td>
</tr>
<tr>
<td>Universities</td>
<td>11 391</td>
<td>13.9</td>
</tr>
<tr>
<td>Other public sector</td>
<td>9 601</td>
<td>11.7</td>
</tr>
<tr>
<td>Private sector</td>
<td>5 113</td>
<td>6.3</td>
</tr>
</tbody>
</table>

| 81 905         | 100.0  |
| 98 344         | 100.0  |
upgrade the services through improvements in logistics and communications, the training of health personnel, improvements in management, and a more efficient delivery of services through a structured outreach programme.

Each village was divided into groups of 500 families. A nurse was made responsible for each group of families, and she had to pay home visits two days a week. These home visits were structured according to priorities—e.g., pregnant mothers, children at immunization age, children suffering from diarrhoeal diseases, acute respiratory infection, or endemic diseases.

Many programmes were tested through this project. Firstly, oral rehydration therapy proved, after two years of testing, to be so successful that it was adopted as the basis for the national programme on rehydration therapy, which started in 1983.

Immunization similarly proved to be very successful, so much so, in fact, that immunization of young married women was virtually 100%.

Finally, a programme for the diagnosis and early treatment of acute respiratory infections produced encouraging results. The lessons learnt have been of great use in designing a child survival project that is due to start shortly.

Information systems

A project on information systems was designed by the Egyptian Board of Health between 1981 and 1983. Initially, the Board identified several deficiencies in the health information system.

The time-lag between the entry of data and their presentation as meaningful information at headquarters could sometimes be measured in years, even for information as vital as infant mortality rate. Data were transmitted from the periphery to headquarters without feedback to the producers or even to the decision-makers at the intermediate level. The collected data were usually fragmented, incoherent, and lacking in accuracy and precision. Moreover the amount of data needed at district level was so huge that it could not be handled manually.

What was needed to overcome these deficiencies was strict control of data inputs based on previously identified data outputs, ease of operation and management, the ability to manipulate data into meaningful information in a reasonable time, and the easy transfer of information between producers and
users. These requirements called for a microcomputer with good storage capacity.

On the assumption that the health information system could be improved in this way, the Board of Health drew up a list of 27 items on which it was thought data should be collected. The nine most important were:

- registration of births, evaluation of family planning services, and child health activities in the unit;
- registration of deaths;
- maternal, infant, neonatal, and childhood mortality;
- schistosomiasis control;
- rheumatic fever and prevalence of streptococcal infections;
- tuberculosis prevalence;
- incidence of, and immunization rates for, measles, tetanus, diphtheria, and poliomyelitis;
- emergency medical services;
- utilization of hospital services.

The software for these programmes was prepared, the computer chosen and the system tested in five districts in El Faiyum. The results were impressive. Later the same system was tested in four other districts in Ismailia with equal success. The system will be adopted nationally as part of the child survival project.

Suez Canal Medical School

In March 1978, a conference on medical education took place at El Faiyum, attended by representatives of the Medical Syndicate, the Egyptian Medical Association, the Ministry of Health, all the medical schools in Egypt, and the Army Medical Corps. The conference emphasized the notion of producing physicians relevant to the needs of the health service.

At that time the founding Dean and Associate Dean of the Suez Canal Medical School were busy with the same question—the relevance of medical education to health needs. They identified the institutional goals of the school as follows:

- to produce physicians whose primary objective is to provide health care in the hospital and the community with major emphasis on primary health care;
— to relate medical education to the needs of society so that physicians would be able to diagnose and manage community health problems;
— to develop and implement, together with the Ministry of Health and other health care bodies, an integral system for health care delivery and health manpower development in the Suez Canal area and Sinai, bearing in mind the limits of national health expenditure in the foreseeable future and using regional health facilities as the focus for education and training;
— to develop programmes of postgraduate and continuing education;
— to develop research programmes that address primarily the actual health needs of the community.

The school adopted community-oriented, problem-solving, student-centred education. From the first week of their enrolment, students learn at the primary health care units in the area for two days a week. The staff also participate actively in the work of the health units and hospitals in the area. A similar method of education has been adopted by Menoufia Medical School, and the Alexandria and Asyût Medical Schools are experimenting with the approach. Other medical schools are adopting a wait-and-see attitude.

New approach to primary health care in urban areas

Health services in urban areas are fragmented between maternal and child health centres, school health services, health bureaux, and hospital outpatient services. Since 1978, a new approach was developed that depends on the construction of urban health centres, each serving 50,000 inhabitants. Since it was difficult to implement integrated comprehensive services, it was decided that the urban centre should comprise sections for maternal and child health care and school health, a health bureau, and clinics for dentistry, midwifery, minor surgery, and the treatment of common diseases. So far, 109 of these centres are operating, amounting to 20% of total needs by the year 2000.

Two of the centres were chosen to test a comprehensive integrated service, one in Port Said and the other in north Cairo. There is now a tendency to increase the number of centres adopting this kind of service.
Child survival project

A child survival project has been undertaken. It comprises four components: immunization against six major diseases, acute respiratory infections, nutrition, and child spacing. The first component was started two years ago, with the help of UNICEF. This component has been so successful that it has raised the number of immunized children from 30% to 90%. The other three components are now being implemented with support from USAID.

Comprehensive versus selective primary health care

Some programmes, namely oral rehydration therapy and immunization, have been emphasized lately in centrally controlled programmes. This raised the question of whether Egypt is shifting from comprehensive to selective primary health care. In fact, the choice is not wholly one or the other. The country already has a wide network of primary health care facilities, particularly in the rural areas. The new vertical programmes have been superimposed on the others. The emphasis takes the form of better logistics, special training in the programme components, and better management. Of particular importance is the provision of better information to the people through television, radio, and the press. The television campaign for oral rehydration therapy was an intelligent one. A famous Egyptian actress, with whom the ordinary Egyptian mother could identify, was the centre of the campaign and was a major factor in the success of the programme. Oral rehydration therapy is being phased out as a centrally controlled programme, but it will remain as one of the programmes of the health units.

Emphasis on certain programmes is sometimes necessary to obtain results over short periods. Thus, it was possible to halve the infant mortality rate and triple the percentage of immunized children.

In the particular circumstances of Egypt, such successes could not be achieved without the availability of a wide network of health services and a sufficient number of qualified health personnel. The additional input for these programmes was in the form of better logistics and communications, improvements in
the cold chain, the training of health personnel, better management, the use of the mass media to inform the public, and extra financial support from the government and donor agencies.

The difficulties facing Egypt

Economic constraints

Egypt has been suffering from economic problems since the late 1960s. However, the problem has been aggravated lately by a fall in oil prices (the main export), a fall in the revenues from the Suez Canal, and a fall in the revenues from Egyptian expatriates working in the Gulf countries. The situation has resulted in huge debts, a deficit in the balance of trade, and a deficit in the budget.

The consequence has been high inflation and a huge price increase in consumer goods and services. This burden is imposed on a population whose per capita gross domestic product is 568 Egyptian pounds (1985–86). The policies adopted by the Government in an attempt to deal with this situation are aimed at:

- improving the infrastructure, e.g., electricity supply, communications, roads, water supply, and sewage disposal;
- reclaiming desert land;
- rehabilitating industry, particularly in the public sector; and
- giving investment incentives to the private sector in the form of tax waivers and the construction of new industrial cities.

The Government has negotiated with the International Monetary Fund, the World Bank, and donor countries on the question of debts. The new economic adjustment policies impose a heavy burden on low-income groups. Social development is bound to suffer through the cutting of health and other social programmes. Food prices have risen fourfold over the last 10 years without an equal rise in incomes for a large section of the population. Equity in health services, which prevailed from 1960 to 1974, is already suffering.
Population trap

In 1907, the population of Egypt was about 11 million. By 1947 it had grown by 70% to 19 million. By 1986 it had grown a further 165% to over 50 million. The net growth during the past few years has been 2.7% annually. Although family planning started in 1953 and has been declared Government policy since 1965, the increase in population is continuing. The National Council for Population is headed by the President himself and comprises a group of influential ministers and experts.

Food supply and nutrition

Until 1974, Egypt had to import relatively little of its food, but after that year the situation worsened owing to population growth and freedom to import. During the 1982-87 plan, the country became self-sufficient in poultry, beans, and lentils. It is expected that over the next five years conditions will improve because of better seeds, irrigation, greater use of pesticides, and an ambitious programme of land reclamation from the desert, which covers 96% of the country. It is hoped to increase the agricultural land area from its present 2.5 million hectares to some 3.3 million hectares by the end of the century, by which time the country should be largely self-sufficient in food.

Water supply and sewerage

The 1986 census shows that dwellings with access to clean water through public networks amount on average to 73.1%. In urban areas the figure is 92.4% and in rural areas 55.9%.

In 1979, proper sewage disposal through public sewerage systems was available to 45% of the urban population. The rest used pit latrines. For rural inhabitants, pit latrines were, and still are, the main method of sewage disposal.

Provision of essential drugs

The local production of drugs, mainly by public-sector companies, used to meet over 80% of local needs. During the last 10 years, however, difficulties have arisen.
The national drug companies needed to modernize their factories, and this problem was solved by a loan from the Government of Kuwait. The prices of drugs were raised in 1977 and then again in 1986, 1987 and 1988. The reason was the rise in price of raw materials on the international market and the devaluation of the Egyptian pound. However, the prices of pharmaceuticals in Egypt are still much lower than on the international market.

Drugs used to be produced by 10 public-sector companies, two private-sector companies (Hoechst and Faizer) and one joint venture between the public sector and a Swiss firm (Farma). Lately, however, six more private companies have started to operate in the country.

This year, the Ministry of Health stopped importing 129 items because of the availability of equivalent items produced locally. It has also issued a list of essential drugs, and is now studying the question of introducing generic names.

Control of endemic diseases

Endemic diseases have been of concern to health authorities in Egypt for a long time. They occur mainly in rural areas. The efforts made over the past 40 years have resulted in a drop in the prevalence of ancylostomiasis to 1% and a drop in malaria prevalence to 1%.

Renewed efforts are being made to control schistosomiasis, the main endemic disease in Egypt. Infected people have been treated en masse, using meprobamate against *Schistosoma haematobium* in Upper Egypt and praziquantel against *Schistosoma mansoni* in the Nile Delta.

Molluscicides have been applied in El Faiyum since 1968, in Middle Egypt since 1977, and in Upper Egypt since 1980. In El Faiyum, the prevalence of schistosomiasis dropped from 45.7% in 1968 to 15.1% in 1981. In Middle Egypt, the prevalence dropped from 29.4% in 1977 to 11.1% in 1981.

Health education is conducted systematically in the form of information to the public at large through mass media and posters and the work of the health team. It is hoped to arouse the interest of the people and induce them to change their habits. A special effort is being made to inform schoolchildren on ways of avoiding and controlling the disease.
Management of common diseases

The management of both common and chronic diseases is still inadequate at the primary health care level. This is due partly to inadequate laboratory testing for diagnostic purposes and partly to an inadequate supply of drugs. These failings are undermining the reputation of the primary health care units in the eyes of the public so that people tend to bypass these units and go direct to the hospital. The units then become underutilized.

More technological devices should be available in primary health care facilities, in the form of simple kits for essential laboratory tests. They are already available in some of the new urban centres, and their use could be greatly extended. Reliable and easy-to-use diagnostic techniques for communicable diseases, such as enzyme immunoassays, could be very helpful.

Education

The adult literacy rate in 1986 was 49.8%, but literacy is higher among women (62%) than among men (38%). In his letter to the new Prime Minister in 1987, the President identified education as a prime priority. Education has suffered from a lack of schools, crowded classes, lack of teachers, and the didactic teaching methods generally in use. The new Minister of Education drew up an ambitious plan for improving education. New resources have been allotted and a national conference held. Some measures have already been taken with regard to curricula, books, and examination methods.

Community participation

Community participation has mostly been in the form of donating land for health facilities and sometimes participating in construction costs. The involvement of the public in planning and administration is limited to the elected local councils. Lately, the Government has been asking people to share in the cost of their health care. Already 25% of hospital beds in Government hospitals are being run on a fee-for-service basis. The fees are, however, much lower than in private hospitals.

Lack of community involvement in health care is one of the major maladies of the health system. However, the situation is
now changing in this respect. People are beginning to ask for more involvement though not necessarily in the right direction. But it is a change for the better, and through a dialogue between health personnel on the one hand and the people on the other, priorities could be identified and more enthusiasm generated.

Management of the health services

Management is probably the weakest point in the health service. Doctors will not accept non-doctors as managers. The compensation offered by the Government to physicians to be full-time managers (i.e., not to engage in private practice) is too low to attract them.

A study conducted in 1980 by the Board of Health revealed that of 135 district hospitals only 65 were managed by full-time physicians. The rest were managed on a part-time basis, with the hospital director also running a private surgery.

The problem is not only in numbers but also in quality. Most of the present managers have not been trained for the job. Such skills as planning, monitoring, evaluation, and determination of cost-effectiveness are very weak and depend on personal experience and intuition.

The Ministry of Health is increasing its grants for post-basic studies in community medicine and public health either locally or abroad. Grants from donor agencies for such studies are also available. This should improve management capabilities.

In spite of the economic difficulties, the Government is studying the wage structure for full-time physicians who opt for management.

Prospects for the future

The current five-year plan, which ends in 1992, is crucial in shaping the future. These years are expected to be hard in terms of economics. What is encouraging is that there is full awareness of the main problems.

Already efforts are being made to reclaim desert land for agriculture and to increase land yields by the use of new technology. In industry 60% of the public-sector factories have been
modernized, and there is increased investment in private-sector factories. The revenue from tourism has more than doubled over the past year and there are good prospects of further expansion. Most of the expenditure of the last five-year plan was on improving the infrastructure—electricity, roads, telephones, telexes, railways, water supply, and sewage disposal.

In spite of the decrease in government financing for health during the past few years, new campaigns were launched that have proved outstandingly successful. These include the national programme of oral rehydration therapy adopted in 1983 and the national programme of immunization against the six major diseases, which started in 1985. The child survival project, which is due to be implemented shortly, is another major step in the right direction. These positive examples indicate clearly the desire and effort to address the major health problems and to fight for health for all.

On the other hand, mistakes have been made. Five huge tertiary-care hospitals have been built or are being built in Greater Cairo alone—Ein Shams University Hospital, Cairo University Hospital, and three hospitals for the Cairo Organization for Curative Services, a government body that offers facilities on the basis of fee for service.

Again, a huge sum was spent by the Ministry of Health in establishing a renal dialysis unit in every general hospital in the country and in some of the district hospitals as well. The average life span of patients treated is two years, and no programme for kidney transplant is available.

However, it is expected that over the next five years the country will achieve good results in the following areas: infant mortality rate, under-five mortality rate, maternal mortality rate, nutrition (particularly of children at weaning age), maternal and child health services, and services to schoolchildren.

It is not expected that the Government will increase the health budget in real terms, but it is receptive to the idea of people sharing in the cost of the health care they receive in government facilities. These facilities include 91% of bed capacity, 3500 primary health care units in both rural and urban areas, all the medical, dental, pharmaceutical, and nursing schools and the health technical institutes, most of the drug industry, and the means of vaccine and sera production. In addition the Government is the major employer of health personnel.
This huge system, if properly financed by people's participation, can offer them better service. There are two ways in which people can participate in health financing. First they may do so through health insurance schemes. The Health Insurance Organization already covers 3,388,000 beneficiaries, constituting 85% of government employees and 29% of industrial workers. In the next few years 10 million students will also be covered. The second way in which people can contribute is through fee for service. Already 25% of the beds in general hospitals are being financed in this way.

It is expected that over the next few years primary health care facilities will offer certain afternoon and evening shifts on a fee-for-service basis. In this way the primary health care facilities will be able to fulfil most of the needs of the community.

The health-for-all strategy will not stop by the year 2000. It has to go on to address health problems that have not been solved and to meet the new problems that may arise. With the activities already started in Egypt it is expected that, by the year 2000, proper sewage disposal for all urban areas will be complete, a clean water supply will be available to the entire population, the Nile and its branches will be protected from industrial effluents and pesticides, population growth will be under control through public awareness and the participation of women in family planning, the country will be nearly self-sufficient in food owing to the reclamation of 840,000 hectares of land from the desert, infectious and endemic diseases will be completely under control and life expectancy at birth will be over 60 years.
Ethiopia: the course is charted

Getachew Tadesse
Vice-Minister of Health,
Addis Ababa, Ethiopia

The present health policy of Ethiopia, which places great importance on the provision of essential health care to the people, originated from the National Democratic Revolutionary Programme of 1976. With the recent formation of the Republic has come an improved health care programme for the people. All the active measures that have been taken to improve the life of the people of Ethiopia during the 15 years since the revolution have aided the general socioeconomic development of the nation.

The health policies of the Government are based on the concept of primary health care, as formulated at the Alma-Ata Conference in 1978, with the objective of health for all by the year 2000. Some concrete actions have been undertaken to extend health services to the rural areas through the expansion of health stations and health centres and through the development of different types of health manpower, including primary health workers. However, in spite of the tremendous effort that has been made to implement primary health care, the Government’s objectives have not yet been met. The main obstacles are natural and man-made calamities.

As we analyse the various experiences we have accumulated, it becomes apparent that there are quite a number of problems that need to be solved. Nevertheless, the achievements attained so far cannot be ignored. The organization of the people within their respective units, such as trade unions and professional associations, is a milestone in the history of the revolution. These organizations and unions are well placed to implement an integrated social and economic development plan. The health organizations are well supported by the most important strategic instrument of primary health care—appropriate science and technology. Even though there is still a lot to be
done to bring the public health movement closer to the people, we can attest to the tremendous results achieved so far. At the same time we believe that there is always room for improvement.

Our tactics should be seen as part of a continuous process of action and development rather than as manifestations of a few ad hoc vertical programmes, which could give the illusion that we are repeating the same failures. Our strategies and objectives are based on:

— improved health system organizational structures,
— improved management processes,
— the realization of community participation through active involvement, and
— intersectoral collaboration and integration.

The development of primary health care in turn depends on:

— the appropriate use of health manpower, aided by acceptable and affordable science and technology,
— the appropriate use of materials through all stages of production, procurement, purchase, storage, and distribution, and
— appropriate financial management.

Financial resources can come from government funding; from direct payment for services by the consumer, and from donations from international and nongovernmental organizations. These resources must be properly used to realize the true principles of primary health care, the goal of which is self-reliance and the freeing of people from dependence on external support. Contributions from outside the country should be used as seed money. All financial resources, regardless of their origin, should be made to serve the purpose of primary health care. In turn, progress in health should contribute to the general development of the nation.

The real hope for change will come when the commitment and concern of the Party and Government are matched by the enthusiasm of the people. The ability of health workers to arouse this enthusiasm is at present being tested in the district health management programme. Much depends on our success in promoting greater change, through the use of agents of change whose motives are based on putting the community first, not the individual.
The development of health care in Ethiopia

In the development of health services in Ethiopia, the problems have been mainly those of organizational weakness, failure to use timely, feasible, and appropriate technology, and inappropriate training and inefficient utilization of health personnel.

The first medical care introduced into Ethiopia in the sixteenth century was meant only for members of the royal family until the establishment of the first hospital in Addis Ababa in 1896. When health services were instituted they were available only in a few urban centres.

A Directorate of Health was established in the Ministry of the Interior in 1901, but the funds allocated to it were small. The first health legislation was promulgated in 1947, charging the government with responsibility for the health of the people. A year later, a separate Ministry of Health was established to be responsible for the promotion of public health in the Empire.

The first health training institution for nurses was established in 1947. In the mid-1950s the Gondar Public Health College was founded to provide training for a basic health services team composed of a health officer, a sanitarian, and a community nurse. Teams of this kind formed the basis for rural health services development for the next two decades. Although the programme was discontinued before its impact was fully known, there can be no doubt that it provided the core of public health personnel, even to the present time.

It was not until the launching of the second five-year development plan in 1963 that the first national policy and strategy for health were formulated. This envisaged the expansion of a decentralized basic health services network, with emphasis on integrated preventive and curative services. It was during this plan that a malaria eradication programme was launched. This period was also marked by significant international assistance to the health sector, but the achievements were rather modest.

The third five-year development plan (1968–73) continued to pursue the same aims but with few achievements by the end of the period. Similarly the fourth plan, for 1974–79, continued to emphasize the importance of public health services and aimed to raise the coverage of basic health services from the 1974 level of 15% to 43% by 1979. However, in 1974, the revolution erupted, bringing with it the National Democratic Revolutionary Pro-
gramme and a major reshaping of priorities and action for health development.

The importance of the National Democratic Revolutionary Programme to health is due as much to its impact on the political, social, and economic determinants of health as to its impact on the health sector itself. For instance, the rural land proclamation giving peasants full rights over the land they use, and the efforts to eradicate illiteracy have positive implications for health.

Health policy has been reformulated to emphasize disease prevention and control, rural health services, self-reliance, and community involvement in health activities. These policies have been reinforced by the adoption of primary health care as a strategy for achieving the social goal of health for all by the year 2000. The progress achieved since the revolution has been satisfactory, but could have been even better had certain weaknesses in the health system been remedied, as this chapter will indicate. The current priorities, however, do reflect to some extent the requirements of the ten-year perspective plan for the health sector (1985–94) with regard to planning, implementation, and the regular following up of health activities. The value of developing a simple evaluation mechanism is undeniable.

The health situation in Ethiopia

Ethiopia has a population of 47 million, of which 40% are under 15 years of age and 20% under 5 years. The crude birth rate is 46.9 per 1000 population, and the crude death rate 18.4 per 1000, giving a population growth rate of 2.9% per annum. Infant mortality is 144 per 1000 live births. Life expectancy is low—only 46 years—owing to excessive deaths among young children and to the high mortality caused by communicable diseases combined with nutritional deficiencies.

Morbidity data for some common diseases in Ethiopia are given in Table 1 for the year 1986. They are typical of the figures observed over the previous four years. In addition to these diseases there are also problems with hypertension, diabetes, mental and neurological afflictions, and liver diseases. Among health problems for which planned measures are lacking are occupational hazards, dental disorders, injuries, and malignancies.
Table 1. Morbidity rates for some common diseases, 1986

<table>
<thead>
<tr>
<th>Disease</th>
<th>Morbidity rate (per 100,000 population)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Waterborne and foodborne diseases</em></td>
<td></td>
</tr>
<tr>
<td>Shigellosis and invasive intestinal amoebiasis</td>
<td>1425</td>
</tr>
<tr>
<td>Typhoid fever</td>
<td>80</td>
</tr>
<tr>
<td>Viral hepatitis A</td>
<td>60</td>
</tr>
<tr>
<td>Ascariasis</td>
<td>880</td>
</tr>
<tr>
<td>Taeniasis</td>
<td>480</td>
</tr>
<tr>
<td>Acute poliomyelitis</td>
<td>2</td>
</tr>
<tr>
<td><em>Environmental contact diseases</em></td>
<td></td>
</tr>
<tr>
<td>Ancylostomias</td>
<td>150</td>
</tr>
<tr>
<td>Strongyloidias</td>
<td>30</td>
</tr>
<tr>
<td>Schistosomias</td>
<td>33</td>
</tr>
<tr>
<td>Tetanus</td>
<td>7</td>
</tr>
<tr>
<td><em>Airborne diseases</em></td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>500</td>
</tr>
<tr>
<td>Measles</td>
<td>30</td>
</tr>
<tr>
<td>Pertussis</td>
<td>43</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>1</td>
</tr>
<tr>
<td>Mumps</td>
<td>24</td>
</tr>
<tr>
<td>Varicella</td>
<td>5</td>
</tr>
<tr>
<td>Meningococcal meningitis</td>
<td>4</td>
</tr>
<tr>
<td><em>Sexually transmitted diseases</em></td>
<td></td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>806</td>
</tr>
<tr>
<td>Primary syphilis</td>
<td>83</td>
</tr>
<tr>
<td>Other syphilis</td>
<td>24</td>
</tr>
<tr>
<td>Chancroid</td>
<td>122</td>
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<tr>
<td>Chlamydial lymphogranuloma</td>
<td>81</td>
</tr>
<tr>
<td>Granuloma inguinale</td>
<td>8</td>
</tr>
<tr>
<td><em>Vectorborne diseases</em></td>
<td></td>
</tr>
<tr>
<td>Malaria</td>
<td>1135</td>
</tr>
<tr>
<td>Relapsing fever</td>
<td>47</td>
</tr>
<tr>
<td>Typhus fever</td>
<td>37</td>
</tr>
<tr>
<td>Onchocercias</td>
<td>55</td>
</tr>
<tr>
<td>Leishmaniasian</td>
<td>3</td>
</tr>
<tr>
<td><em>Nutritional deficiency diseases</em></td>
<td></td>
</tr>
<tr>
<td>Marasmus and kwashiorkor</td>
<td>260</td>
</tr>
<tr>
<td>Goitre</td>
<td>40</td>
</tr>
<tr>
<td>Anaemia</td>
<td>280</td>
</tr>
<tr>
<td><em>Other diseases</em></td>
<td></td>
</tr>
<tr>
<td>Leprosy</td>
<td>10</td>
</tr>
<tr>
<td>Trachoma</td>
<td>280</td>
</tr>
<tr>
<td>Bronchial asthma</td>
<td>210</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>100</td>
</tr>
</tbody>
</table>
Unfortunately, no community-based studies are being carried out, and there is as yet no continuous surveillance of morbidity and mortality patterns. Indeed, Ethiopia at present lacks compulsory registration of births and deaths.

Since 1974 much work has been done on improving water supplies; 1260 springs have been protected and nearly 125,000 have been cleaned, benefiting over 38 million people. A further 2.5 million people have benefited from the protection of wells. Over 1.7 million latrines have been constructed. However, in the provision of piped water supplies progress has been slower. Only 8.4% of the urban population and 9.6% of the rural population receive an adequate supply of piped water.

There has been a steady expansion in the provision of community health services. Before the revolution only 15% of the population was covered while today the figure is 45%. Between 1978 and 1987 the number of health stations grew from 1152 to 2095 and the number of health centres from 117 to 159. The number of hospitals has remained constant at 86, but the number of hospital beds has risen from 8808 to 11,935. Between

Nutrition demonstration during a prenatal follow-up programme at a community health post.
1979 and 1987 the number of women receiving antenatal examinations rose from 11% to 36% and the number of children under 5 years of age who were seen by a health worker rose from 10% to 22%. In 1981 some 3.8% of children under 2 years of age were immunized against measles, and by 1987 this figure had risen to 10.2%. Over the same period the number of women receiving tetanus toxoid vaccination rose from 1% to 4.8%.

Table 2 shows the maternal and child health services and the family planning services provided in 1986 and those planned for 1991.

**Current health activities**

Most current activities are curative in nature and are offered in clinics, health centres, and hospitals. The actual distribution of resources, whether financial, human, or material, is not easy to assess, but there are persistent complaints of inadequate services, shortage of manpower, and lack of finance.

In spite of the concentration on curative medicine, a number of public health programmes have been carried out in recent years, as shown in Table 3.

These achievements were not general throughout the country, however, but occurred in a few limited areas of regions with an adequate health infrastructure.

While there is a wealth of information from a variety of sources on specific health problems, there is little that represents the country as a whole. However, it is apparent that there is much room for improvement in the implementation of primary health care.

**Table 2. Maternal and child health and family planning services, present and projected**

<table>
<thead>
<tr>
<th>Service</th>
<th>1986 Planned</th>
<th>1986 Achieved</th>
<th>1991 Planned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal care</td>
<td>494,700</td>
<td>770,480</td>
<td>2,600,000</td>
</tr>
<tr>
<td>Delivery attendance</td>
<td>310,300</td>
<td>143,066</td>
<td>2,400,000</td>
</tr>
<tr>
<td>Family planning</td>
<td>392,144</td>
<td>458,005</td>
<td>430,000</td>
</tr>
<tr>
<td>Health care for children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>up to 5 years of age</td>
<td>1,727,900</td>
<td>1,610,213</td>
<td>9,300,000</td>
</tr>
</tbody>
</table>
Table 3. Public health programmes implemented 1984-87

<table>
<thead>
<tr>
<th></th>
<th>1984-85 Achieved</th>
<th>% of target</th>
<th>1985-86 Achieved</th>
<th>% of target</th>
<th>1986-87 Achieved</th>
<th>% of target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Malaria</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of people protected</td>
<td>2557 900</td>
<td>80</td>
<td>3007 300</td>
<td>84</td>
<td>3567 600</td>
<td>97</td>
</tr>
<tr>
<td><strong>Immunization</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of adults vaccinated</td>
<td>1 100</td>
<td>94</td>
<td>1 700</td>
<td>112</td>
<td>2 700</td>
<td>100</td>
</tr>
<tr>
<td>No. of children vaccinated</td>
<td>551 300</td>
<td>96</td>
<td>648 000</td>
<td>88</td>
<td>234 700</td>
<td>52</td>
</tr>
<tr>
<td><strong>Environmental health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Springs protected</td>
<td>228 000</td>
<td>8</td>
<td>262 000</td>
<td>9</td>
<td>244 000</td>
<td>8</td>
</tr>
<tr>
<td>Pit latrines built</td>
<td>289 400</td>
<td>48</td>
<td>286 800</td>
<td>48</td>
<td>222 600</td>
<td>56</td>
</tr>
<tr>
<td><strong>Maternal and child health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antenatals</td>
<td>306 200</td>
<td>78</td>
<td>286 100</td>
<td>58</td>
<td>385 900</td>
<td>71</td>
</tr>
<tr>
<td>Under fives treated</td>
<td>786 400</td>
<td>57</td>
<td>716 800</td>
<td>42</td>
<td>870 000</td>
<td>58</td>
</tr>
<tr>
<td>Deliveries attended</td>
<td>90 600</td>
<td>29</td>
<td>143 100</td>
<td>46</td>
<td>130 200</td>
<td>31</td>
</tr>
<tr>
<td><strong>Patient visits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatients</td>
<td>14 961 500</td>
<td>81</td>
<td>17 824 300</td>
<td>88</td>
<td>20 859 100</td>
<td>100</td>
</tr>
<tr>
<td>Inpatients</td>
<td>183 400</td>
<td>92</td>
<td>183 800</td>
<td>61</td>
<td>216 900</td>
<td>72</td>
</tr>
</tbody>
</table>

Health care throughout the country. There is a need to expand the coverage of the population, particularly through making better use of human resources both within the health services and in the community.

The allocation of resources

It has been said that the “litmus test” of commitment to primary health care is the change in allocation of resources in its support. In Ethiopia, taking the health budget of 1978 as a base of 100, the allocations up to 1987 were as shown below:

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td>100</td>
<td>104</td>
<td>115</td>
<td>129</td>
<td>156</td>
<td>174</td>
<td>181</td>
<td>201</td>
<td>199</td>
<td>213</td>
</tr>
</tbody>
</table>
Thus one can see that within 10 years the allocated budget has more than doubled.

Another useful indicator of resource utilization is that of distribution by geographical area. In Ethiopia there have been marked differences between the regions in this respect. Some have received two or three times the per capita budget allocated to the poorest regions, and in Addis Ababa the expenditure per head has been 21 times higher. The ten-year plan proposes to reduce this difference.

The distribution of budget allocations between primary, secondary, and tertiary levels of the health system is another important indicator of primary health care policy implementation. However, there are difficulties both in defining the costs that are to be included in primary health care and in knowing what is an appropriate balance between the different levels. The distribution of the budget among major types of health institutions in 1987 is shown in Table 4.

Ethiopia has been fortunate in having received substantial financial and technical support for the health sector from a number of countries. While this support is much appreciated, it must be recognized that it is often directed to very specific

<table>
<thead>
<tr>
<th>% of operational budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Health headquarters</td>
</tr>
<tr>
<td>Training institutions</td>
</tr>
<tr>
<td>Health institutions in Addis Ababa</td>
</tr>
<tr>
<td>Regional and rural hospitals</td>
</tr>
<tr>
<td>Regional health stations and health centres</td>
</tr>
<tr>
<td>Ministry of Health central garage</td>
</tr>
<tr>
<td>National Health Research Institute</td>
</tr>
<tr>
<td>Contribution to Red Cross</td>
</tr>
<tr>
<td>Regional health department</td>
</tr>
<tr>
<td>Malaria control programme</td>
</tr>
<tr>
<td>Ethiopian Nutrition Institute</td>
</tr>
<tr>
<td>Expanded Programme of Immunization</td>
</tr>
</tbody>
</table>

100
objectives and limited projects. The support provided in this way may sometimes lead to a greater interest in specific programmes at the expense of the general health service. Clear policies and careful planning are necessary to ensure that support is used only for activities that are directly in line with national priorities.

Manpower development

During the past decade the numbers of doctors, nurses, and health assistants have increased dramatically, as may be seen from Table 5. In 1979 there were only four doctors in the whole country, but by 1987 there were 320. Nurses have almost quadrupled in number, and health assistants have more than doubled. Other categories of health personnel, however, have increased only slowly, if at all. Generally it may be said that there are still far too few health workers and a further effort is needed to augment their numbers.

In the meantime reliance continues to be placed on traditional birth attendants for the care of mothers during childbirth, and it has become necessary to look to another important group for the provision of health services—the traditional medical practitioners, known as *wegeshas* and *awakis*. It is possible that 80% of the population consult such practitioners because of their accessibility and cultural acceptability.

Problems and critical areas for action

So far, I have tried to assess the general health system of Ethiopia; it is now time to consider the strengths and weaknesses of the present organization, which is in a process of progressive development.

First and foremost among the sources of strength is the strong policy commitment at all levels of government to primary health care, to its basic principles of equity, community involvement, and intersectoral collaboration, and to its emphasis on preventive approaches.

Of almost equal importance is the strong community infrastructure that exists for local involvement in development
<table>
<thead>
<tr>
<th></th>
<th>Doctors</th>
<th>Pharmacists</th>
<th>Nurses</th>
<th>Pharmaceutical technicians</th>
<th>Laboratory technicians</th>
<th>X-ray technicians</th>
<th>Sanitarians</th>
<th>Health assistants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>143</td>
<td>65</td>
<td>46</td>
<td>99</td>
<td>85</td>
<td>35</td>
<td>25</td>
<td>321</td>
</tr>
<tr>
<td>1979</td>
<td>142</td>
<td>81</td>
<td>142</td>
<td>179</td>
<td>81</td>
<td>36</td>
<td>24</td>
<td>550</td>
</tr>
<tr>
<td>1980</td>
<td>321</td>
<td>327</td>
<td>252</td>
<td>399</td>
<td>279</td>
<td>42</td>
<td>24</td>
<td>390</td>
</tr>
<tr>
<td>1981</td>
<td>421</td>
<td>277</td>
<td>251</td>
<td>401</td>
<td>341</td>
<td>44</td>
<td>24</td>
<td>490</td>
</tr>
<tr>
<td>1982</td>
<td>386</td>
<td>277</td>
<td>251</td>
<td>401</td>
<td>341</td>
<td>44</td>
<td>24</td>
<td>490</td>
</tr>
<tr>
<td>1983</td>
<td>759</td>
<td>251</td>
<td>251</td>
<td>401</td>
<td>341</td>
<td>44</td>
<td>24</td>
<td>490</td>
</tr>
<tr>
<td>1984</td>
<td>1293</td>
<td>386</td>
<td>277</td>
<td>401</td>
<td>341</td>
<td>44</td>
<td>24</td>
<td>490</td>
</tr>
<tr>
<td>1985</td>
<td>1526</td>
<td>327</td>
<td>252</td>
<td>421</td>
<td>351</td>
<td>46</td>
<td>24</td>
<td>490</td>
</tr>
<tr>
<td>1986</td>
<td>1422</td>
<td>277</td>
<td>252</td>
<td>401</td>
<td>341</td>
<td>44</td>
<td>24</td>
<td>490</td>
</tr>
<tr>
<td>1987</td>
<td>320</td>
<td>327</td>
<td>252</td>
<td>401</td>
<td>341</td>
<td>44</td>
<td>24</td>
<td>490</td>
</tr>
</tbody>
</table>

Table 5. Health manpower development, 1978 to 1987

Achieving Health for All by the Year 2000
activities, including the peasants' associations, the urban dwellers' associations, and other mass organizations such as the Revolutionary Ethiopian Women's Associations and the Revolutionary Ethiopian Youth Associations.

Primary health care is able to depend on well-established traditions of rural public health activities, with a core of experienced personnel at present working throughout the country in malaria and leprosy control projects and in health centres and regional health services.

Another positive point is the expanding network of health centres and health stations offering a range of comprehensive health services. Lastly, there is an established network of health training institutions to meet the current manpower development needs for the country.

These strengths are, however, matched by a large number of weaknesses. One of the main obstacles to the advance of comprehensive primary health care in Ethiopia is the inappropriateness of the organizational structure of the Ministry of Health. With this in mind the Ministry has tried to rearrange its organizational structure and to implement the concept of primary health care in its fullest sense. Moreover, since curative and preventive programmes have to be carried out side by side, the Ministry is implementing these programmes in a comprehensive and integrated manner and in accordance with the existing level of socioeconomic development.

In trying to implement primary health care, the Ministry is faced with the extensive remnants of the health care approach previously used. These include the vertical programmes such as malaria control, venereal diseases control, and trachoma control. The old ways of thinking need to be corrected and reoriented, and the implementation of the new approach needs the collaboration of all international agencies. The National Health Development Network, which has been established to ensure more concerted action for health, needs further appropriate reorientation.

The shortage of trained and qualified health manpower continues to be a serious impediment to health development in Ethiopia, and the trained health workers at present in service need refresher courses to orient them to the new approach to health care.

Health management is at present hindered by lack of an adequate information system. This also has an adverse effect on
health service research studies and thus on the implementation of health service programmes.

Other weaknesses in the implementation of primary health care include inappropriate methods of procurement, production, storage, and distribution of pharmaceutical products and medical equipment, lack of expertise in the maintenance and repair of medical equipment and vehicles, lack of a full-time management structure below regional level, poor support and supervision at the periphery, and failure to define the role of the universities, medical faculties, and schools of pharmacy. The lack of funds applies an overall constraint, imposing limitations particularly on the construction of health stations, health centres, rural hospitals, and training schools, the acquisition of medical equipment for these facilities, and the purchase of vehicles and fuel for the supervision of field staff and the strengthening of the referral system.

Current priorities for action

To improve Ethiopia’s health system will require more than good will and enthusiasm and more than the simple delivery of health technology, however effective that may be, to a passive population. It will require a broad sociomedical approach that can provide people and organizations with the knowledge and skill needed for them to work more effectively for their own social improvement in all sectors of life.

Health development may be seen to depend on six interrelated factors: planning, epidemiology, hygiene and environmental sanitation, health education, statistics, and medical care.

At the base of the system of health care lie the national health and socioeconomic plans and policies. The system has the support of other sectors and of international agencies, and it benefits from Technical Cooperation among Developing Countries.

One of the main priorities receiving attention at present is the reorientation of the Ministry of Health’s headquarters. The proposed new structure has been forwarded to the Ministry through the Prime Minister’s office for finalization. It is hoped that the new structure will achieve:
— administrative and financial integration of vertical programmes,
— increased priority to strengthening promotive and preventive programmes,
— increased priority to coordination and collaboration among the various programmes of the Ministry of Health,
— increased priority to interaction with community organizations and other sectors, and
— strengthening of health management at the district level, which is believed to be the most crucial level for the implementation of primary health care at the present stage of socioeconomic development.

In addition to the reorganization and reorientation of the Ministry's headquarters, there is a need for reorganization and strengthening of regional and subregional health units. The action taken so far by the Ministry has been to organize an integrated health system, but the management capability of this system reaches only to the 15 regional health offices, the areas of the country beyond them being regarded as virtually unmanageable. Better health management will be attained only when district health administration units are established because the district is the administrative level that comprises all other socioeconomic development units such as education, agriculture, animal husbandry, water resources, and housing.

District management

The district is the most important yet the weakest level of health management in Ethiopia. It is the natural meeting-point for bottom-up planning and organization and top-down planning and support—the point at which community needs and national priorities can be reconciled. It is near enough to communities for problems and constraints at community level to be understood and for support to local health institutions to be coordinated. It is an administrative unit of government where key development sectors are represented, thus facilitating intersectoral cooperation and the planning and management of services across a broad front.

Yet management at district level suffers from many failings. It generally lacks the ability to translate national policies and strategies into operational terms, and it cannot design health
systems that cope effectively with community involvement and intersectoral cooperation, partly because of a limited appreciation among health personnel of the importance of these aspects of health work.

Districts suffer, too, from inadequate and poorly organized financing and budgeting and lack of sufficient trained manpower, together with insufficient emphasis on staff selection, training, development, and support. As a result, programmes carried out at district level are not well coordinated with other activities, including those carried out by hospitals. Few staff are available with the skills on which good management depends—for example, those dealing with supply, logistics and maintenance, financial management and accounting, personnel management, and the supervision of health services, in-service training, and operational research. The management information system is usually inadequate, resulting in poor monitoring and evaluation. More fundamentally, districts suffer from lack of authority owing to the reluctance of central management to delegate power.

The following activities were undertaken to tackle these problems:

— the training of medical officers and district health managers;
— the orientation of health personnel, community representatives and personnel from key development sectors for their new roles in primary health care;
— the identification of a few districts that could be used for systematic efforts to study and test solutions to certain important organizational obstacles to the implementation of primary health care.

Responsibility for supervising and administering the health services in the district lies with the Regional Health Officer. In addition, the staff and health officer (or nurse) at health centres supervise a number of associated health stations. This system is inadequate to meet the health needs of the entire district. Services are curative, poorly integrated, and provide very little outreach. Although communities are now well organized in both urban and rural areas and there is a high degree of interest in health, the health personnel are unable to provide the support the communities require, a fact that is reflected in the very high dropout rate (70%) among community health agents.
At the same time, the number of medical graduates, at present 900, is expanding by some 250–300 a year. The possibility is thus being considered of posting medical graduates to health centres, but without radical improvements in planning and management this step is unlikely to be very effective and could even be counterproductive because it could create disenchantment with conditions of service, particularly in rural areas.

The following job description of the district health manager was the basis for the design of the training course:

(1) works with mass organizations in the district to identify health-related problems and advise on means of overcoming them,

(2) organizes, manages, and administers the health services of the district to achieve optimum coverage, efficiency, and effectiveness,

(3) plans the health services in the district,

(4) ensures the coordination of intersectoral health-related activities,

(5) develops or strengthens the mechanisms for collection, analysis, interpretation, and use of information necessary for health planning and management, including monitoring and evaluation at all levels in the district,

(6) participates in the planning of training for professional and other cadres of staff in the district, and

(7) promotes, plans, and carries out applied research on problems related to health and health services in the district.

It is clear that the district health manager is expected to be much more than an administrator. He or she is expected to be a leader, trainer, and source of inspiration for the development of primary health care in the district. He or she plans, organizes, coordinates, supervises, and evaluates all primary health care activities.

During the residency programme of the trainees, the district health managers were assigned to their respective districts, with excellent results. The success achieved so far is highly promising. We have been able to see the actual health profile of the district and determine the community health problems, which has made it easier for health personnel and the people themselves to solve the problems. During this process the health managers achieved the active involvement of the community. The various primary health care components, such as the expanded
programme on immunization, the control of communicable diseases, and the making available of essential drugs through a revolving fund, have been highly successful.

I believe that after a longer trial and the inclusion of more districts in the new strategy, it will be possible to form a new policy on health and population. At present there is no need for legislation to implement the district management policy. We must first develop the district leadership and organize the district health team.

Progress achieved in district health management

A major outcome of the district health management programme is that epidemics are now better managed, prevented, and controlled. This is a direct result of the larger number of health posts and health centres that have been established, with community participation, and of their better organization.

The corresponding increase in accessibility of health services is of great benefit to the public. A continuing health
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Hygiene education related to latrine construction and use is regularly conducted by sanitarians assigned to health centres.
education programme is being conducted among the people and the health workers in all model districts, and the health needs of the communities are being properly identified. Intersectoral collaboration with other governmental and nongovernmental organizations is being strengthened.

The economic benefits, too, are considerable. Better management has improved the cost-effectiveness of the services and increased their efficacy. The institution of a rotating fund for the supply of drugs has ensured the availability of medicines at little cost to public funds. The use of biological methods in the control of malaria has reduced expenditure on larvicidal oil and residual spraying. Better management also ensures that the money donated by international and nongovernmental organizations is properly administered.

Health for all

It is the intention of the government to use the experience gained in the model districts to implement primary health care throughout Ethiopia. It will not be easy to increase the 45% coverage of the people with formal health services in a reasonable time, so the development of primary health care will bring an earlier and more appropriate solution to the most common health problems, which make up at least 75% of the disease burden in the country.

A component of the programme will be a great extension of health education, addressed not only to the public but to the health professionals as well. For this purpose a production centre for health learning materials already exists in Addis Ababa.

To attain the goal of health for all by the year 2000, we must above all enable and encourage the community to become involved in the planning, implementation, monitoring, and evaluation of all health activities and even in decision-making.
The tradition in Finland is that the provision of essential health services is a function of society. It is the responsibility of local authorities to organize the delivery of services. Financing is by a mixture of local and central government funding. Supervision and control are exercised by the central Government. Subordinate to the ministries are specialized national boards, which are permanent and unaffected by changes in Government.

An important feature of the Finnish Constitution is the emphasis on local government. The 461 local authorities or communes are entitled to levy income tax. Power in the communes resides with the elected council, under which operate a number of politically representative local boards responsible for health, welfare, education, public works, land use, town planning, etc.

Health comes under the Ministry of Social Affairs and Health, which supervises the National Board of Health. In keeping with a general trend towards decentralization, the ministry has only 15 people to look after health, and the entire staff of the National Board of Health is a mere 200. The General Director of the Board is a physician, and its Administrative Director is a lawyer. The Board has five departments and the Pharmaceutical Office.

All the present general hospitals and about half the country's primary health care centres are run by federations of communes. The member communes retain executive and financial responsibility. The central administration issues general instructions and grants state subsidies for approved objects.

Difficulties have arisen from the large number of federations, and from the fact that federations established for different
purposes (not only health care) are seldom conterminous: their boundaries often overlap. A current trend is to reduce the number of federations by combining their functions while at the same time making their boundaries conterminous.

**Finnish health policy in the 1970s: priority for primary health care**

The health service system has been developed step by step through special legislation. For instance, for historical reasons there were separate administrative systems for general hospital services, mental hospitals and, until 1987, tuberculosis hospitals, although they were all run by independent federations of local authorities. In the field of primary health services, separate laws were passed in the post-war period to develop one type of service after another according to the most urgently felt needs.

This approach did achieve some remarkable results. The Finnish system of maternal and child health care, which has been provided by public health nurses and midwives since the 1940s, provides a model of a community-based, prevention-oriented service with full coverage free of charge. It can be regarded as an early form of primary health care, and it certainly is part of the explanation for Finland's excellent record in reducing its infant mortality. In the 1950s and 1960s, Finnish health policy was dominated by a forceful hospital drive, resulting in a modern regionalized hospital system of high quality by any standards. This progress, however, was not without drawbacks. Most of the resources went into the intensive development of the hospital network, leaving primary care largely fragmented and underdeveloped, and the training of personnel was strongly hospital-centred.

By the beginning of the 1970s, Finland had arrived at a situation in which some 90% of public health care resources were being used for specialized medical and hospital care and only 10% for primary health care services. The growth rate of health care expenditure in the 1960s had been nearly twice that of the gross domestic product, averaging 8% per year at constant prices. Indicators depicting the state of health of the population, excluding infant mortality, pointed to slow or even unfavourable development and to wider regional imbalances. Gaps and
shortcomings in primary health care services were publicly admitted to be a defect in the health care system.

It was clear that these flaws could be eliminated only by means of a change in resource allocation and the development of both primary and specialized health services according to national priorities.

There was a general recognition that the fragmented step-by-step approach had led to one-sided development and lack of primary care services. It was therefore decided to put the main emphasis on primary health care and to create the necessary administrative and financial organization required for the rapid, planned development of a comprehensive primary health care system run by the local authorities. This would require not only the integration of existing compartmentalized elements of primary health care but also the integration of planning, financing, and service delivery and the closest coordination between the hospital sector and the primary health care services.

The political basis for the new philosophy of “primary care first” was the Primary Health Care Act of 1972, passed unanimously by Parliament. Under this Act, implementation is worked out by rotating national five-year plans approved annually by the government, and similar plans made by the local authorities and their federations. Directives and instructions are issued by the central authorities, and funds are provided annually by Parliament and communal councils.

It is important to note that boosting primary health care could not have been realized by new legislation alone without some mechanism ensuring overall cost control and balanced development of the hospital and primary health sectors. The solution was to amend the different laws governing hospital services in two simple but far-reaching ways. Firstly, a similar rotating system of national five-year plans was adopted in the hospital sector. Secondly, the obstacles to coordinated regional hospital planning resulting from the historical tripartite system (general hospitals, mental hospitals, and tuberculosis hospitals) were alleviated by laying the statutory responsibility for regional hospital plans on the federations of communes running the central (general) hospitals.

A framework was thereby established that ensured national, regional, and local planning and resources allocation for primary health care and hospital services. The key elements for implementing the new policy were the following. First, a
financing system was created covering all the health care provided by the local authorities. State subsidies covering 31–70% of acceptable investment and running costs (the percentage varies according to the financial capacity of the local authority) gave the communes a powerful incentive to invest their local tax revenue in primary health care. Secondly, arrangements were made for the simultaneous approval of the national plans for hospital and primary care. This ensured a deliberate choice of priorities in the allocation of resources, personnel, investments, and running costs.

Integration of planning, decision-making and resource allocation

The rotating five-year plans for primary health care and hospitals in use since 1972 were drafted annually by the National Board of Health, keeping government policies in mind and using relevant information from the previous national plans as well as information from local and regional plans expressing the needs of those responsible for the delivery of services. Since 1984, environmental health has been included in the national health plan. A five-year plan was also prepared for social welfare. The national plans for health care and for social welfare were combined for the first time for the period 1989–1994. The draft national plans are negotiated between the Treasury and the Ministry of Social Affairs and Health (and other interested parties) and finally decided upon by the Cabinet. The plans are revised annually, usually without major changes in content.

It is worth stressing that the Government adopts the national plans for all the health care and social services simultaneously and the plans therefore form an integrated whole. The national plans for primary health care, environmental health and hospitals contain the general goals of primary health care and hospital services, functional objectives and instructions for reaching them, personnel quotas, investment plans, and cost estimates.

The National Board of Health issues guidelines on activities and regional resource allocations, on which the health boards of the local authorities and their federations work out their detailed plans. These are sent to the provincial administrations,
acting for the State, which approve them if they conform to guidelines and resource limits contained in the national plans.

The planning process does not directly dictate what the communes and their federations should do, but if the national plans are not followed the central government can refuse its share of expenditure (on average half of the total). This makes the plans a very powerful tool in the guidance of health policy.

The importance of the integration of planning, decision-making, and budgeting (resource allocation) cannot be overemphasized. Only through planning that leads to political decisions based on explicit priorities and objectives is it possible to make preferential allocations in budgeting and to monitor and evaluate the progress being made. The principle applies to all echelons of management.

This type of integrated planning and financing has enabled a much higher proportion of the available additional resources to be directed to primary health care, and it has permitted preferential allocation of resources to the sparsely populated parts of the country. In addition to that, new forms of service can be initiated either simultaneously or gradually, while appropriate technology can be promoted and inappropriate technology counteracted.

In Finland the health-centre hospitals are well integrated with the district health care system, but the integration of the specialized hospitals has been more difficult. According to the national health plans, the specialized hospitals should support and advise the health centres and organize specialized consultations at the request of the health centres. This kind of integration has progressed slowly and has required a change in attitude towards the role of the hospital. Nowadays there is good cooperation between hospitals and health centres in education and training and, in most places, in patient care.

A difficult problem was the dichotomy of social and health services. For a long time, social services were underdeveloped in comparison with health care, and this undeniably hampered the arrangements for the care of long-stay patients, home care for the elderly, the care of alcohol-dependent people, and so on.

Recent organizational reforms should make cooperation between health and social welfare easier. Welfare, like health, is handled by the local authorities in Finland. The Welfare Act and the Planning and State Subsidies for Welfare Act, both of 1984, have done for welfare what the Primary Health Care Act of 1972
More difficult problems are faced in health promotion. Despite considerable experience and success in some fields such as smoking control and traffic safety, it is still uncertain which measures would be effective, and there are many conflicts between health policy objectives and commercial and other vested interests.

Acknowledgements

I wish to express my thanks to Dr Kimmo Leppo of the National Board of Health, for permission to use his unpublished reports. This review was largely based on the following publications:


Hungary:  
the quest for health for all

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Hungary covers an area of some 93,000 km² and has a population of over 10 million. Traditionally an agricultural nation, Hungary has become heavily industrialized since the Second World War, producing machinery, textiles, metal goods, chemicals, and motor vehicles. Major farm products are corn, wheat, rice, potatoes, turnips, fruit, and livestock. Bauxite and manganese are the most important mineral resources. About two-thirds of the population is Roman Catholic, but there is a large Calvinist minority.

Health situation

In common with other countries that have become industrialized, Hungary has experienced a dramatic change in disease patterns in recent decades. Morbidity and mortality rates for communicable diseases have fallen sharply, while the corresponding figures for noncommunicable diseases have increased. The most important causes of permanent disability and death in Hungary today are cardiovascular diseases, malignancy, accidents, and suicide. Cardiovascular diseases now account for half the mortality rate, which increased by 18% during 1970–84. Furthermore, analysis according to age group shows that, while the mortality rates for infants and those over 70 years of age
were lowered, the most significant increase occurred in the working population, among males 40–60 years old.

This shift in disease patterns has far-reaching implications not only for the families affected but also for the nation. Apart from the reduction in the work-force caused by illness, disability, and death, the growing number of invalids of working age and of elderly patients places a heavy burden on the social services. The shift was unexpected, and the health sector has not been able to keep pace with the increased demand for curative services, in spite of a rapid expansion in recent decades.

It is now realized that a significant improvement in the health status of the population cannot be achieved by the health sector alone. Among the factors contributing to the high incidence of cardiovascular disease, cancer, accidents, and suicide are environmental pollution, smoking, alcohol abuse, over-nutrition, lack of exercise, and stress. These risk factors have all increased in recent decades as direct or indirect consequences of industrialization and economic changes, migration from rural to urban areas, changing family patterns, social mobility, increase in divorce, and change in the age structure of the population.

Clearly, the diversity of causes demands an intersectoral approach to disease prevention and health promotion. With this in mind the government combined the health and social services sectors in the new Ministry of Health and Social Affairs, which became operational in January 1988 and has recently drawn up a long-term national programme of health promotion, in which all the concerned sectors are expected to participate.

Health services administration

The 1972 Constitution states that access to free health services is a right of every Hungarian citizen. By 1978, when the Government adopted primary health care as the means of achieving health for all, the health system was already well developed, and access to both in- and outpatient facilities was good. However, the emphasis was on curative services rather than on disease prevention and health promotion. One important change since that time is that responsibility for the long-term care of chronic noncommunicable diseases such as hypertension, diabetes, rheumatic diseases, and cardiovascular diseases now rests with primary health care teams rather than with hospital outpatient
departments. This change facilitates interaction between patients and health professionals, thereby enhancing the likelihood of patient compliance.

The health services are integrated, which means that all the health services within a given catchment area, whether they be primary health care services or those provided by specialized hospitals, are administered by the same authority—usually the local council to whom authority is delegated by central government. The system is designed to facilitate close collaboration between general practitioners and the hospital services. There is a progressive system of referral from the general practitioner to the local hospital and then to the specialist services offered by county, regional, and national institutions.

An important complement to the activities of the general practitioner within the primary health care service is provided by the community-based dispensaries, the occupational health service, the district paediatric services, the school health services, and the geriatric nursing services.
Dispensaries usually deal with a specific condition—for example, pulmonary affections, sexually transmitted diseases, mental disorders and alcohol dependence, and cancer. However, the role of the dispensaries can be adapted to suit changing needs. With the reduction in the number of tuberculosis patients, for example, dispensaries that formerly dealt exclusively with pulmonary affections are able to lighten the load of the general practitioner by screening patients for hypertension, diabetes, and breast and cervical cancer, and by performing electrocardiograms, urine analysis, etc. It is not essential to be referred by a general practitioner in order to be treated at a dispensary, where great emphasis is placed on close cooperation between the patient, the family, and dispensary staff in the long-term management of the condition.

Occupational health services have been a state responsibility since 1951. Any establishment employing more than 500 persons is required to have an industrial physician in full- or part-time attendance. These services are responsible for some 10 million consultations annually. They perform a wide range of functions in the workplace, such as the screening of prospective employees, the provision of first aid, the assessment of aptitude for a specific employment, and the long-term care of chronic conditions.

District paediatric services provide care for the mother during pregnancy as well as care of her newborn child. In the towns they are staffed by paediatricians and maternal and child health nurses, whereas at village level they are staffed by the maternal and child health nurse on the local primary health care team, with the support of a visiting paediatrician and obstetrician. Despite frequent consultations in the antenatal period, low-birth-weight babies (under 2500 g) still comprise 10% of all live births. An important role of the district paediatric team is to give advice and encouragement to new mothers and to promote breast-feeding.

School health services are also provided by teams comprising paediatricians and maternal and child health nurses, whose task is to provide a periodic screening service to adolescents between the ages of 14 and 18.

As in most industrial countries, the care of the elderly poses a special problem to the Hungarian health service. The number of citizens over the age of 70 currently stands at just over one million, or 10% of the total population. Approximately 70% of
social security expenditure goes to the provision of old age pensions, which represent about 60% of an average income. Despite their modest incomes, the most pressing problem for many of these elderly people is not lack of money but loneliness, compounded by increasing infirmity. Provision of care may take the form of visits from the community nursing staff or the social worker, with the possibility of receiving further care in a day centre or residential home. Currently, some 25 000 elderly people attend a day centre, a further 33 000 are cared for in residential homes, and 39 000 benefit from the services of visiting nurses or social workers. It is planned to expand these community-based services for the elderly.

Problems in implementing primary health care

All too often, primary health care services are organized on the lines of traditional curative services rather than in response to the need for community-based activities with a strong emphasis on health promotion and disease prevention. Moreover, the staff of the primary health care team are employed by the local authority but are answerable to the chief physician at the local hospital. This may well lead to a lack of understanding of the nature of the problems encountered by the team in their day-to-day work and ultimately to a lack of effective supervision and support.

Many of the problems encountered by the general practitioner stem from the fact that medical training in Hungary is not oriented to the needs of primary health care. It is still hospital-based. During medical training the physician receives a total of 6600 hours of instruction, yet only 12 hours of lecture time are devoted to general practice, followed by a two-week practical training period in the last semester. Opportunities to redress this imbalance once qualified are few and far between. Although general practice has been a recognized medical speciality in Hungary since 1979, few physicians working in the community are able to undertake the necessary postgraduate training, chiefly because the local authorities who employ them would have to release them on full pay for the two-year hospital-based course.

Furthermore, physicians are not taught to deal with the social problems with which they are often confronted, a failing
compounded by the lack of trained social workers in Hungary. Indeed, training in social work was introduced only in 1987, so there are as yet no social workers on the primary health care teams.

**Decision-making and finance**

Overall responsibility for health policy and the distribution of resources to the health sector is in the hands of the Ministry of Finance and the Ministry of Health and Social Affairs, together with the national planning office. They jointly establish the long-term health goals, as well as the operational health budget for a given year. At national level there is a firm commitment to improving primary health care implementation through the multisectoral long-term national programme of health promotion. One of the important tasks assigned to the health sector in the context of this programme is to examine ways of limiting the expenditure of hospital-based services in order to increase the resources available for primary health care activities.

The health sector makes no direct charge to patients for the services it provides, either in hospitals or in the various primary health care services. The only exception to this rule is that ambulatory patients are expected to contribute 15% of the cost of prescription drugs. However, drugs required for the long-term treatment of chronic conditions such as diabetes are exempt, as are those required for treating certain infectious diseases such as tuberculosis and sexually transmitted diseases. Seventy-five per cent of the registered pharmaceutical preparations are manufactured in Hungary.

Since the mid-1970s, an integrated system of health service administration has existed in Hungary. At local level, this means that overall responsibility for both primary health care services and the running of the hospitals rests with the health department of the local council. In most parts of the country, following recent reorganization, it is the hospital directors who are responsible for these departments, aided by a team of deputy directors. This integration, which was designed to facilitate a more equitable distribution of resources, has in some cases been to the disadvantage of the primary health care services, whose activities have been handicapped by insufficient funding. The
reason for this is that the primary health care services are not financially independent of the hospitals.

Until recently, hospitals received all their funding from central government. Now, however, they have been granted a certain degree of independence. They are free to charge for services provided to other institutions and to use the resources generated for development. In addition, they are now allowed to accept donations of equipment or finance from enterprises, agricultural cooperatives, and social organizations. So far, however, the amount of assistance received in this way has been small.

The budget allocation for each hospital is calculated according to the number and cost of inpatient days in the previous financial year, plus an allowance to cover increases in running costs. Particularly costly services, such as renal dialysis units, diagnostic imaging facilities, and intensive care centres are eligible for supplementary funding.

Central government carries out an evaluation of all hospitals at least once every five years. However, there is at present no mechanism for enforcing the national guiding principles concerning local health service finance if hospitals are failing to comply, and a trial scheme is under way in certain areas that aims to increase accountability and reduce excessive running costs by introducing a global working budget for each institution, a detailed cost analysis of operational expenses, and incentives for adopting a cost-conscious approach. The trial is planned to last for three years. If successful, it could result in savings that could be used to finance vital primary health care activities. The provision of social and care services for the elderly, for example, is an area in urgent need of expansion. At present, there are two million people of pensionable age living in Hungary, 5% of whom are cared for in institutions. The rest are able to remain in their own homes, though often only through the work of the health and social services.

Indeed, it was to facilitate the coordination of the health and social services that the new joint Ministry of Health and Social Affairs was created. The tasks of the new Ministry are

— to accept responsibility for all health care activities;
— to direct and coordinate multisectoral health promotion and disease prevention activities;
— to plan, develop, and provide all social services;
— to administer social security benefits, such as old age
pensions, sickness and invalidity benefits, and child care payments;
— to regulate all the activities of the social sector; and
— to take responsibility for rehabilitation services.

It should be emphasized however, that the financing of the health and social sectors is at the moment entirely separate. This is partly because most of the social welfare benefits are paid for by central government whereas the health service institutions are largely controlled by the health departments of the local councils.

The director of the health department is invariably a medical doctor, but generally one of the administrative deputy directors is qualified in accountancy. All too often, however, the duties of this post are concerned primarily with ensuring that the hospital spends the money available in accordance with the rules, and perhaps with additional fund-raising activities. The deputy director is rarely concerned with the financing of the wider integrated health system and has little influence on health policy decisions, which are taken almost exclusively by medical doctors, often with scant regard for the economic implications of their actions.

If an integrated health system is to raise the level of primary health care services through a cost-conscious administration of the more expensive hospital-based services, we believe that the expertise of health economists working at all levels in the health care delivery system—especially at the crucial local council level—is vital. Yet specific training in health economics is not currently available in Hungary. It is hoped that it will be introduced in the near future under the direction of the health sector, which should regulate the duration and content of training so that it meets the needs of the health services.

**Long-term targets**

Access to free health care services in Hungary is good, and this has done much to decrease inequalities in health. There have been considerable advances in medical technology during the past 40 years. Yet the health sector has failed to adapt sufficiently to the changing demands of primary health care. Services have remained essentially curative, and, although it is wide-
ly acknowledged that socioeconomic conditions have a far more significant effect on the health of a population than does the quality of health services provided, the health sector has been slow to adopt a leadership role in an intersectoral approach to health promotion and disease prevention. This has been a contributory factor in the increase in preventable mortality among the working population.

It is against this background that the long-term national programme of health promotion has been introduced. The programme targets require a significant input from a wide range of government departments and social organizations. The aims of the programme are stated in a Government publication, which not only addresses the institutions concerned but appeals to all citizens to become actively involved in improving their health status. It is divided into four sections.

The first describes the present situation, and using examples, shows that a concerted effort from the whole of society is capable of dramatically improving the nation's health.

The second section presents the aims of the programme over the next 15-20 years, which are

- to lower the important health disparities between regions to less than 10%;
- to reduce infant mortality by at least 10%, initially by reducing premature births by 30%;
- to achieve a 10% reduction in mortality from cardiovascular diseases among people under 65, with emphasis on controlling hypertension;
- to reduce the incidence of neoplasms by 10% in the same age group through control of carcinogenic substances and improved screening;
- to lower the incidence of industrial and road accidents by 10% by reducing the level of alcohol dependence; and
- to reduce the number of suicides.

It is believed that if these targets can be achieved, there would be a significant improvement in life expectancy at birth and an improvement in the length of healthy productive life that citizens could reasonably expect to enjoy. This would release resources for improving the services available to the elderly and the handicapped.

The third section invites each citizen to participate actively in his or her personal health promotion programme. It stresses
One of the aims of the health promotion programme is to reduce the mortality associated with cardiovascular disease.

the contribution of a happy family life and of health education of children.

The fourth section reminds the population that improving their health status is not merely an individual concern or the concern of the health sector but rather the concern of all government departments and strata of society, united in a concerted effort to make the goals a reality.

The plan of action that complements the programme formulates specific short- and medium-term tasks to be undertaken by various state institutions. It requires all proposals for change by any of the authorities to be examined in the light of their impact on health and asks that the health sector be accorded priority in the distribution of government resources. During the course of the medium-term plan, the progress made will be evaluated and any action needed will be undertaken. It is recommended that programme activities be reinforced by legislative action to reduce the incidence of smoking and drug dependence.
Above all, the overriding concern of the programme should be the specific health and social concerns of the more vulnerable sections of society—the elderly, the low-income families, the mentally and physically handicapped, and the chronically sick. For until we achieve a real improvement in the quality of life in these groups, health for all will not become a reality in Hungary.
Indonesia is an archipelago in south-east Asia consisting of over 13,000 islands with an area of nearly 2 million km², mostly covered by tropical rainforest. It is rich in natural resources, including oil and natural gas. The population is estimated to be over 197 million. Most of the people are Muslims, but there are also numbers of Christians, Hindus, and Buddhists. The country is divided into 27 provinces with 246 districts and 55 municipalities. There are 3,548 subdistricts with 67,981 villages.

The national development programme is based on five principles: belief in one supreme God, the attainment of a just and civilized society, the unity of Indonesia, representative democracy, and the attainment of social justice.

The People’s Consultative Assembly has emphasized the prime importance of equity in the distribution of health services and has stated that national development covers the whole of Indonesian society. It also attaches great importance to the principle that health development concerns the “whole person”, which is to say that it covers not only physical health but also mental health and aims to achieve the optimum social relations within the individual’s environment.

The main obstacle to equity in the provision of health services is the uneven population distribution over more than

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13,000 islands, and it is now being overcome by the implementation of primary health care. This is defined as essential health care made accessible to everyone at a cost the country and community can afford, using methods that are practical, scientifically sound, and socially acceptable in Indonesia.

The implementation of primary health care began in 1978, after five years during which attention had been concentrated on health centres, health manpower, and the provision of drugs.

**The situation before primary health care**

The baseline picture of health in 1978, before the implementation of primary health care, was not a good one. The crude death rate was 13.5 per 1000 people, the infant mortality rate was 103 per 1000 live births, the mortality rate of children under 5 years of age was 20.9 per 1000, and life expectancy at birth was 52 years. The total fertility rate was 4.7 per woman. Only about 50% of Indonesian women were literate, and people were largely unaware of the requirements for good health.

Maternal and child health had not yet been given high priority. The role of traditional birth attendants was much greater than that of modern health professionals. Neonatal tetanus was common owing to the unhygienic practices of untrained traditional birth attendants and others. More than 80% of births were supervised by traditional birth attendants. Low birth weight was very common, with about 13% of newborn babies weighing less than 2500 g. A large number of mothers did not seek either antenatal or postnatal care.

Medical coverage was only 43% of the total target population. Fewer than 5% were treated at hospitals and only 18% at health centres and private clinics.

Immunization programmes covered less than 40% of children under the age of 14 months, and measles and polio vaccines were not available.

Some endemic diseases had not yet been controlled, and oral rehydration salts were not in widespread use to control diarrhoeal diseases. The incidence of cholera was thought to be about 40 cases per 100,000, with a case-fatality rate of 57 per 1000. Dengue haemorrhagic fever persisted in many provinces with a case-fatality rate of 5.1 per 1000. Of the drugs used to treat
patients in Indonesia, 90% were provided and distributed by the private sector.

After the establishment of health centres throughout Indonesia, the development of community health in the rural areas was seen as being of prime importance. It was at about this time that the concept of primary health care began to be promulgated as a means of achieving health for all, and it was soon adopted by the health policy-makers in Indonesia.

The health system

In 1982 a national health system was formulated to provide main guidelines for health development. Five main objectives are to be attained by the year 2000:

- the improvement of communities’ ability to help themselves to be healthy;
- the improvement of the environment so that it can no longer threaten the health of the people;
- the improvement of community nutritional status;
- the reduction of morbidity and mortality; and
- the development of small, happy, and prosperous families.

The strategy to be used to achieve these objectives will be based on the promotion and initiation of health projects, the development of health manpower, the control of drug and food supplies, the improvement of nutrition and environmental health, the strengthening of management techniques, and the promulgation of appropriate laws.

The Indonesian health system is organized at various levels. At the level of the district or municipality, a district or municipal health office is established by the Ministry of Health and a district or municipal health service is operated by local government.

The main functions of the district health service are to care for patients in the district hospital and to examine specimens in the district laboratory. Many of the patients will have been referred from the subdistrict level. In addition, the district health service carries out public health activities such as disease control, health education, and the training of health personnel.
The district health office is mainly an administrative and supervisory body. It ensures that medical interventions reach the people who can benefit from them, especially high-risk groups, and organizes public works aimed at improving environmental hygiene and safety. Its responsibilities include village community health development, the management of drugs, manpower, public information, planning, and general administrative work.

At the village level, community health development is an integral part of overall village development under the umbrella of the Village Community Resilience Institute, which is the forum of all development activities requiring intersectoral cooperation.

At least one health centre and 3–5 subcentres can be found in every subdistrict. Their work involves case finding, treatment, immunization, environmental interventions, and the teaching of healthy life-styles.

The activities of health centres are not only complete in themselves but are also integrated with the village community and linked with all other kinds of health activities carried out in the community under the coordination of the Village Community Resilience Institute.

The basic health services provided through health centres comprise maternal and child health, family planning, nutrition, environmental health, the prevention and control of communic-
Immunization of village children

able diseases, immunization, mental health, health education, treatment, school health, public health nursing, oral and dental health, simple laboratory examinations, and the maintenance of records for the health information system. Health centres are the means of providing support, equipment, and supervision to subcentre staff, private health practitioners, and village health volunteers.

Community participation is achieved by encouraging local people to become involved in analysing problems, formulating plans of operation, deciding priorities, implementing healthy life-styles, and participating in manpower development, fund raising, and the supply of equipment.

Community health development is carried out by village health volunteers or by village health workers who are selected and paid by the community. These people are trained to perform simple health activities ("minimal activities").

Integrated family planning and health posts

The development of primary health care as the key approach for attaining health for all Indonesians by the year 2000 has been
accelerated by the establishment of integrated family planning and health posts (posyandu) in the villages (Fig. 1). Staffed by health professionals and village health volunteers working side by side, these posts are open to the public at least once a month.

Since the fourth five-year development programme (1984-89), integrated family planning and health in Indonesia has been extended to cover maternal and child health, nutrition, immunization, the control of diarrhoeal diseases, and family planning.

For infants and children under the age of five, the services provided by these posts include growth monitoring by weighing, the provision of supplementary foods, basic immunizations, the treatment of diseases (especially diarrhoeal diseases), and the health education of mothers. For pregnant and lactating mothers and eligible couples the services cover nutrition, disease prevention (including tetanus toxoid immunization), treatment, the provision of contraceptives, and health education for individuals or groups of people. The services are delivered at five separate tables. The first table is for registration, the second for weighing infants and children, the third for filling in health cards, the fourth for health education, and the fifth for consultations with professional health workers; here the public may
Regular checks are made on the physical development of preschool children
obtain maternal and child health services, family planning advice, immunization, and treatment.

When the family planning and health post is not operating, village health volunteers deliver essential health care where needed. They have to help people on the spot, referring difficult cases to health centres or hospitals for professional care.

In some places the family planning and health posts have become highly developed. Besides giving the usual family planning and health services, they play a part in the transfer of technology. They can, for example, promulgate appropriate methods of constructing a smokeless stove for preventing indoor air pollution.

Every post belongs to the village in which it is located, not to the Government, making each a forum created by the community for its own benefit.

In all the family planning and health posts, the role of women's organizations, especially the Women's Family Welfare Movement (PKK), is very much to the fore. This is important because the success of the posts depends very largely on women.

Village women talk to one another at the posts and receive information and education, not only on health and family planning but on many other aspects of community development.

The drop-out rate of village health volunteers is high, and some people believe that these volunteers would find their work more satisfying if they were given the authority to treat people with simple drugs such as antipyretics, anthelmintics, and even antimicrobial drugs. In some provinces this proposal is already being tried.

The Women's Family Welfare Movement has started to develop a system of care based on ten families (das wisma) to promote family welfare and family health. Another initiative in this direction was the launching in 1983 of the Healthy Life Movement, which has six components—maternal and child health, family planning, nutrition, immunization, the control of communicable diseases, and environmental sanitation. It attaches great importance to the equalization of health service distribution to all parts of society.

Through the establishment of integrated family planning and health posts and the development of the ten-family system of care, the idea of health for all is becoming a reality in Indonesia.

In 1978 the organization of the health system was incomplete. Further efforts were therefore made to increase health
resources by providing drugs and appointing health workers for the health centres. This effort was mainly directed to the equalization of community health services.

According to state policy, health development should be carried out with cross-sectoral cooperation and active community participation aimed at an equal distribution of health services throughout the country.

**Changing attitudes**

In the leprosy hospital in the district of Tangerang, West Java, the inmates used to be permanent residents, since they had been ostracized by the rest of the community and abandoned by their families. Indeed, some families even tried to create the impression that they did not have a relative suffering from leprosy. By doing so, they hoped that the negative attitude of the community towards them would slowly disappear. The local people believed that leprosy was incurable and hereditary, and some said that it was a punishment from God. More recently, however, the authors saw some leprosy patients at a health post in Kuningan, collecting leprosy drugs brought from the local health centre. The head of the health centre explained that leprosy patients in his area were no longer ostracized owing to the intensive health education carried out by dedicated village health volunteers. He referred only a few of his leprosy patients to the hospital in Tangerang, because most of them were now treated as outpatients. The hospital itself, in his view, had slowly changed its image from being a symbol of cruelty to one of hope. Many visitors now came to see the patients, and reconstructive surgery was carried out on many referred cases.

At a village in the district of Bogor, a senior official of an international donor agency had an opportunity to observe a new outlook on the part of a traditional birth attendant. When the official asked the head of a group of households about family planning practices among eligible couples, the question was answered instead by a traditional birth attendant, who was responsible to the group head for all information on family planning practices among the village people. She had learned by heart the total number of pregnancies, births, and family planning accepters in the group of households and showed a surprisingly positive attitude towards family planning.
As the primary health care strategy reached the remote rural areas of Indonesia, organizational structures and management functions were adapted to the new situation. Information systems, logistic support, supervision, monitoring, and financial procedures were changed step by step.

Local authorities were already encouraged to analyse all the data collected locally, but the number of variables was reduced so as to concentrate on the most important data.

In the Ministry of Health, computers were now in use to process and analyse the data collected throughout Indonesia. The main effort was devoted to the primary health care programme, and logistic support was given to a special programme only if there were very strong reasons for it. Closely related programmes were supervised and monitored simultaneously to increase efficiency, and financial procedures were simplified to accelerate programme implementation.

Accelerating health development

During the first decade of primary health care, measurable progress has been achieved. In 1978 the infant mortality rate was 103/1000 live births; by 1985 it had been reduced to 70—the target that had been scheduled for achievement in 1989. So there had been an acceleration of four years. The ten-family system of care was planned to be implemented some time after 1990, but it was in fact launched in many areas in Indonesia in 1987 by the Women’s Family Welfare Movement. These results stem from the rising level of popular participation in health planning and health activities. There is an increasing participation of local people, especially women, in planning and in the subdistrict workshops on health activities. Programme targets and lists of priorities are no longer formulated only by health professionals but also by many other people, such as representatives of women’s organizations, peasant groups, and informal leaders.

Inequities in access to health care have been reduced considerably by means of the health centres and subcentres, the wide network of integrated family planning and health posts, the ten-family system of care, and the village health volunteers.

Health care is in fact coming closer to people in rural areas throughout Indonesia. People can obtain simple life-saving drugs from the village health volunteers, such as oral rehy-
Indonesia

drination salts for treating dehydration, cotrimoxazole tablets for treating moderate cases of acute respiratory infection, and chloroquine tablets for treating malaria.

The village health volunteers also impart health information—on the promotion of health, prevention of diseases, treatment of simple illnesses, home care, and family planning.

Since the health posts began to be established in 1984 in villages throughout Indonesia, the expanded programme on immunization has been implemented more effectively. Previously immunization was ineffective because its cost–benefit ratio was high and its coverage so low that it hardly had any impact on morbidity. The problem was not lack of funds but lack of manpower.

Immunization is effective only when mothers are ready to cooperate closely. In Indonesia, the immunization of children below the age of 14 months cannot be carried out without the mother's consent. Increasing numbers of mothers are now bringing their children to health posts for immunization. There is thus no need to recruit more field workers for the immunization programme except for a limited number of professionals. Table 1 shows the dramatic increase in national immunization coverage since 1984.

Health promotion is another highly successful result of the establishment of health posts. The breast-feeding campaign is the best example. The advantages of breast-feeding have been emphasized repeatedly at the family planning and health posts, and the message has spread through the entire country. As a result bottle-feeding has been reduced to a tolerable limit, mostly when circumstances make it unavoidable.

Table 1. Immunization coverage in Indonesia, 1984–87

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td>49.6</td>
<td>55.7</td>
<td>64.6</td>
<td>66.1</td>
</tr>
<tr>
<td>DPT 3</td>
<td>5.6</td>
<td>12.9</td>
<td>27.0</td>
<td>46.5</td>
</tr>
<tr>
<td>Polio 3</td>
<td>5.8</td>
<td>11.5</td>
<td>24.1</td>
<td>44.2</td>
</tr>
<tr>
<td>Measles</td>
<td>0.9</td>
<td>12.7</td>
<td>20.4</td>
<td>40.2</td>
</tr>
<tr>
<td>TT 2</td>
<td>16.8</td>
<td>19.8</td>
<td>24.7</td>
<td>25.5</td>
</tr>
</tbody>
</table>

Note. Dropout rate between first and third injections of both DPT and polio is about 25–30%.

Target populations. BCG: babies, 0–11 months; DPT and polio: babies, 2–11 months; measles: babies, 9–11 months; TT (tetanus toxoid): pregnant women.
The need for the best possible coordination between the health sector and other development sectors has been promoted intensively from the lowest to the highest level.

At the lowest level, the village heads coordinate all the development sectors including the health sector through the Village Community Resilience Institute as the highest coordinating forum at village level. In addition, the monthly mini-workshop and the yearly microplanning meeting, held under the chairmanship of a health centre doctor, can also be used to promote better intersectoral coordination, because representatives of the other development sectors may be invited to participate.

Administrative reforms

Management skills, including decision-making, budgeting, and personnel management, are being continually improved at all levels of administration. Depending on the ability of local authorities to manage health development, responsibility is gradually transferred from central government to local government. Under this policy of decentralization, many local authorities have now taken over important areas of decision-making in health, including the allocation of funds and the recruitment of health workers. But the overall national responsibility for health remains with the central government.

These changes have resulted in visible improvements, best demonstrated by the effects of the integrated family planning and health posts over a period of about six years from 1978.

- The case-fatality rate from dengue haemorrhagic fever fell from 5.1% to 4.1%.
- The case-fatality rate from diarrhoea fell from 51 per 1000 to 32 per 1000.
- The prevalence of pulmonary tuberculosis fell from 0.3% to 0.19%.
- The prevalence of filariasis fell from 8.1% to 3.3%.
- The prevalence of schistosomiasis in Lindu, Central Sulawesi, fell from 20% to 2%.
- The parasite index of malaria in the priority areas of islands other than Java and Bali was reduced from 4.3% to 2.7%.
The progress of primary health care must be continually monitored to determine its strengths and weaknesses and in order to overcome setbacks and correct deviations. Initial studies showed that there was too great an emphasis on hospital-based activities at the expense of community-based activities, and this led to a recommendation for administrative reforms.

Community-based activities enable a strong emphasis to be placed on promotive and preventive activities and encourage people to develop their ability to help themselves. They are then released from total dependence on professional health workers.

Community participation deserves the support of general practitioners and medical specialists because all the activities performed by village health volunteers should be controlled by professional health workers.

Sidoarjo district

As an example of health care delivery in a district in Indonesia we shall consider Sidoarjo in East Java. Java is the most overcrowded island in the world. With a population of 110 million, it contains two-thirds of the total population of Indonesia. The most densely populated area is the province of East Java, which has a population of 31 million. The district of Sidoarjo, comprising 18 subdistricts and 353 villages has a population density of 1451 people per km². Per capita income in 1986 was US$ 233, but literacy is high, at 90%.

The district is served by 44 general practitioners, 7 medical specialists, 20 dentists, 116 midwives, 180 assistant midwives, 47 assistant nurses, 22 health inspectors, 18 sanitarians, 3 pharmacists, and 9 laboratory technicians. There are 367 traditional birth attendants, 87% of whom have been trained by health workers, and 7696 village health volunteers, nearly three-quarters of whom are active.

The total operational cost of health development in the district is Rp. 977 544 000 (approximately US$ 600 000), nearly half of which is spent on 268 drugs, most of them essential.

There are 1006 integrated family planning and health posts in the district, so each village has at least two posts. The distance between health centres is less than 5 km. All villages can be reached by car or motorcycle. Only a third of the people attending health posts come from more than 200 m away. Nearly
half the people attending a health centre come from less than 1 km away, and only 6% have to travel more than 2.5 km. To visit a hospital, only 7% of people have to travel more than 8 km.

Most of the people visit the health posts for preventive care, less than 2% come for curative care. The importance of health centres, health subcentres, and hospitals as centres for preventive care is less than that of the health posts because a much smaller proportion of the people who visit health centres, hospitals, and health subcentres do so for preventive care, the figures being 27%, 24%, and 9% respectively.

On average, each person in the district spends more than US$3.6 a year on primary health care compared with less than US$1 per capita allowed in the government health budget.

Health development in the district is carried out on the basis of cross-sectoral cooperation, community participation, political commitment, local government financial support, and adequate health manpower.

The main obstacle to health development is the inadequate budget allocated by the government, but this might be largely overcome by improving management of various infectious diseases, especially acute respiratory infection and diarrhoeal diseases, the main causes of morbidity and mortality. Mild cases of acute respiratory infection are usually self-limiting and only supportive measures are needed without any antimicrobials. Mild cases of diarrhoea can be treated with home-made fluids only, without oral rehydration salts or antimicrobials. However, antimicrobials may still be used for treating mild cases of acute respiratory infection and diarrhoeal diseases, as reflected by the high amount of money spent on drugs. The irrational use of antimicrobials is a waste of funds and causes adverse side-effects and the emergence of drug-resistant bacteria. During the present economic recession, rationalization of the use of drugs may be one of the best and easiest ways of increasing efficiency. In the near future a booklet on improved management of acute respiratory infection and diarrhoeal diseases will be distributed to health professionals throughout Indonesia.

A better understanding of the impact of the primary health care approach is obtained by comparing the data on the health situation in the district for 1978 with those for 1986. These are given in Table 2.

Even in the district of Sidoarjo, which is regarded as one of the best districts for primary health care implementation, the
### Table 2. Achievements in implementing primary health care in Sidoarjo district

<table>
<thead>
<tr>
<th>Component</th>
<th>1978</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy rate</td>
<td>Low</td>
<td>90-95%</td>
</tr>
<tr>
<td>Training of traditional birth attendants</td>
<td>Not begun</td>
<td>87% trained</td>
</tr>
<tr>
<td><strong>Nutrition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children 0–4 years</td>
<td>Nutritional assessment not well developed</td>
<td>Severe malnutrition 0.5% Undernutrition 35%</td>
</tr>
<tr>
<td><strong>Hygiene</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safe water supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>rural areas</td>
<td>23%</td>
<td>46%</td>
</tr>
<tr>
<td>urban areas</td>
<td>39%</td>
<td>71%</td>
</tr>
<tr>
<td>Latrines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>rural areas</td>
<td>18%</td>
<td>30%</td>
</tr>
<tr>
<td>urban areas</td>
<td>21%</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Population ratios</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctors</td>
<td>1: 76,000</td>
<td>1: 19,500</td>
</tr>
<tr>
<td>Midwives</td>
<td>1: 10,000</td>
<td>1: 7,500</td>
</tr>
<tr>
<td>Nurses</td>
<td>1: 13,000</td>
<td>1: 5,000</td>
</tr>
<tr>
<td>Dentists</td>
<td>1: 95,500</td>
<td>1: 43,000</td>
</tr>
<tr>
<td><strong>Maternal and child health</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliveries attended by:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>health professionals</td>
<td>47%</td>
<td>55%</td>
</tr>
<tr>
<td>trained TBAs</td>
<td>–</td>
<td>43%</td>
</tr>
<tr>
<td>untrained TBAs</td>
<td>53%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Control of endemic diseases</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diarrhoeal diseases</td>
<td>Endemic. Fatality rate 14.9 per 1000 cases</td>
<td>Still endemic. Fatality rate 0.2 per 1000 cases</td>
</tr>
<tr>
<td>Dengue haemorrhagic fever</td>
<td>Endemic. Fatality rate 10.2 per 1000 cases</td>
<td>Still endemic. Fatality rate 5.7 per 1000 cases</td>
</tr>
<tr>
<td><strong>Management of common diseases</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intravenous solution for all dehydrated cases at hospitals and health centres</td>
<td>Intravenous solution for some dehydrated cases at hospitals and health centres</td>
<td></td>
</tr>
<tr>
<td>Both oral rehydration salts and home-made fluid widely used</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2. (Contd.)

<table>
<thead>
<tr>
<th>Component</th>
<th>1978</th>
<th>1986</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Management of common diseases (contd.)</strong></td>
<td>Irrational use of antimicrobials for treating mild cases of acute respiratory infection</td>
<td>Irrational use of antimicrobials for treating mild cases of acute respiratory infection</td>
</tr>
<tr>
<td></td>
<td>Irrational use of antibiotics and antidiarrhoea agents for treating diarrhoea cases</td>
<td>Persisting occasional irrational use of antibiotics and antidiarrhoea agents by some health professionals for treating diarrhoea cases</td>
</tr>
<tr>
<td><strong>Immunization</strong></td>
<td>Limited coverage based on available budget. EPI just beginning</td>
<td>Coverage of target population</td>
</tr>
<tr>
<td></td>
<td>BCG 76%</td>
<td>DPT-3 55%</td>
</tr>
<tr>
<td></td>
<td>polio-3 56%</td>
<td>measles 45%</td>
</tr>
<tr>
<td><strong>Provision of essential drugs</strong></td>
<td>Not widely used</td>
<td>Not widely used</td>
</tr>
</tbody>
</table>

Health system needs to be strengthened if the rapid growth of community participation is to be sustained. The support given to village health volunteers should also be increased in order to secure the level of community participation needed to reduce the endemicity of diarrhoeal diseases and dengue haemorrhagic fever.

**The future**

The long-term prospects for health development in Indonesia may be discerned in the objectives of the development programme formulated in 1982. The ability of a large number of communities to improve their own health by their own efforts is increasing steadily, and there is a corresponding increase in the number of integrated family planning and health posts and in the ten-family system of care.
People are becoming more aware of the prime importance of the environment. They are learning that a harmonious relationship between people and their environment provides a basis for good health. Private organizations for promoting environmental health are not uncommon in Indonesia, and, while there is now an awareness of the need to improve environmental health as a whole, the emphasis at present has to be given to environmental sanitation as a means of preventing infectious diseases associated with low standards of personal and public hygiene. A relatively rapid process of industrialization is underway in Indonesia, with all its implications, including industrial pollution. However, community participation in environmental health is keeping pace with it.

The success of agricultural development, which has been given the highest priority since the first five-year national development plan, is the strongest foundation for improving the nutritional status of the community. A steady increase in agricultural production is the best guarantee of food availability throughout Indonesia. A forum to coordinate efforts to improve family nutritional status was established in 1970, with representatives from the Ministry of Health playing an important role.

In the long term, the ability of communities to improve their own health status through self-help, a cleaner environment, and a better nutritional status will reduce both morbidity and mortality. Reduced mortality will have a positive impact on fertility, because the child survival rate is linked to birth rate. A high survival rate is usually associated with a low birth rate, so the integrated family planning and health approach will develop healthy small families.

At present Indonesia is still facing an economic recession. We are trying to make the best of it by finding hitherto hidden resources and by increasing efficiency. When the recession is over we shall continue our national health development, with an additional fund from the new resources that have been uncovered and with greater efficiency. We have learned in the field that large-scale development schemes planned only by health professionals without popular participation usually fail. The nationwide latrine development project and the dengue haemorrhagic fever control programme can be taken as examples. At the beginning of the latrine development project, a large number of latrines were constructed by various private contractors without community participation. The people had taken no active
part in constructing the latrines and did not appreciate the improvement they offered in environmental sanitation. Most of the latrines were not used. A better result was then achieved with community participation. Dengue haemorrhagic fever had spread out from Surabaya, West Java, where it was detected for the first time in 1968, to all provinces of Indonesia except East Timor. The control of the vector-borne disease was not as successful as it should have been because only the fatality rate was reduced, not the morbidity. Proper control was found to be possible only with the participation of the community in eliminating the breeding places of the mosquitos that carried the disease.

Until now the new resources discovered in Indonesia have not been used for health development. The time has come to develop a social financing system and use these resources to support the provision of health services at all levels.

During the fifth five-year national development plan, which started in 1989, health care delivery will involve both professional and nonprofessional health staff working side by side in the community and with individual families. An effort will be made to develop a new orientation in the health profession towards the full support of nonprofessional health workers as the principal means of promoting community self-reliance in health development. An important aim will be to encourage people to adopt a healthy life-style, which will reinforce the continuous improvement in the quality of life.

The targets to be attained by the year 2000 will not be beyond reach because of the steady improvement in the ability of every member of the community to live a healthy and productive life.
When news of the Declaration of Alma-Ata reached us in Malaysia, our initial reaction was: “So what’s new about that?” We felt that we as a nation had been committed to the concepts expressed at Alma-Ata since our independence 20 years earlier, and that Alma-Ata and WHO slogans would not make any material difference. The years since Alma-Ata have shown that this was not true. Ours is a story of how the concepts spelt out in 1978 helped us to progress more rapidly and more efficiently towards the goal of health for all. This chapter is not a comprehensive country report; rather it is intended to provide analytical glimpses of some critical features that have characterized our progress.

Two decades of development

Malaysia is a federation of 13 states with a population of 15.7 million, a land area of 329,293 km², and an average density of 48 people per km². The density varies from 12 per km² in Sarawak, the most rural state, to 1018 per km² in Penang, a highly
urbanized island state. At the time of independence, services were largely urban and curative, there were no specific nationwide control programmes for the major endemic communicable diseases, and there was an acute shortage of trained medical personnel at professional, paramedical, and auxiliary levels. After independence, the health services became mainly a central government responsibility, with delegation for service delivery through state and district health administrations, the former covering populations from 500,000 to 1,800,000 and the latter covering populations of 20,000 to 650,000.

During the two decades that followed independence (1957–77), political stability and a buoyant economy facilitated the planning and implementation of a series of national five-year development plans, in which the development of the health sector was an integral component. Considerable effort went into rural development, improved communications, and education. In the health sector, the focus was on rectifying the imbalance in the distribution of services between urban and rural areas and between states, giving priority to preventive services, particularly maternal and child health and the control of communicable diseases, and to training personnel, with the emphasis on the rapid production of large numbers of paramedical staff who provided the bulk of primary health care.

The health infrastructure was expanded rapidly, particularly in the rural areas. By 1978, there was a relatively well developed public-sector health service consisting of a rural network of midwives’ clinics each serving about 2000 people, rural health centres and health subcentres serving 10,000–50,000 people, urban-based district hospitals with 150–400 beds, and general hospitals with 500–2000 beds, which provided general outpatient care, inpatient care, and specialist services, and served as referral centres for the district or state. The basic services provided through the rural health service network were outpatient care for common diseases, maternal and child health care, communicable disease control, environmental sanitation, dental care, health education, simple laboratory work, and the maintenance of medical and health records. Whereas in 1960 only 8% of the 5 million rural population were covered by this network, by 1974 the coverage had increased to some 40% of the 7 million rural population. Despite a population increase from 7 million in 1960 to 10 million by 1975, the rural health centre/population ratio was 1:23,700 and the midwife clinic/population...
ratio was 1:4300. Similarly the doctor/population ratio rose from 1:6600 in 1960 to 1:4100 in 1977.

During these two decades, not only had health services expanded to cover a much greater segment of the poor but their scope had increased. For example, the rural midwife, the most peripheral of the health care providers, was retrained to become a community nurse, who provided care for minor ailments as well as all the basic elements of maternal and child health care. A food and nutrition programme was started in districts with poor health status, a school health programme was initiated, and family planning and malaria and tuberculosis control were integrated into the basic health services at the periphery. Meanwhile the hospital services were being upgraded. Although the overall bed/population ratio remained at 1.6 per 1000 throughout 1970–80, the ratio of beds to population improved in five of the eight states that had been most disadvantaged in this respect in 1970. Moreover the specialist services expanded from 121 units in 1970 to 220 units in 1980.

These developments had a dramatic impact on health status. Between 1957 and 1977, the infant mortality rate decreased from 75.5 to 31.8 per 1000, the mortality rate of one- to four-year-olds (toddlers) decreased from 10.7 to 2.9 per 1000, and the maternal mortality rate decreased from 3.2 to 0.8 per 1000.

The Malaysian situation in 1978

By 1978, the elements of many of the primary health care strategies enunciated at Alma-Ata were already evident in the Malaysian health care system. For example, concern for reducing the inequity in access to health care and for increasing coverage had been the underlying aims since independence and had been formalized in 1971, when the Government adopted a 20-year perspective plan known as the New Economic Policy aimed at reducing (and eventually eradicating) poverty and accelerating the process of restructuring society. The health sector had had to focus on the problems affecting the poor. In addition to the rural communities, the urban poor had become the focus of attention.

Similarly the need for effective intersectoral coordination to support development had been recognized as early as the 1960s, and an effective mechanism had been set up for this
purpose. The Prime Minister’s Department coordinated efforts through a National Action Council, which was political, and a National Development and Planning Committee, which had an executive function. Specific units in the Prime Minister’s Department (Economic Planning Unit and Implementation Coordination Unit) were set up to coordinate and monitor development. This coordinating mechanism was replicated at state level (state development committees and state action councils), at district level, and at village level (village development and security committees). At each level there were representatives not only of the various government sectors but of the community. Among the techniques found to be highly effective in this coordinating mechanism was the “operations room” technique, whereby a nerve centre was set up at each administrative level to monitor closely the performance of all agencies and to allow information to be shared between sectors. Agencies had to report regularly to the National Action Council on their progress. One illustration of the effectiveness of this technique is that the period taken for land acquisition for development projects was reduced from about 27 months to about 4 months. The development planning network provided not only a means of effective coordination but also a forum for expressing needs and demands as perceived at grass-roots level and as a means of demonstrating the Government’s political commitment. The district and village committees as well as the mass media served as “listening posts” for the development process. Full use was made of the information provided through the health information system and from special surveys on accessibility and utilization of health facilities and patterns of health behaviour. At grass-roots level, the village development and security committees provided the structure for community participation, on which many health programmes depended—particularly rural environmental sanitation, applied food and nutrition, and the disease control programmes.

A fresh look at ourselves

Consequent to Alma-Ata in 1978, after the initial resistance to new ideas, we took a fresh look at ourselves. After our spectacular development efforts, how far had we progressed towards the goal of health for all? In 1978–80 a survey was carried out in
every district in the country to identify areas that were not yet served by static physical facilities and to identify community resources in these areas that could be used as entry points for providing basic health care. Twelve per cent of the population of Peninsular Malaysia and 40% of the population of East Malaysia were classified as underserved. As a consequence of this information, mobile health teams were formed to visit underserved villages once a fortnight to provide basic medical care and maternal and child health care. In addition, maternal and child health care was extended beyond the clinic, through collaboration with other community workers such as extension workers in the rural development programme. Schoolteachers were trained in first aid with assistance from the Red Crescent (the Malaysian equivalent of the Red Cross).

A review of the status of maternal and child health showed that in 1987, although maternal, infant, and toddler mortality rates had declined dramatically on a national basis, there were still many districts in which they were unduly high. Ten per cent of deliveries were still being conducted by traditional birth attendants.

Diphtheria rates had declined, but in 1977 there had still been 53 notified cases and 15 known diphtheria deaths. Only 52% of infants had received all three doses of triple antigen.

Similarly a review of the rural environmental sanitation programme showed that by 1979 only 30% of the rural population in Peninsular Malaysia had a safe water supply and only 42% had sanitary latrines, compared to the target of 50% envisaged in the health development plans. Shortfalls in the programme were attributed to logistic problems, inadequate supervision, and poor personnel performance. In 1978, cholera and enteric fevers were still occurring at the rate of 14 per 100,000.

It was evident that a change in approach in the development of the health sector was needed. Whereas in earlier years major gains in health status had been achieved by efforts to correct the imbalance in the provision of services between geographical areas and between preventive and curative services, further gains would be achieved only if the system became more effective in identifying problems and applying appropriate strategies.

One of the side-effects of the rapid development of the health services and the rapid production of large numbers of personnel was that, at district and even at state level, there was an
overdependence on instructions, procedures, norms, and formats generated at national level. Staff tended to do what they had done before (or what their predecessors had done) without questioning whether it was appropriate or even necessary. Most of the staff at district level were in the same age group, and their level of experience was similar. There was no one to provide leadership—least of all the District Medical Officer of Health, who was often untrained and only in transit to his or her next posting.

It was evident that the primary health care strategies most relevant to the Malaysian scenario would be those that concentrated on improving the effectiveness of preventive and promotive programmes, decentralizing managerial processes (particularly in decision-making, personnel management, and budgeting), and encouraging better coordination and community participation. In other words, although an appropriate health care system was in place, it needed to be "fine-tuned" to respond to complex and varied demands.

"Fine-tuning" the health care system

During the first five years after Alma-Ata, a number of strategies were adopted. Maternal and child health was an area of priority. The health information system revealed that the main cause of maternal mortality was postpartum haemorrhage occurring in the home. Although antenatal procedures were supposed to identify mothers at high obstetric risk and refer them to hospitals, many high-risk mothers continued to deliver at home, often under the care of traditional birth attendants. A training programme was therefore launched for traditional birth attendants using a pictorial manual that not only illustrated the basics of hygienic delivery but also emphasized recognition of high-risk mothers. The traditional birth attendants were registered and supervised by the staff through a system of monthly checking of delivery bags and birth records. By 1985 training had been given to 1027 of the 1988 registered traditional birth attendants. Simultaneously, the deliveries they carried out had declined from 10% in 1980 to 4.6% in 1985.

Most of the nurses working in the rural health services had been trained under a curriculum that was essentially hospital-oriented. Although a one-year postbasic course in public health
nursing was available, few of the nurses were willing to apply for it, so a special eight-week course in family health was designed, with emphasis on the requirements of the rural health services. By 1985, this shorter course had been attended by 345 nurses.

Another problem was inadequate communication between the rural maternal and child health services and the obstetric and paediatric services in hospitals, resulting in problems in referral of high-risk patients to hospitals and subsequent follow-up. It was realized that the quality of the family health programme would be greatly improved if the obstetricians and paediatricians from the hospitals became involved. Therefore maternal and child health committees with representatives from hospitals as well as the rural services were set up (or reactivated) in each state. These committees investigated every maternal and infant death and coordinated local training sessions for staff in health centres.

Between 1980 and 1984 the maternal mortality rate declined from 0.63 to 0.39 per 1000 deliveries. Subsequently, in 1986–87, the risk-approach strategy was reviewed by a national joint conference of obstetricians, paediatricians, and rural maternal and child health staff and a number of procedures developed to improve the detection of mothers most at risk. Other procedures were developed for the intensive monitoring of such mothers in order to ensure that they received the level of care most appropriate to their condition—namely, the attention of a hospital doctor, a medical officer at the health centre, or a midwife at the community clinic (1). Simultaneously, in a number of areas with high maternal mortality, the village development and security committees were recruited into the efforts to obtain community support to ensure that high-risk mothers obtain the care they require. It is hoped that by these efforts preventable maternal deaths will be completely eliminated.

Strengthening management at district level

In 1981 the Ministry of Health adopted a policy of strengthening management, particularly at the middle level. It was recognized that the ability of managers to resolve problems depended on their attitudes, their management skills and style, and their perceptions of their own roles. A management training programme was initiated to develop problem-solving and decision-
making skills among managers at state, district, and hospital levels. The training focused on teams rather than individuals because experience had shown that a trained individual returning to an inhospitable managerial climate in his or her organization was seldom able to initiate organizational change. It was hoped that the team approach would rapidly create a critical mass capable of initiating change that would be responsive to the needs of specific problems and environmental situations (2). The health information system was strengthened to provide timely information on trends in health service utilization and on health status. Health systems research was adopted as a tool that could support decision-making by providing information specific to the local situation. Health service personnel were trained to take part in this research at an appropriate level. For example, in one district a team studying the reasons for low coverage by measles immunization found that measles was regarded as a harmless and “natural” disease of childhood, not only by mothers but by clinic staff as well, many of whom had not had their own children immunized. As a result, efforts to improve immunization coverage started with an intensive education campaign on the dangers of measles, directed at the staff of the clinics, including cleaners and receptionists (3).

Concurrently with these training approaches, budgetary control was decentralized from the state to the larger hospitals so that managers would be given not only the responsibility for initiating change but also the authority to do so. Thus, in addition to requesting their funds, they now became responsible for deciding how to spend them. They were also to be accountable for the efficiency of their units and for their impact on health status.

Involving hospitals in primary health care

It was realized that many of the decisions influencing the cost of the health services and the funds available for preventive programmes were being made in the hospitals. So a systematic programme was introduced in 1984 to educate and motivate clinicians on their managerial responsibilities and draw them into the mainstream of decision-making. A series of conferences was organized for specialists in various disciplines, concentrating on strategies to improve the quality of services. The sub-
jects discussed included the improvement of coordination in referrals, the management of emergencies, the use of expensive antibiotics, and the type of laboratory and radiological examinations that should be considered routine. A committee of specialists prepared a standard list of drugs that should be available in public-sector patient-care facilities throughout the country. The list was divided into three categories in accordance with the seniority of the prescribing officer—namely, medical assistant, medical officer, or specialist. This served to reduce the wastage of drugs due to differing patterns of prescribing by doctors who worked in the facility for only a short time. It also improved medical care, particularly in the rural health centres, because patients requiring more complex care now had to be referred to the doctor.

A system of quality assurance was introduced in 1986 aimed at ensuring “the achievement of optimum impact on the health of the patient and community within available resources” (4). Clinical specialists in each discipline identified the indicators of quality of care—e.g., typhoid case-fatality rate in hospitals (general medicine) and incidence of eclampsia (obstetrics). Data on these indicators were collected from every hospital twice a year. Hospitals were divided into two categories—those with specialist services and those without—and all hospitals within a category were compared with each other. Those in which an indicator showed an extreme value were termed “outliers” and were required to investigate the reasons for their performance systematically and to report to state and national quality-assurance committees on their findings and on any remedial measures they had taken. This process has stimulated specialists throughout the country to take a greater interest in training and supervising young medical officers and in preparing them for the management of common conditions. In the words of a medical officer in charge of one of the more remote district hospitals, “The obstetrician and the paediatrician from the general hospital in the state capital have now started visiting us regularly, and when they come they spend time teaching the medical officers. Also, it is now easy for me to send my doctors for short periods of training in the general hospital and I have already arranged for one doctor to have such training in anaesthesia and another in neonatal paediatrics. We are all concerned that we should not be the outlier hospital in the next round of quality assurance monitoring.”
Changes at district level

Our narrative now shifts to the grass-roots and district levels, using as examples, the districts of Batang Padang and Kuala Muda/Yan in the States of Perak and Kedah. In each of these districts the medical officer of health has worked continuously over most of the past decade, and it is therefore possible to obtain insights into the changes that have occurred.

The land and the people

The districts concerned are both predominantly rural but have geographical, demographic, and occupational differences.

Lying along the foothills of the main range in Tapah is the district of Batang Padang. Around 55% of its total population of 148,000 are Malays. A feature of the demography of the district is that near Slim River there are several orang asli settlements, which have their own specific health problems. The majority of the population are agricultural workers, and there are four recently developed land schemes with a population of around 6000, again with their own specific health problems.

Kuala Muda and Yan have a population of nearly 300,000, of which Malays comprise 75%. Many of the people in Kuala Muda work in the rubber estates, which have recently been fragmented and no longer provide health services. That responsibility now falls on the government health departments. Yan, on the other hand, is a coastal area with paddy growing and fishing as the main occupations.

The people and their health

What was the health status of the people of these districts in 1978–79 and what were the health facilities available to them? How much improvement was there in the decade that followed? Table 1 provides some health status indicators for these two districts.

Although travelling dispensaries were a long-standing feature of the health services, the needs of pockets of population were not being adequately met. For example, the 1978 survey of underserved areas showed that in Kuala Muda/Yan there were
Table 1. Health status indicators for the Kuala Muda and Batang Padang districts

<table>
<thead>
<tr>
<th></th>
<th>Kuala Muda/Yan</th>
<th>Batang Padang</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1980</td>
<td>1984</td>
</tr>
<tr>
<td>Crude birth rate (per 1000 population per year)</td>
<td>29.4</td>
<td>21.7</td>
</tr>
<tr>
<td>Crude death rate (per 1000 population per year)</td>
<td>6.15</td>
<td>3.7</td>
</tr>
<tr>
<td>Maternal mortality rate (per 1000 deliveries)</td>
<td>0.47</td>
<td>1.14</td>
</tr>
<tr>
<td>Infant mortality rate (per 1000 live births per year)</td>
<td>31.17</td>
<td>23.73</td>
</tr>
<tr>
<td>Facility/population ratio</td>
<td>1:7000</td>
<td>1:5500</td>
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still 23 villages classified as underserved (i.e., not within 5 km of a fixed health facility along a gravel road or navigable river or where no members of the village were known to have received any of the basic services offered by the rural health network). The health department had to devise immediate strategies to respond to the situation. Redeployment of resources and streamlining of the services seemed to be the key.

A nationwide review of resources found that the vehicle used for mobile services in Penang (an adjacent state) was under-utilized. It was immediately deployed to Kuala Muda/Yan. A health team was put together by redeploying manpower from other districts led by the nursing sister from Sungei Petani. These efforts proved to be very timely, because the mobile health team was able to serve not only the underserved villages but also the rubber estates. Unlike the earlier travelling dispensaries, the mobile health team provided maternal and child health care as well as curative services. It included a doctor in addition to the medical assistant and health nurses. By 1986, the district was able to report that no village was underserved, as defined by the 1978 criteria.

The history of the management of travelling dispensaries and of the subsequent mobile health teams illustrates another common problem in management at district level. The travelling schedules of the dispensaries were established 10–15 years ago, but the mobile health teams were established after the 1978
survey and their travelling schedules were based on data from that survey.

Since 1978 questions have been voiced from time to time regarding the usefulness of these mobile services, and in 1985 a district health officer stationed near Batang Padang initiated a health systems study on the utilization of the travelling dispensaries and mobile health team in her district. It showed that, while the mobile health team visited remote villages and was well utilized, the travelling dispensaries were continuing to serve villages that by now had easy access to static facilities and were consequently little used. The travelling schedules set up many years ago had simply not been reviewed. The findings were presented at the monthly meeting of district health officers, and every district instituted a periodic review of its mobile services with the aim of revising schedules or even of terminating services and redeploying the staff to busy static facilities (5).

Mothers and children

Mothers and children form 40% of the population and are the most vulnerable group. Much emphasis has accordingly been placed on expanding the rural health services to provide better coverage with maternal and child health services. An effort has also been made to achieve a greater effectiveness of the services through decentralization of management, innovative thinking, and community participation.

In the districts under study, a number of changes have taken place since 1978. Five additional buildings have been constructed in Kuala Muda/Yan and two in Batang Padang to serve as the nerve centres for maternal and child health services. Similarly, the number of telephones in the rural health network has increased from two to seven in Kuala Muda/Yan and from one to five in Batang Padang. An extra public health nurse and an assistant nurse have been assigned to each district. Junior clerks have taken over the tasks of reception and records, while junior laboratory assistants have taken over simple urine and blood tests, thereby releasing nursing staff to provide more direct care. A doctor and a health sister have been posted in each main health centre.

Doctors and nurses have attended in-service training in family planning, and the district medical officers of health were
sent for postgraduate training in public health. More vehicles have become available, and midwives have been given motorcycles to travel to the more remote areas.

What effect did these improvements have on the quality of the services? One of the reports of 1979 from Kuala Muda/Yan noted that antenatal check-ups were being done by nurses in the rural health clinics, and that mothers were sent to the district hospital for at least one check-up. However, a number of problems had led to mothers refusing to attend the hospital session. They complained that they had to wait for almost a day when they attended this session. Most mothers complained that the examination was not thorough, and many of them refused to go for the second check-up at 36–38 weeks gestation, as advised by the obstetrician. Staff complained that there was no feedback from the hospital when they referred cases there, in spite of the fact that patients were referred with a form that required a reply. Most of these problems were solved when a doctor was posted to the health centre in October 1979.

If you can't beat them, get them to join you

It was noticed in the early 1980s in Kuala Muda/Yan that the proportion of unsafe deliveries was still as high as 30%. Unsafe deliveries were home deliveries attended by unqualified traditional birth attendants, and many of these deliveries involved high-risk cases. The traditional birth attendants knew that they should not accept such cases, so they would attend the mother until the birth occurred and then call the government midwife to cut the cord. These "born before arrival" cases amounted to 10% of all home deliveries and were a constant source of worry. There were four maternal deaths in 1983, two caused by postpartum haemorrhage, one by puerperal sepsis, and one by postnatal eclampsia; all the deaths were preventable. The district annual report for that year reads:

All born-before-arrival cases should have been hospital deliveries. However, for personal reasons mothers refuse. Warning letters have been given to 16 traditional birth attendants who are unregistered. They have been visited, and dialogues have been held between health staff, the traditional birth attendants, and the village development committees. This problem is difficult to overcome. Staff in the district have tried many methods; they have to be supervised closely to intensify efforts at changing people's attitudes.
A no-nonsense report indeed—but one that did nothing to overcome the problem, because it was one of human relations. The health staff finally realized that human problems required human solutions. They saw that their rapport with the traditional birth attendants was poor. Nurses were then advised not to be prejudiced against the traditional birth attendants but to join them to enlist their cooperation. A party was held for all traditional birth attendants and government midwives, and when the atmosphere had become relaxed the Midwives Act was explained to the traditional birth attendants and they were given a list of dos and don’ts. The party helped to establish better relationships all round, and the health staff learned to look on the traditional birth attendants as partners. The percentage of unsafe deliveries dropped from 29.5 in 1978 to 6.5 in 1986.

Another strategy introduced to safeguard maternal health was the risk approach. All high-risk maternal cases were put on a priority list and their cards tagged with a red slip. These patients were given priority for home visits and follow-up and were required to deliver in hospital. However, the mothers could not be persuaded that they were in fact at risk and continued to deliver at home. Fortunately the decentralization of management gave local health authorities the liberty to make decisions to suit the local situation. When a high-risk mother insisted on delivering at home despite efforts to convince her of the dangers, she was persuaded to engage a trained government midwife to attend the delivery rather than a traditional birth attendant. This system has worked well. The government midwife is able to detect an impending problem and call for help or send the mother to hospital.

Procedures are not enough

Another effective strategy was the setting up of district maternal and child health committees, which investigate every maternal death. One of the most positive results of these investigations is that staff have become flexible and resourceful in their approach to dealing with emergency situations. This could save lives. For example, when one maternal death through haemorrhage was investigated it was found that the midwife on duty had just followed routine procedure. When faced with a complication she had called an ambulance and sent the patient to the nearest hospital. She had not thought of calling any of the
trained nurses who were available at nearer points. A new procedure was therefore introduced whereby midwives were required to call a staff nurse immediately from the nearest health facility if they detected a complication developing. The staff nurse had to set up an intravenous drip before sending the patient to the hospital.

On another occasion, a staff nurse had detected a complication developing and had tried to get the ambulance from the health centre to take the patient to the hospital. Unfortunately it was not available, and considerable time was wasted trying to get private transport. It is an illustration of the chasm between the health and hospital services that it did not occur to her to get transport from the hospital itself.

Primary health care workers, being the first line of contact with patients, need to be alert and quick-thinking. They need to respond with innovation and common sense. They will be able to do this only if management is decentralized enough to encourage independent action. If authority is delegated to the lowest possible level, frontline workers will have the confidence to respond creatively to emergency situations as they will be accountable only to those who are familiar with the local scene. The district maternal and child health committee was able to give this confidence to frontline workers.

Of cold fingers and warm vaccines

The immunization of children against preventable diseases has been promoted internationally. But the implementation of an immunization programme is a complex matter heavily dependent on efficient transportation systems and modern technology. In 1978, many of the midwives' clinics and health subcentres had no refrigerators. Vaccines were obtained from the state store, carried in polythene bags in a bed of ice cubes and put in the health office refrigerator. These refrigerators were used for many purposes, and scant attention was paid to storing the vaccines at the correct temperature. When there was a power failure, no other cold store was available for the vaccines.

Since then, refrigerators have been provided in all clinics and a district store has been established with a proper freezer. A vehicle has been placed at the disposal of the pharmacist to bring the vaccine quickly from the state to the district store, the
vaccine being transported in a vacuum flask fitted with a maximum and minimum thermometer. Alternative cold storage is available in the event of a power failure.

We have come a long way, and today the cold chain for vaccines remains unbroken in Malaysia. A senior sister laughed as she recollected the primitive fashion in which vaccines were handled in earlier days.

"I still remember transporting the vaccine in a polythene bag. The vehicle in which I travelled would have several missions to accomplish and no priority was given to the safe transport of the vaccines. After going all over the place I would finally arrive at my destination clutching a bag dripping with melted ice cubes, my fingers numb with cold."

Yes, we have come a long way indeed!

Management in the hands of all

"Two heads are better than one" is as true an adage as any. Technology has ensured the potency of the vaccines, but the delivery of the immunization programme is still in human hands.
Looking through the immunization records of the various clinics, the doctor in the district of Kuala Muda/Yan saw that the coverage was far from satisfactory. There was an adequate supply of vaccines, her staff were trained, immunization services were available several days a week, and still the figures were falling short. She decided to bring up the issue at the next staff meeting of district staff nurses. These meetings had changed character since she had attended a management workshop and been introduced to concepts of participative management; they were now generating a lot of good ideas.

At the meeting her nurses brainstormed on the poor attendances and came up with several new ideas, which were immediately put into effect. The areas of worst coverage were identified and toured by mobile teams so that the nurses could carry out an intensive campaign of home visits. But the most innovative idea was to invite the mothers to compete in a cooking demonstration. This was successful in two ways. Firstly, the mothers learned about nutrition, because the nurses provided each of them with a list of food items that would make a balanced diet. Secondly, because the mothers brought their children along, this gave an opportunity for the nurses to examine and immunize them.

A further strategy that helped to improve the efficiency of the immunization programme was to invite each nurse, at the staff meetings, to set her own target according to the local situation instead of adopting a standard target for the whole district. Because of this, the staff implemented the programme with enthusiasm, and a spirit of competition was generated.

In recent years, other measures have been introduced at the national level to improve immunization coverage. For example, the list of contraindications for immunization has been reduced. In the past, even a slight cold, cough, or skin infection was considered as a contraindication. Now immunization can be given in the presence of such infections.

Children who have defaulted from immunization now have their cards tagged to indicate priority, and more home visits are made to them. Figures on immunization are now obtained from private doctors and army camps, and this strengthening of the information system gives a better picture of immunization coverage.
Where are all the children?

A nurse had been newly appointed at the maternal and child health centre. After a few weeks, she began to worry about the poor response to the call for immunization and decided to have a chat with the mothers. What she discovered gave the doctor in charge of the clinic a great deal to think about.

The clinic had been guilty of providing services to the people on its own terms. Since the rules said that the vaccine had to be used within four hours of opening the vial, the procedure was to wait for a crowd to gather before starting the immunization. But the mothers were not prepared to wait.

The problem was that the vials contained 10 ml of vaccine, and any that remained after the four hours had passed was wasted. Returns were sent to the state on wastage of vaccines, and the district did not want to be high on the wastage list.

The medical officer of health decided to change the policy and leave it to the discretion of the staff to open a vial as and when necessary—the emphasis was to be on coverage and not on preventing wastage. A further consequence of this line of thinking was to replace the 10 ml vials with 5 ml ones.

The lesson to be learnt is that efficiency can sometimes be at the expense of effectiveness and that people need to be served on their terms. This is a lesson that never gets out of date.

In a more recent investigation into the factors responsible for failure to achieve immunization targets, we found that although the average child has more than six contacts with the health system before the age of one year, these contacts are not adequately used for immunization.

Appropriate technology and community participation

Another development that district staff became excited about was the gravity-feed system of water supply, which has given new life to the environmental sanitation programme through the application of appropriate technology. The national environmental sanitation programme started during the years of active rural development. By 1978 its principles were well defined. Rural communities were encouraged to build sanitary latrines and wells and construct simple systems for the disposal of waste.
water and solid refuse. Health inspectors provided technical guidance in these efforts, while the village development and safety committees organized the villagers to contribute manpower through traditional *gotong royong* (self help), whereby the men provide the voluntary labour force on appointed days and the women cook a feast for them. Latrine bowls and well rings were bought with a contribution of cash from the community augmented by assistance from the government. Local materials were used for the rest of the construction.

Although considerable progress was made in upgrading rural sanitation, by 1978 only 28.8% of the rural population in Batang Padang district had sanitary latrines and only 12.4% had a safe water supply. The sanitation programme had lost momentum. In general, the villagers were not very interested in it. Their prime interest had been in obtaining convenient and sufficient water, but the community wells were not much more convenient than the shallow, unprotected, insanitary wells they had used previously. Abundant rainfall kept the insanitary wells functioning, and in fact some householders continued to use them even after the community had provided safe water. Health staff were discouraged because their health education efforts appeared to have fallen on deaf ears and waterborne diseases continued to be widespread.

In 1978, a new concept in rural water supply was introduced. The jungle-covered hills of Batang Padang had many streams that were untouched by human activity. Villages nestled in the valleys below these hills, but the thick equatorial jungle and the steep gradient prevented villagers having access to the streams. A gravity-feed system of water supply was devised whereby a small dam was built across a suitable stream and water was piped down to the village. For a small fee, householders could obtain a household connection to this pipeline, and for the first time they could have clean running water from a tap in their own homes.

The village of Kampong Poh with a population of 1000 was chosen for the first gravity-feed project because it had a strong community organization, the village headman and the village development committee were very active, the Department of Public Works had no plans to provide piped water to the area during the next five years, and there was a suitable stream in the hills above the village. The health inspector made a preliminary topographical survey, drew the plans for the proposed project,
and submitted them for approval to the Public Health Engineering Division of the Ministry of Health.

Meanwhile the health inspector had a series of meetings with the village committee to discuss the project. The villagers agreed to the proposal that the water scheme be constructed only after sanitary latrines had been built. They also agreed to provide the labour force for the construction and contributed 20 Malay dollars (about US$8) per household. The district office contributed funds for the purchase of plastic latrine bowls, water pipes, and cement. The villagers gathered wood and palm thatch for the superstructures.

The week of gotong royong was one of excitement. Everyone participated. The health staff took the opportunity to talk to people about waterborne diseases and basic hygiene and the necessity of protecting the water source from contamination. The construction was completed in an atmosphere of celebration. The village committee undertook the simple maintenance that the scheme required, and selected villagers were trained for this by the health staff. The village used to be greatly
affected by waterborne diseases, including cholera, but has ceased to suffer from them since the introduction of the gravity-feed system.

The success of this project spurred the district sanitation team to greater efforts, and in the ten years that have elapsed since then 35 other villages have constructed similar schemes, all with equal enthusiasm and success.

But the scheme is not without its dangers. One Saturday morning, one of the health staff who had gone on a routine inspection of the gravity-feed scheme came back with a discarded can he had found. It had contained a herbicidal chemical that was being used by the Forestry Department. The discovery caused some panic. How toxic was the herbicide? Had the water been contaminated? Health staff had a difficult time convincing the villagers that they should refrain from using the apparently clean water in their taps until the Department of Chemistry had given its opinion. The water and the health of the villagers were monitored very closely for the next year. Fortunately there were no ill effects. This incident highlights the need for intersectoral cooperation between the health sector and other sectors such as agriculture, so that each is fully informed of the other’s activities. It also illustrates the importance of unceasing vigilance.

The future

Malaysia has reached a stage at which the pattern of disease has changed from predominantly infectious diseases to a much greater proportion of chronic diseases. Public expectation and demand for more sophisticated health care are increasing rapidly. A peninsula-wide health and morbidity survey in 1986 showed that almost 90% of the population lived within 5 km of a static health care facility. For preventive services they willingly used the nearest facility (e.g., the midwife’s clinic), but for the diagnosis and treatment of illness even country dwellers were bypassing nearer, less sophisticated facilities to use health centres or hospitals. Over half the population used private doctors’ clinics. It is evident that the lessons of intersectoral coordination learnt during the days of rapid development of the infrastructure must now be applied to coordination between the public and private health sectors. Injuries and chronic diseases are best combated by prevention, particularly with community
participation. More sophisticated health education and community participation strategies will have to be developed to suit an increasingly sophisticated population.

The survey also showed that there are still pockets of disadvantaged groups in most states, and they remain disadvantaged although health services are readily accessible. It is clear that district health managers will have to develop local strategies suited to the particular problems of these groups to ensure that health development does not pass them by.

Acknowledgements

We wish to express our appreciation to Meera Koay, Lim Chie Kiang, Chee Chin Seang and S. Raman for their assistance in the preparation of this paper.

*      *

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Mozambique: primary health care in the worst conditions

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The People’s Republic of Mozambique emerged as a newly independent state in 1975 after a liberation struggle that had lasted 10 years. It inherited a legacy of underdevelopment and an illiteracy rate of 93%. The overwhelming majority of rural peasants used rudimentary tools and did not work with the wheel or draught animals. These were some of the starting points for an ambitious project for social betterment that was to occupy the country for the next 12 years, against a background of continuous warfare.

Scarcely a month after independence, the decision was made to nationalize the medical services, integrating into a single national health service all private, missionary, and governmental institutions and abolishing the practice of private medicine. The Ministry of Health gave priority to rural areas and preventive medicine.

In September 1977, after extensive debating in each village and district, it was decided to integrate the different levels of health care, to regard the primary level as the universal entry point, and to encourage each health centre to assume certain responsibilities for nonmedical activities in its area. It was decided also that there would be a single fee for outpatient consultations and free delivery of preventive care as well as free hospitalization and complementary means of diagnosis.
Health education was regarded not just as a component of each programme but as part of a more general struggle against obscurantism. In addition, the concept whereby “health is built with your own hands” was promoted to replace that of individual health alone. Both the health post and the hospital vegetable garden were created by the efforts of the local population.

Health posts and health personnel have, however, become the target of savage attacks by rebels and terrorist groups. Inconceivable horrors have been witnessed: massacres in hospitals, attacks on ambulances, and assassination of health personnel.

Policy implementation: strategy and approaches

Primary health care

In view of the excessive concentration of the health network in urban areas, especially the capital city, it was decided to extend primary health care to the rural areas so as to bring the entry point nearer to the people. Health zones were set up to bring a greater degree of order to the urban areas and to make optimum use of more specialized units. Referral mechanisms were also established between different levels of the health system.

With the aid of a generous budget allotted by the State, the national health service was extended and better equipped. These resources had to be managed rationally, especially since they were much sought after by other economic and social sectors. Investment in the health sector involved political risks, and performance had to be high to justify those risks. Each health unit, the health care pyramid, and every new programme had to be managed with maximum efficiency so that specific objectives could be attained at national level.

Management

The Ministry of Health, the organ responsible for health administration, programming and management, established offices at central, provincial, and district levels, and within the Ministry a specialized body called the National Directorate was set up to take charge of and promote preventive medicine. Other major
sectors such as the pharmaceutical and planning departments, were set up to meet other priorities.

The most qualified physicians and technicians were deliberately assigned to administration and management functions. They are indispensable for producing policy guidelines to be implemented at local level, and it was through their experiences that Mozambique was able to make valuable contributions to the Alma-Ata conference in 1978.

A health information system was set up right at the start. From 1979, annual analyses were made of 72 indicators pertaining to resources and activities and including economic, financial, epidemiological, and demographic indicators.

With this experience, Mozambique was able to criticize deviations from the concepts of health for all and primary health care, both before and after the Alma-Ata conference. Primary health care cannot be devised as second-class health care for the poor, on the fringes of a superior health care system to which they have no access.

Preventive medicine

The major causes of morbidity and mortality in Mozambique in 1975 were those usually found in tropical developing countries: malnutrition, transmissible and parasitic diseases, and illnesses related to pregnancy and childbirth.

The few preventive health services during colonial times were extremely localized and had clear-cut political objectives: to create a cordon sanitaire for the cities and to provide rudimentary protection for the workforce. Even the conventional vertical programmes for major endemic diseases had a colonial orientation: they were aimed at cleaning up areas intended for settlers (malaria, trypanosomiasis) and at giving basic health protection to workers used for forced labour in the mines and on the plantations (tuberculosis and leprosy).

The task before the new national health service was thus clear—to implement preventive and curative activities in each health unit. Immunization, maternal and child health care (including family planning), health and nutritional education, oral health, basic sanitation, water and food hygiene, control of endemic diseases, and epidemiological surveillance became incorporated into the daily activities of health centres and health posts throughout the country.
Staffing

Towards the end of 1975, there were 86 physicians in Mozambique and three nursing schools for the training of nurses, midwives, and environmental health workers.

Given the diversity of functions to be carried out by the national health service, 13 different health careers were defined. This number was halved some years later owing to increased integration in the delivery of health care services at the periphery. Pre-eminence was given to careers necessary for the development of peripheral services: nurses, medical assistants and medical aides, laboratory personnel, and village health workers. Standard teams were defined for each level within the health service.

The country’s only Faculty of Medicine adopted teaching methods designed to produce a new type of physician, able both to manage community health programmes and to ensure emergency treatment in isolated conditions.

Drug policy

If a health facility is to be seen as useful and reliable by the public it must be able to dispense medicines corresponding to the level at which it operates. Having aroused great expectations among the population by creating a single health service with universal access, the Ministry of Health was aware of the need to ensure that drugs were available. Indeed the major drug policy measures in Mozambique were taken during the first years of independence, concurrently with the establishment of the national health service.

A technical therapeutics and pharmacy committee was created in September 1975, its first major task being to prepare a national formulary, which was published the following year. The formulary listed 430 drugs that had to be available to the public through the national health service, but this number was reduced to 343 in the third edition of the formulary published in 1984.

A State enterprise was created for the importation of drugs. It rapidly acquired a monopoly and today makes considerable savings from its worldwide purchasing powers. The drug marketing practices that had prevailed up to that time were abolished.
The prescribing of drugs by all categories of health care workers, including physicians, is now regulated by law, and the use of international nonproprietary designations is compulsory. Treatment schedules were elaborated for the most common ailments, and the teaching of pharmacology was strengthened.

A quality control system was set up in 1985 with its own laboratory, and a system guaranteeing essential drugs for use in primary health care was established in 1987.

Rationalization in selecting, importing, and prescribing drugs made it possible to keep drug expenditure down to less than 17% of the annual health budget. The importance given to primary health care is shown by the fact that between 1980 and 1982 nearly 70% of drug expenditure was on some 50 basic products.

Budgeting

In countries with a unified health care system, the priority given to health is indicated by the proportion of the government budget allocated to it. In 1981 the health sector in Mozambique accounted for 11.9% of the national budget, compared with 4.6% in 1975. By 1976, it already amounted to 9.7%. Health expenditure per inhabitant increased from US$ 1.7 in 1975 to US$ 5.6 in 1982.

Between 1978 and 1981 the proportion of the health service budget spent on setting up new health posts and centres increased by 37%.

Multisectoral approach

The Ministry of Health stated in 1978 that “the health status of a community reflects the influence, whether positive or negative, of various factors, of which medicine is merely a part and not the most important one”. In 1979, in his address to the twenty-ninth session of the WHO Regional Committee for Africa, President Samora M. Machel summarized this view in the words “the health sector is not an island”.

Attempts have been made for many years to achieve a multisectoral approach to development projects, such as water supply and basic sanitation, but experience has shown that there is a gap between theory and practice.
The early attempt to achieve a parallel rate of progress in all sectors likewise proved unsuccessful and was abandoned in favour of programmes that would have a synergistic effect on other sectors.

A few success stories, such as that of water and food hygiene, showed that the health sector must develop its own technological potential in order to promote a multisectoral approach. Only when it is credited with technological capabilities will the health sector be able to define measurable objectives to be attained through joint action and the tasks required of each partner.

Community involvement

The health sector learned from experience that the energies of large groups of the population cannot be mobilized through obscure debates on health status. It was necessary to define specific goals and objectives such as child immunization, prenatal consultations, and the quality of safe water, which could be discussed by local organizations.

Health workers used the extensive networks of “social mobilizers” created by the Frelimo Party in urban and rural areas. Together they carried out door-to-door campaigns that guaranteed the success of the Expanded Programme on Immunization.

Health workers learned, with some reluctance, how to turn hospitals into institutions in which health education was also given. The mothers accompanying their children to hospital proved to be among the major protagonists of child health education, besides being indispensable in reducing hospital mortality.

The fruits of determination

Peripheral health network

Table 1 shows the efforts that have been made to expand the peripheral health network. Between 1975 and 1983, the overall number of health posts and health centres tripled while the number of hospitals remained constant or actually declined. In addition, 130 laboratories were set up in health centres and rural hospitals, and 80 new stomatology departments were created.
Table 1. Health network trends, 1975–86

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<tbody>
<tr>
<td>Health posts</td>
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<td>455</td>
<td>629</td>
<td>788</td>
<td>934</td>
<td>1122</td>
<td>1158</td>
<td>1195</td>
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<tr>
<td>Health centres</td>
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<td>253</td>
<td>285</td>
<td>281</td>
<td>281</td>
<td>220</td>
<td>213</td>
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<tr>
<td>General and rural hospitals</td>
<td>100</td>
<td>25</td>
<td>26</td>
<td>26</td>
<td>27</td>
<td>27</td>
<td>26</td>
<td>27</td>
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<tr>
<td>Provincial hospitals</td>
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<td>7</td>
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<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Central hospitals</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>Psychiatric hospitals</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
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</tbody>
</table>

The training of health personnel progressed at the same feverish pace. From 1976 to 1985, the following health workers were trained:

Medical assistants and medical aides: 596
Midwives and maternal and child health nurses: 818
Nurses: 2181
Preventive medicine technicians and aides: 268
Pharmacy personnel: 486
Laboratory personnel: 406
Health unit administrators: 76
Specialized nurses: 384
Village health workers: 1402

The number of physicians increased from 86 in 1975 to an average of 300 in the years 1983–86 (including some 60% of foreigners). A programme was launched for the training of traditional birth attendants, and planning and management workshops were organized for district-level personnel.

The peripheral network was the major beneficiary of this training effort. In 1986, despite the destruction and insecurity prevailing in many rural districts, 41% of all health personnel were serving in rural areas. They included 69% of medical assistants and medical aides, 48% of nurses, and 60% of maternal and child health nurses/midwives. The distribution of personnel in the different provinces was carried out in such a way
as to eliminate the enormous inequalities that had hitherto prevailed. The benefits were soon felt in the rural areas. In 1979 there had been 13 200 people per health centre or post, and within four years this number had fallen to 9 770. Little improvement has been achieved since then owing to the adverse conditions in the country.

The number of consultations per inhabitant per year, which attained 0.60 in 1979, fell to 0.40 in 1986 as a result of guerrilla attacks on the peripheral network and communication links. In spite of this, the role played by the primary level as the basic means of health care delivery increased.

In 1979, of all the medical consultations recorded in the country, 75% took place at rural health centres and posts, 14.2% at rural hospitals, 5.7% at provincial hospitals, and 5% at central and psychiatric hospitals. By 1984 the consultations taking place at the peripheral facilities had risen to 84.6% while those at the central hospitals had fallen to 4%. The rural hospitals also recorded a fall to 10.0%, but the most striking change was the fall in consultations at the provincial hospitals to a mere 1.4%. Clearly people were tending to rely increasingly on the rural health posts and centres rather than on the more remote hospitals.

The existence of newly trained personnel made it possible to improve the quality of care delivered. Medical assistants and medical aides gradually assumed more of the burden of health care in the peripheral areas, their share of the consultations rising from 15% to 32% between 1979 and 1986. By contrast, the proportion of consultations handled by untrained auxiliary personnel during this period fell from 8% to 2%. This was a marked change for the better since medical assistants and medical aides were trained to carry out diagnosis and treatment, given the scarcity of physicians.

Immunization

From the very beginning, the Expanded Programme on Immunization was extremely successful and highly acclaimed by health personnel and the population at large for its social relevance. It began with a mass campaign immediately after independence, achieving a coverage of more than 95% of the target population. It was also the final stage in the eradication of smallpox.

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The development of the programme was not as spectacular as the initial campaign, but between 1982 and 1984 immunization began to be incorporated into maternal and child health activities and gradually spread into the rural areas. Owing to guerrilla warfare, the coverage in rural areas decreased from nearly 45% to 30–35% in 1986, but the programme has improved in urban areas in both coverage and quality (Table 2).

In addition to the immunization of children, the programme undertakes the immunization of pregnant women against tetanus, and the first result was a decrease in the incidence of neonatal tetanus and in the mortality from that disease. A larger interval between outbreaks of measles in urban areas was also noticed.

Maternal and child health

In a country where 24% of women are aged between 15 and 49, where 44% of the population are in the age group 0–14 years, with high fertility and birth rates (44 per 1000) and a high infant
mortality rate (about 150 per 1000), and where there had been a total absence of health services for these groups, the maternal and child health programme has become an essential component of health care and is currently being expanded. For health, demographic, and social reasons (women's liberation through their active involvement in the new society), family planning was included from the very beginning as a means of preventing high obstetric risks.

Following the "reference pyramid" model adopted by the national health service, the maternal and child health programme includes activities at the various levels of health care, with referral of pregnant women subject to obstetric risks and of children requiring special care to higher levels. The major objective of primary level health care is to detect such risk conditions. The conventional midwife was replaced by the maternal and child health nurse, who could carry out both preventive and curative activities.

Within a few years, through collaboration with the Organization of Mozambican Women, results started to appear. By 1986:

- 45% of pregnant women were receiving prenatal care;
- 27% of deliveries were being carried out by skilled personnel in health facilities;
- 21% of children aged 0–4 years were receiving prophylactic measures at least once (compared with 7% in 1979);
- the recorded number of women regularly using a birth control method had increased twelvefold to more than 60,000, with 20% of them using an intrauterine device.

Within two years surveys revealed an average of 3 to 4 prenatal consultations per pregnant woman, even in rural areas. The quality of care began to be reflected in the proper screening of high obstetric risks. For example, in Maputo, the proportion of pregnancies for which obstetric risks were detected increased steadily from 32% in 1982 to 40% in 1985.

In urban centres, the number of consultations per child 0–2 years of age reached about 4.5 in 1987, thereby facilitating immunization in due time. In rural areas, this figure averaged about 2.5 in 1986, which indicated that the same results might be obtained with immunization and the diarrhoeal diseases control programme—at least for the 25–30% of the population within 5 km of a health facility.
Preparing a health culture

The results obtained in Mozambique are not the fruits of a benevolent and disciplinarian welfare state. They reflect the people's awareness of their right to benefits for which they had fought. They are the first demonstration of a new culture of the people, a culture in which

— schoolchildren design postal stamps for World Health Day;
— the "barefoot" illustrator of the Jornal de Parede draws a latrine beside the bus station;
— an illiterate mother shows her child’s health card — still intact after three years in a cob house without any furniture with drawers;
— a nursing mother brings her husband to the family planning centre to discuss the most adequate method of birth control.

This culture has now entered our school books and literacy programmes. It is beginning to reach beyond the narrow limits of the habitual unidirectional messages of health personnel. It is a
culture that gives health topics a prominent role in the repertoires of urban theatre groups, a culture that urges people to help in reconstructing health posts that have been looted by terrorists.

Limitations and errors

The health programme in Mozambique has, to date, been implemented as a matter of urgency, powered by ambitious objectives and disciplined by the critical assessment of the people. Given the colonial vacuum that was inherited, the endless needs of the entire country, and the limited human resources available, little time was taken for a scientific evaluation of progress.

Health systems research has been carried out sporadically, but it lacks coordination and is often conducted by foreign experts—who marvel at the excellent quality of the “laboratory” before their eyes.

The framework of primary health care was set up, but the day-to-day operations are still of poor quality. Owing to a lack of local technology, there was delay in scheduling activities for the control of some endemic diseases and the prevention of occupational health hazards. Shortcomings in the training of health personnel are another constraint. It is therefore not surprising that an assessment of health posts and centres has shown that, for 30–40% of all outpatients, diagnosis was deficient and drug prescription incorrect.

We have already referred to the wide range of “health careers” established after independence. This was appropriate at a time when it was supposed that the country’s financial resources would permit the extension of the health centre network. Experience has shown that this extension must be carried out through smaller units existing in larger numbers, namely health posts, and that the delivery of basic curative and preventive care must be based on merely two health professionals: the general nurse, whose duties comprise diagnosis, treatment, nursing, and first aid, and the maternal and child health nurse. The methods and duration of training have been reformulated to enhance professional skills and ensure the quality of services.

The performance of village health workers was adversely affected by the misfortunes of war, the economic failure of “communal villages”, and the excessively rigid training and
management programmes. Seventy per cent of trained village health workers are now without any regular activity.

Despite all the efforts made in the training of personnel, most districts do not yet have analysis, programming, and management capabilities. The local implementation of government projects is carried out routinely, and little initiative is shown in the mobilization of local resources. The management of material resources is inadequate, and stocks of drugs, vaccines, and fuel are often depleted in a system of "management by emergency".

The new phase of resistance

Unfortunately, warfare and economic crises are all too common in the recent history of developing countries. Since 1982 the effects of fighting in Mozambique have been too great to be remedied. There are now nearly a million displaced persons and some four million requiring food aid. Twenty-five per cent of the primary health care network is partially or totally inactive, and over large areas hospitals have been blown up and health centres plundered. In one year (1985), 21 health workers were murdered and 250 dispossessed, and 80,000 children are estimated to have died through lack of basic health care. Two thousand people were mutilated, while half the tuberculosis patients and three-quarters of the leprosy cases could no longer be cared for. Half of all the farm crops were lost.

Military aggression was combined with an economic blockade, and the resulting conditions were worsened by natural disasters and the effects of international monetary crises.

Since 1982 the Government has found it difficult to guarantee financial support for the health care network. Budget allocations for health started decreasing, as shown in Table 3, dropping to a mere 7.8% of the total budget in 1986. Expenditure on supplies and services dropped from 50% in 1981 to 37% in 1986, the remainder being used for wages. Owing to a rise in prices in the local markets, it became difficult to purchase food and hygiene requisites for patients. Donations accounted for 20% of total drug imports in 1986 and 40% in 1987.

The challenge facing the health sector was clear: if the decreasing quality of health care led to its becoming discredited, technocrats would be encouraged to call for a return to pri-
Table 3. Ministry of Health operating budget, 1975–86

<table>
<thead>
<tr>
<th>Year</th>
<th>Health budget (millions of US$)</th>
<th>% of total State budget</th>
<th>Health expenditure per capita (US$)</th>
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<tr>
<td>1975</td>
<td>15.2</td>
<td>4.6</td>
<td>1.7</td>
</tr>
<tr>
<td>1976</td>
<td>23.1</td>
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<td>1977</td>
<td>32.8</td>
<td>12.8</td>
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<tr>
<td>1978</td>
<td>35.4</td>
<td>11.2</td>
<td>3.8</td>
</tr>
<tr>
<td>1979</td>
<td>38.4</td>
<td>11.0</td>
<td>3.8</td>
</tr>
<tr>
<td>1980</td>
<td>46.1</td>
<td>10.6</td>
<td>4.5</td>
</tr>
<tr>
<td>1981</td>
<td>55.8</td>
<td>11.9</td>
<td>5.4</td>
</tr>
<tr>
<td>1982</td>
<td>60.7</td>
<td>11.2</td>
<td>5.6</td>
</tr>
<tr>
<td>1983</td>
<td>67.6</td>
<td>10.4</td>
<td>5.1</td>
</tr>
<tr>
<td>1984</td>
<td>61.6</td>
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<tr>
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<td>56.0</td>
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<tr>
<td>1986</td>
<td>52.4</td>
<td>7.8</td>
<td>3.8</td>
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</tbody>
</table>

vatization. It would be the end of the social achievements to which the Government had aspired.

In 1987 the national currency fell to a tenth of its original value against the US dollar. The price of outpatient consultations increased from US$0.18 to US$0.25, a charge of US$1.25 per day was levied in provincial and central hospitals, and drug prices were increased by a factor of six.

Nevertheless, the new law on medical care maintained the major benefits of the Medical Socialization Act:

— free referral to higher levels of health care;
— free preventive care procedures and free maternal and child health care, including vaccines, contraceptives, and drugs for major endemic diseases;
— special low fees for rural areas; and
— free diagnostic examinations.

The health sector began managing the new income generated from consultation and hospitalization fees as a means of supplementing the operating budget for the health care network and preserving an acceptable level of technical quality. At the time of writing, however, information on the effect of these measures on the use of health facilities by the population is still scanty and contradictory.
The state financial machinery was not alone in reacting. Throughout the country individuals made great efforts to keep the peripheral services running. Towards the end of 1985 there were signs of recovery, and 158 health posts were reopened.

The immunization programme, the maternal and child health programme, and the supervision of tuberculosis patients did not collapse, even in the rural areas. In Inhambane, for example, 82% of children aged 0–2 years were fully immunized.

International support arrived with its mixture of generosity and risks of programmes becoming deviated. However, the health care policy and major programmes were firmly entrenched. A donor organization launching an “integrated project” in a district would find health facilities still functioning in the prescribed way, with treatment schedules, instructions for the implementation of major programmes, and job descriptions of health personnel. The “emergency programme” would rapidly become a programme providing operational support for the national health service, though at the cost of a significant waste of time in trying to reconcile the interests of the national health service and those of the donor organization and its funding partners.

However, the major constraint for international support is once again military aggression. Truck convoys transporting food supplies are attacked on the road. In these conditions how is it possible to transport equipment and construction teams to a site where a health post has been destroyed?

The Ministry of Health is getting ready once more to begin training village health workers and other types of “health mobilizers” among the displaced population. Those responsible for the Expanded Programme on Immunization are reorganizing their tactics and the immunization timetable in rural areas. Health care programmes for mutilated people and abandoned children are being strengthened.

An uncertain future is ahead. Mozambique is experiencing one of the most difficult periods in its history. The colonial heritage was followed by savage aggression and the dismantling of rural society, the consequences of which will be felt for decades. It will not be easy for future generations to comprehend the hardships the country went through after independence. Nevertheless, the determination of health workers and the long-standing resistance of a people whose achievements are still visible today enable us to assert: “The struggle continues”.

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The Netherlands: the hurdle race to primary health care

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The typical Dutch way of constructing a health care system is as follows. Take a large quantity of water, build a dyke around it, pump the water out of it, build a couple of new towns and villages and provide this newly reclaimed land with a health care system, where primary health care providers are employed in multidisciplinary health centres instead of being self-employed (or employed by different organizations), where the separation between planning and financing of health care has been abolished, and where hospital facilities are considered as additional to primary care. The striking similarity of this Utopian description with the actual health care situation in Almere, a booming new town in the recently created province of Flevoland and a popular destination for foreign visitors interested in Netherlands health care, points to two conclusions. The first is that the Almere health care situation is “worth a detour”, to quote a well-known phrase from the Michelin tourist guides, and the second is that in the rest of the Netherlands these Utopian features are apparently absent.

In the Netherlands the typical general practitioner is self-employed and works alone. Only 7% practise in multidisciplinary health centres. The situation is the other way around in Almere. Practically all the general practitioners there are employed in multidisciplinary health centres, and—even more important—by one single organization, the Foundation for Primary Care Provision, Almere, which acts as the employer of all the different primary health care providers. Elsewhere in the
Netherlands they would be either self-employed or employed by various organizations.

As yet there is no hospital in Almere, only an outpatient clinic. A hospital is due to be opened in 1991, but when it is opened its size will be limited to 180 beds, while the primary health care centres will be expected to continue their emergency and first aid services. The hospital will thus provide only 2.25 beds per 1000 population, half the figure for the rest of the country, but in Almere the hospital will be regarded merely as an adjunct to the primary health care system, while elsewhere the hospitals are dominant.

Another striking feature in Almere is the integration of two kinds of facility that are usually completely separate both financially and administratively—the nursing homes and the homes for the aged.

Some of the differences between Almere and the rest of the country are due to the different population structure. In Almere nearly 11% of the population are children less than 4 years old, while people over 65 years old constitute only 5.5%. Outside Almere these figures are virtually reversed.

Nevertheless, it is clear that there is a striking contrast between the single district that fits into the Alma-Ata targets and the usual Netherlands health care organization.

In this chapter I shall first of all describe the Netherlands health care policy since 1974, when a White Paper on the structure of health care appeared that analysed the causes of the alarming rise in health care costs and contained proposals for the future structure of Netherlands health care. I shall then deal with the legislation on the subject during the period 1974–88 and end by giving an evaluation of these measures, derived mainly from a study carried out by the Netherlands Institute of Primary Health Care to assess the actual strengthening of primary health care in the period 1974–87 (1).

The situation in the mid-1970s

In comparison with other countries, the Netherlands in the mid-1970s had experienced a sharp rise in health care costs due to the unbridled growth of the hospital sector in the previous decade, a declining number of general practitioners, and an increasing
number of medical specialists. No effective legal or financial instruments existed to curb these costs.

In Fig. 1, the health care costs in the Netherlands are shown in comparison with those in other OECD member states. It is clear that the increase in the Netherlands took place between 1965 and 1975 (as also in the Federal Republic of Germany, Norway, and Switzerland) while for most of the other countries the major increase took place later. This brought an early awareness to Netherlands Government officials of the explosive element in the growth of health care costs.

Until 1964 there had been more general practitioners than medical specialists. The number of general practitioners then started declining while the number of specialists increased.

Fig. 1. Health care spending as a percentage of the gross national product in the Netherlands compared with the average for OECD countries, 1960–84
Home nursing was the responsibility of three so-called Cross Organizations—one Roman Catholic, one Protestant, and one non-religious.

Traditionally the role of the Government in health care financing has been limited. There has always been a relatively large private sector (covering some 30% of the population and amounting to about 25% of health care costs in 1980) and a traditional separation of health care policy and health care funding, the latter not being part of general taxation but arising from the premiums paid by employers and employees. Corporate organizations consisting of representatives of employers, trade unions, health care providers, funding organizations, and neutral experts have been created to decide on tariffs and premiums. The involvement of the Government was only marginal in the 1960s and 1970s. To regulate the planning of hospital facilities after the unbridled growth of the 1960s, the Hospital Facilities Act was accepted by Parliament in 1971.

Although, generally speaking, life expectancy increased between 1960 and 1975 for the population of OECD member states, with a general exception of males aged 40–65, there are some striking differences between countries. The life expectancy of males aged 40 actually decreased in the Netherlands, as in Denmark and Norway, while the average rate of increase in the OECD for the period 1950–80 was 5.5 years. The same was true for the life expectancy of males aged 65 (2). The life expectancy of women, however, has increased continuously and is among the highest in the world.

This was the situation that caused the first general reflection on the structure of health care in the Netherlands.

The White Paper on the structure of health care

In a White Paper issued in 1974 on the structure of health care (3), the centre-left Government made an analysis of the health care structure in the Netherlands. It stated that there had to be "a shift of emphasis, which is now one-sidedly on institutional care, towards ambulatory care and prevention and the creation of a well-ordered internally consistent system of provisions in geographically limited areas". Major concepts in the White Paper were "health care at the district level" and "no direct access to specialist and institutional health care". Three pieces of legislation were announced:
ACHIEVING HEALTH FOR ALL BY THE YEAR 2000

— a Health Care Planning Bill—an extension of the Hospital Facilities Act of 1971 to all sorts of health care,
— a Health Care Financing Bill to replace the Hospital Tariffs Act of 1965, and
— a Public Health Insurance Bill that would cover the whole of the population instead of the 70% covered at that time.

The last-mentioned bill was dropped because it would have caused a radical increase in the health care costs of the relatively wealthy and healthy sector of the population (the 30% then covered by private insurance), while other solutions would have increased the financial burden on the less privileged groups too substantially.

The Declaration of Alma-Ata, 1978

The principles agreed upon in Alma-Ata in 1978 found a fertile breeding ground in Netherlands health care policy, although the “colour” of the Government had changed from centre-left to centre-right in 1977. The Government had committed itself to the development of primary health care (ambulatory care) and to a reduction in the role of institutional care. Of the several Government White Papers about the structure and content of health care, two have been devoted specifically to primary health care. One was not an official White Paper, having Cabinet approval before appearance, but a paper published under the responsibility of the Secretary of State for Public Health only. It appeared in 1980 and was called Outline of primary health care.

It was the first official document in which one could discover Alma-Ata principles, even though it made no formal mention of the Declaration of Alma-Ata. In this document the term “primary health care” was used not solely for ambulatory care but for primary care that is “generalistic (containing curative, pre-

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* In the Netherlands there is a considerable private sector in health care insurance. All citizens are covered against catastrophic illness by the General Exceptional Medical Expenses Act, which covers the stay in hospital after the first year and the stay in other institutions (e.g., nursing homes) from the first day. Ordinary health care costs are covered by the Sick Fund Act for employees, while the rest of the population (38%) has to seek private insurance. A thorough description of health care insurance acts in the Netherlands can be found in: Roscam Abbing, H.D.C. & Rutten, F.F.H. [*Past and future of the health care insurance system in the Netherlands*], Deventer, Kluwer, 1985 (in Dutch).
ventive, caring, rehabilitative, and monitoring aspects and not limited to specific categories of persons and problems and specific methods of healing), directly accessible, ambulatory, situated among the target population, and directed towards the home situation of the clients”. Although the document was about primary health care, personnel such as social workers and home helps were considered as vital counterparts to primary health care development.

Bottlenecks in the realization of a well-balanced health care structure can be found (according to the Outline) at the executive level, the supporting level, and the policy level, where structural bottlenecks like the separation of planning and financing appear. Four elements of health care policy for the period 1975–80 were described in detail:

1. strengthening the Cross Organization (for home nursing) by merging the three different denominations into one national organization financed out of social security funds and increasing the number of staff by 3–4% per year;
2. stimulating multidisciplinary health centres;
3. stimulating cooperation between primary and secondary care by, for instance, opening diagnostic hospital facilities for general practitioners; and
4. stimulating primary health care support (through increased postgraduate education, research, and administrative support).

The Outline called attention to a lack of vital information such as reliable personnel statistics, and urged the creation of a suitable statistical agency to provide it. It also suggested that the norms for provider–population ratios be improved—for example, by decreasing the general practitioner’s list size, by increasing the number of district nurses and dieticians, by maintaining the same workload for dentists, midwives, and pharmacists, and by decreasing the number of physiotherapists. Further proposals made in the Outline were the provision of additional financial support for multidisciplinary health teams, the promotion of a cohesive structure of primary health care support, and the improvement of communication between all groups and organizations active in primary health care. The policy intentions thus aimed at “stimulating”, “promoting”, and “supporting”, not at direct structural change. The separation of planning and financing was stated but not solved.
The White Paper on primary care

The second policy paper with a focus on primary health care was the White Paper on primary care of 1983. Note that the word "health" has been removed. Primary care includes social work and home help. The general practitioner, the district nurse, the social worker, and the home help now provide the four "core-disciplines" of primary care. Primary care is described as a subsystem of care wherein professionals share the responsibility for providing continuous, integrated, personal care of the patient in his or her own home surroundings.

Most of the problems and bottlenecks described in the White Paper on the structure of health care and in the Outline were unchanged. Some had even worsened because of the inclusion of further taxation-financed providers such as the social worker and the home help. The document also contained new norms for provider-population ratios in primary care. But its essence was the integration of the four core-disciplines of primary care.\(^1\)

The White Paper on primary care was the last paper on the structure of primary health care. In 1986 White Paper 2000 appeared, which stated that since it was difficult to attack the structure of health care an approach would be adopted that emphasized health instead of health care. White Paper 2000 was inspired by WHO's health-for-all criteria and contained all sorts of analyses and propositions to improve the health of the population by preventive activities such as reduction in smoking.

At the same time (and separately from the preparation of the White Paper) a committee of experts was asked to provide new advice on the unbalanced health care funding in the Netherlands, which they did in the spring of 1987. What they proposed was a basic social health insurance for the whole population of the Netherlands with, however, a more limited

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\(^1\) Part of the background to the proposed integration was a change in the composition of the Department of Public Health. The Secretary of State for Public Health was part of the Ministry of Social Affairs until 1971, when a new Department of Public Health and Environmental Protection was created. In 1982, however, the Department of Environmental Protection was transferred to the Department of Housing and Environmental Planning while the former Ministry of Culture, Recreation and Social Work merged with the Department of Public Health, and became known as the Ministry of Welfare, Public Health and Culture. This meant that the responsibility for social workers, home helps, general practitioners, and home nurses now came under a single authority. This administrative integration appears to have stimulated the White Paper on primary care.
package of services than that now provided to the publicly insured part of the population. The Cabinet is still discussing this advice. The most probable outcome is that the proposal will be delayed until the 1990s together with a general reform of taxation.

Health care legislation

The three Bills proposed in the 1974 White Paper on the structure of health care were a Planning Bill, a Tariff Bill, and a Public Insurance Bill. The third was not even presented to Parliament, but preparation did start on the other two. The Planning Bill had a sad fate, which will be described below. The Tariff Bill was accepted in 1982 and is operative, but its significance is limited.

Health care tariffs have to be approved by a Central Tariff Authority, an advisory body to the Secretary of State for Public Health. Tariffs are usually negotiated between the “sick funds” (public health insurance), the organization of private health insurance companies, and the health care providers (the National Hospital Council and the national associations of health care professionals such as the general practitioners, specialists, dentists, pharmacists, and physiotherapists). Sometimes there are direct negotiations between bodies such as the Association of General Practitioners and the Secretary of State, who is directly responsible for executing the planning laws that regulate the number of general practitioners and their average list size. The role of the financing organizations in this case is unclear, however, as is demonstrated by the fact that a court hearing is often necessary to reach a decision.\(^a\)

\(^a\) The complexity of the matter is shown by the following situation. An agreement has been reached between the Secretary of State for Public Health and the Netherlands Association of General Practitioners concerning the reference income for general practitioners. This reference income depends not only on the size of the list of publicly insured patients and the capitation fee per patient but also on the estimated number of bills for private patients. There is no central recording of these bills, and the doctors claim a lower number of private consultations than the Government does. The disagreement with the State was brought to court by the doctors’ association, which won. So the State was obliged to base the reference income on the lower consultation rates and to allow the doctors to increase their private fees and force private health insurance companies to reimburse those increased fees.
The Central Tariff Authority is not free to approve or reject all negotiated tariffs; its decisions are limited by a separate set of legislative measures that regulate the income of independent professionals. This sounds contradictory, and in fact it is. The Temporary Act for Reference Incomes of Independent Professions links the incomes in the professional sector to the incomes of comparable ranks in the Civil Service. A complication is that incomes policy is a responsibility of the Minister of Social Affairs, who might (and does) interfere with tariff policy in the health sector.

While having to operate within this legal framework, the Secretary of State for Public Health is under the obligation to limit health care spending in general, and, although it is not formally his budget, he is still held responsible for curbing the expansion of spending in the whole sector.

The validity of the Tariffs Act is seriously hampered by the unchanged system of funding and by the fact that incomes policy is the responsibility of the Minister of Social Affairs.

Although the value of the Health Care Tariffs Act is limited, it is operative. The Planning Act is not, in spite of years of preparation and Parliamentary debate. The first proposal for a Health Care Provision Bill, as it came to be called, was placed before Parliament in 1976, the idea being to extend the existing Hospital Facilities Act, but the will to decentralize planning activities prevailed. A proposal containing the general principles of the old Planning Bill with regard to health care institutions (including primary care institutions like the District Nurses Organization but excluding all personal health care providers like general practitioners, dentists, physiotherapists, and midwives) was accepted in 1982. The legislation contained an elaborate planning procedure (four-year plans with a whole circuit of advisory bodies) and laid the formal responsibility on the lower echelons of government (provinces and municipalities).

The basic principles of this skeleton law were accepted by Parliament, but all the concrete procedures still had to be "filled in" by separate measures of the Minister of Health. Three regions were designated where the new Act could be tried out experimentally. Now, in 1988, the Health Care Provision Act is about to be withdrawn. The reasons are first, the insight that planning without funding is empty rhetoric, secondly, the increasing tendency to put a check on overregulation by govern-
ment (the elaborate procedures could lead to an unlimited extension of health care bureaucracy), and thirdly, the failure to establish a new layer of government between the 12 provinces and more than 700 municipalities.

**Health care at the district level**

The devolution of authority to a regional level containing most of the basic health services was a major objective in the 1974 White Paper on the structure of health care. The White Paper, however, proposed waiting for the outcome of a restructuring of local government. Creation of an intermediate level—"the district"—between the province and the municipality was the task of the Home Secretary in the 1960s. Several proposals (25 districts, 40 districts) were published but none was accepted, mainly for fear of the costs of an extra layer of civil service in a stagnating economy. The decades of discussion and delay left things as they were before. Now municipalities cooperate in activities that go beyond their scope (waste disposal, fire protection, ambulance services, etc.) but there is no single, intermediate, administrative authority between the provinces and the municipalities.

This stagnation in administrative policy created a chaos of regional subdivisions. One can easily count over 30 different regional subdivisions in the health care sector alone. Even in primary care there are over a dozen. The official health care region is now the regional subdivision defined in the Health Care Provision Bill (25 regions and 63 subregions). This forms a compromise between a functional approach (catchment areas of hospitals) and an administrative approach (no crossing of provincial borders). In addition to this official subdivision, each health care provision has created a subdivision of its own.

In primary health care the failure to create an appropriate district level is one of the most confusing and depressing aspects of Netherlands health care organization.

In ambulatory mental health care, until the mid-1970s, a confusing conglomeration of all sorts of different organizations existed for very specific types of mental health care—remedial teaching, marriage counselling, psychotherapy, care after discharge, and so on. Since then a homogeneous organization has been created at the district level—the Regional Institution for
Ambulatory Mental Health Care. It is funded from one single source—the General Exceptional Medical Expenses Act. This example has inspired the idea of integrating at least three of the four primary health care services: community nursing, social work, and home helps. Funding them from the same financial source would force them into one organizational unit. This idea, however, has not yet been discussed by Parliament.

An evaluation of the proposals for primary health care

Two major objectives in the 1974 White Paper on the structure of health care were: (1) the curbing of health care costs, especially by limiting the expansion of the hospital sector, and (2) the strengthening of primary care by: (a) creating an appropriate regional level of health care provision and planning, (b) limiting direct access to institutional and specialist care, (c) strengthening primary care by lowering the population–provider ratios, and (d) stimulating multidisciplinary cooperation in primary care.

Curbing health care costs

The graph of health care costs in the Netherlands shows a certain stabilization after 1975, and an actual reduction after 1983. The most successful measure in this respect was the creation of budgets for hospitals in 1983, which froze the level of hospital spending. It has hardly increased since. There has been a slow reduction in the number of hospital beds since 1978, and this process continues.

Strengthening of primary care

Attempts to establish an appropriate regional level of health care provision and planning have been a woeful failure, although the example of ambulatory mental health care could

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In writing this section I am greatly indebted to my colleagues Peter Groenewegen, Emmy Sluijs, and Dinny de Bakker for their detailed analysis of primary health care development in the Netherlands.
have been followed by three of the four primary health care organizations.

There has been some success during the past decade in limiting direct access to specialist care. Access to specialist medical care, to paramedical care, and to ambulatory mental health care is now through general practitioners. This is true even for the private sector. Most of the private health insurance companies require a referral from a general practitioner before they reimburse the costs of specialist and hospital care.

The lowering of population-provider ratios has progressed at a fairly steady rate in recent years. The number of general practitioners, district nurses, dentists, pharmacists, physiotherapists, and midwives increased in the period 1974–87. The average list-size of a general practitioner in 1974 was almost 3000; the most recent figure, in 1987, is 2300. The normative list (on which the reference income of general practitioners is based) decreased from 2600 to 2350 and will decrease to 2000 in the next two years. The proportion of single-handed general practices decreased from 83% in 1973 to 60% in 1985, and the so-called goodwill payment that was needed to take over a practice has been abolished. The increase in the number of district nurses has been relatively small, but the number of nurse-assistants has quadrupled since 1974, as has the number of principal nurses. The originally scattered and low-scale organization has been integrated into one national organization for community nursing funded from one source, social security.

The development of multidisciplinary cooperation has been less encouraging. In 1974 the multidisciplinary health centre where general practitioner, district nurse, and social worker together provided their services in a common building was considered the best way of improving multidisciplinary cooperation in primary health care. The number of these centres rose from 21 in 1974 to 146 in 1987. Since 1985, however, this growth has stopped. Today about 7% of the population are clients of these multidisciplinary health centres. Although the centres show lower referral rates to secondary care (4), there is some doubt about their cost-effectiveness. Besides the multidisciplinary health centres there is a growing number of “home-teams”, that is, cooperative primary health care teams without common accommodation.

Attempts have been made to improve the quality of care by creating a two-year mandatory vocational training for general
practitioners and by creating several support and research institutions for primary health care, of which the Netherlands Institute of Primary Health Care is an example.

Conclusion

Although the reorganization of health care was successful in some respects (the growth of health care costs was curbed, especially by creating fixed hospital budgets in 1983), there was hardly any movement from secondary to primary care. The increase in primary care did not coincide with a decrease in secondary care. Many of the anomalies that were stated in the White Paper on the structure of health care in 1974 have not been solved, especially those in the domain of health care funding. The separation of planning and funding is still the most important obstacle to adequate health care policy. This, combined with the failure of the policy to decentralize decision-making and create a district level for health care planning and provision, leads to the conclusion that the Netherlands still has a long way to go 10 years after the Declaration of Alma-Ata, even though the situation had been analysed four years previously.

Compared to some other European countries, where the limitation of access to hospitals by introducing a general practitioner referral system would be considered dangerous radicalism, the situation in the Netherlands is probably not too bad, but, compared to the analysis of the situation that was made in 1974, not much progress has been made. Perhaps the major talents of the people of the Netherlands lie in constructing dykes and fighting against the sea. Here the purpose is clear, the problem self-evident, and the know-how available. Health care is apparently different, although it is a consolation that the health care situation of the population has not deteriorated and is still one of the best in the world.

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Although Nigeria has no accurate data, publications from Nigerian universities and surveys conducted by various government agencies provide a good picture of the state of people’s health. The country’s high mortality rates for all ages are similar to those of other developing countries.

Pregnancy and childbirth now constitute a major threat to the lives of women between 15 and 45 years of age. The individuals mainly at risk are those having babies for the first time or those who have already had two or more children, those under 18 years of age, those of short stature, those who have had difficulties with previous pregnancies, and those with chronic illnesses. They are usually not identified and so do not receive appropriate health care.

Children below the age of five years die mainly from preventable diseases or from diseases that could be easily cured if diagnosed and treated early. For example, the two leading killers are diarrhoea and respiratory infections. Death from the former can be prevented by replacing fluid loss through oral rehydration with a solution of salt and sugar; death from the latter can be prevented by early treatment of the infection and prompt identification and referral if complications appear. Immunization can prevent the six major childhood diseases—tetanus, measles, poliomyelitis, diphtheria, tuberculosis, and whooping cough.

Children under five years of age die in large numbers from malaria, particularly if they do not possess the sickle-cell gene. The disease manifests first as fever; the child may then develop convulsions, go into a coma, and die. The remedy is to treat every feverish child promptly with antimalarial drugs before the
major manifestations appear. Death from malaria is rare among older children, since they have usually developed immunity to the disease.

Underlying these serious diseases is malnutrition, which weakens children and makes them vulnerable to the myriad infections that beset them.

Few deaths occur among schoolchildren but there are many cases of fever (due mainly to malaria), leg ulcers, accidents, cough, anaemia, and of problems of adolescence (such as behaviour, teenage pregnancies, sexually transmitted diseases, and drug and alcohol abuse). These can be competently tackled by a school health service.

The major causes of death among adults are road accidents, infections, and chronic diseases such as hypertension, diabetes, liver cirrhosis, and cancer. The carnage on the roads is well known. The injured and maimed are occupying hospital beds all over the country, and each year many families are deprived of the earning power of those who are killed. Many chronic diseases such as cancer of the lung, cancer of the liver, and heart disease can be caused by habits such as smoking, excessive drinking of alcohol, and overeating.

This preamble is to emphasize that most diseases affecting Nigerians are preventable or could be easily cured if diagnosed and treated early. The community creates the environment in which such diseases flourish. In the rural areas where most people live and work, health facilities are rare, poverty is rife, and scientific thinking is unknown. Diseases are ascribed to witches and the spirits of ancestors. This is where action must be taken if there is to be any change in health care. Up to 80% of babies are delivered in an unhealthy environment, and even when they are born in a hospital or health centre, they are discharged into a contaminated environment.

**Traditional medical practice**

It is wrong to believe that there was no health care before the advent of Western medicine. Traditional medicine was supreme everywhere, and although it presided over the highest mortality and morbidity rates ever known, the people believed in it and still believe in it.
In Bendel State, it has been found that 56% of traditional midwives do not think it necessary to wash their hands or the woman's body before delivery of the baby and 20% attempt complicated and difficult deliveries in which they invariably fail. Asked about the methods used to resuscitate a baby that fails to cry at birth, the answers varied from "sprinkle alligator pepper on the baby" to "plug the anus with the finger and pour cold water on the baby" and "nothing, it is God's wish".

For convulsions due to fever, a mixture is administered containing mainly cow's urine, tobacco leaves, and various herbs, which is known to cause a fatal reduction in blood sugar in rabbits. This mixture is a major contributor to about 60% of the deaths due to this condition.

When asked about the use of the cow's urine mixture to prevent convulsions, mothers in Lagos stated that they gave it to their children regularly, sometimes several times a day, either alone or mixed with other medicines, and that the children in most cases improved. When a child convulses, a large quantity of the mixture is poured down his or her throat. This is the community's attitude to a preparation known to be poisonous.

Health resources

Although Nigeria has more than one doctor for every 10000 people, these doctors are poorly distributed, most of them being in the urban areas and the southern states. There are communities that have never seen a doctor and others may have a ratio of one doctor to 200 000 population. On the other hand, it is estimated that Lagos has one doctor per 500 people. Attempts to persuade doctors to serve in the poorer areas of the country have failed, largely because their education does not equip them with the skills needed to work with such communities. Another reason is the lack of amenities such as water, electricity, and schools in rural areas. Lastly, there is still a lingering belief that in some states doctors face discrimination in appointments to comfortable posts.

Nurses are five times more numerous than doctors but they too are poorly distributed. However, many rural health centres throughout the country are staffed by nurses, and they do what they have been taught to do to the best of their ability.

In the early 1970s, studies indicated that nurses, like doctors, were ill equipped to deliver primary health services, and a
major adjustment in their curriculum was required. Although this was done, it did not succeed in removing the overwhelming bias towards the provision of hospital or individual health care services, but it did increase considerably the content of primary health care.

In 1978, a new breed of primary health care workers was introduced. These were the community health officers, supervisors, assistants, and aides. In 1987, the names “assistants” and “aides” were changed to “community health extension workers” for the very important reason that the aides, being the most important members of the primary health care team, are expected to spend 80% of their time in the community, where they motivate the villagers to action in the provision of health services. They will thus be the architects of community participation—a prerequisite for introducing a community to the age of science.

In addition to diagnosing and treating common conditions with simple measures, identifying pregnant women and ensuring that they deliver safely, identifying malnourished children, and providing health education in the community, the community health extension workers will mobilize the community for preventive action such as the building of latrines, wells, and roads. This is no mean task, and to call them “aides” is misleading and belittles their important role. In the past, as aides, they were regarded as fit only for menial jobs in clinics and hospitals. As community health extension workers, their role is to spread health care within the community in a responsible manner. They are not aides to anybody but skilled health workers in their own right—agents of change with important functions to perform in the community health team.

Those who used to be known as assistants have a similar role but at a higher level, providing the bulk of clinic-based health care services. These two kinds of community health extension workers form the basic primary health care team and the link between the community and the clinic.

The health services

There are three tiers of health services. The primary, which is closest to the people, is constitutionally the responsibility of local government. The secondary health services, which care for
patients whose problems cannot be solved at the primary level, are delivered in general or district hospitals under the supervision of state governments. Tertiary health services are the most sophisticated and costly for government and patients alike. They deal with the most difficult cases referred from the secondary health care system, treating them in teaching hospitals supervised by the Federal Ministry of Health.

The challenge at the primary level is to establish a health care system that will touch the lives of every citizen and tackle the conditions causing the highest mortality and morbidity. The system must be organized at the grass-roots level and woven into the fabric of the community through the process of community participation. It must integrate preventive, promotive, and curative services, using technology the community will accept and can afford, and it must have an efficient and effective system of supervision and referral.

The most important principle of primary health care, as defined at Alma-Ata in 1978, is community participation. It coincides with the present administration’s thrust to mobilize the nation for social justice, self-reliance, and economic reconstruction.

The Federal Government is determined to set in motion the process that will ensure that every Nigerian obtains the health services he or she needs, when and where they are needed, at a cost the country can afford. It is also determined to ensure that the people participate fully in the provision of the services, which means that at the village or street level the community must be involved in planning, implementing, and managing the system. In other words, the community must be in control of the system and of the resources needed to maintain it.

Another important principle is that of self-reliance. Because the health problems of a community cannot all be solved at once owing to insufficient financial, human, material, or other resources, it is necessary to progress at a pace that takes these constraints into account, as long as there is a reduction in mortality and morbidity and an improvement in the quality of life. The greatest advance in developing health care delivery systems in the past 20 years is the realization that there is no standard method of designing them. For example, it is now widely accepted that a community need not wait until a doctor is available before services can be delivered; many communities throughout the world are being served by categories of health
manpower down to the level of village health worker, with excellent community acceptance and satisfaction and a measurable impact on the diseases wreaking the most havoc on them.

Closely linked with self-reliance is the use of appropriate technology. Whatever tasks are carried out to deliver the services, they must be capable of being executed effectively at the technological level of the community. It is useless, for example, to install an X-ray machine or dental chair in a village where there is no piped water or electricity—not to mention radiographers or dental technicians.

Urging mothers to use packets of oral rehydration salts to prevent dehydration in children when supplies are erratic will only create a culture of dependence, which may cost lives. Self-reliance can be achieved by teaching mothers to prepare their own solutions with salt and sugar, which are readily available in their kitchens.

**Basic health service scheme**

The first serious attempt to put a primary health care service in place was in 1975, when General Yakubu Gowon announced the basic health service scheme as part of the third national development plan (1975–80). The aims of the scheme were to “increase the proportion of the population receiving health care from 25 to 60 per cent, correct the imbalances in the location and distribution of health institutions and between preventive and curative medicine, provide the infrastructure for all preventive health programmes such as control of communicable diseases, family health, environmental health, nutrition and others, and establish a health care system best adapted to the local conditions and to the level of health technology.”

The plan for the implementation of the scheme was to build in each local government area a comprehensive health centre, four primary health centres, and 20 health clinics. This was called a basic health unit designed to provide health care for a population of 150,000. The health clinics were to be the most peripheral health facilities, each serving a population of 2000. A primary health centre, the intermediate health facility, would serve as a referral centre for four health clinics and serve a population of 10,000, while the more sophisticated comprehensive health centre would be the referral centre for the four
primary health centres and for four of the health clinics and serve a population of 50,000. In addition, five mobile clinics would operate out of the primary health centre, serving a total population of 20,000.

To provide the health personnel required for these services, 19 schools of health technology, one in each state, were established to train three categories of community health extension workers (formerly known as supervisors, assistants, and aides). The officers were to be trained in the teaching hospitals.

During the implementation of the scheme, the principles of primary health care were not applied. The community did not participate in any way in the process. Up until 1985, no primary health care system, as defined by WHO, existed anywhere in the country.

In 1978, it was decided to build a basic health unit in a local government area in each state so that a model health service could be set up that would later be copied by other local governments. The states refused to comply because it meant constructing 25 health facilities in one local government area. The buildings were instead shared among different communities, not on the basis of need but on the basis of influence and politics, and were therefore scattered throughout the states in a disorderly manner. That was the end of the basic health scheme, which degenerated into building health facilities, equipping them, and posting health personnel to them. After an expenditure of about 200 million naira (approximately US$ 44 million) at the end of 1983, most of the facilities remained uncompleted all over the country.

There were other problems with the implementation of the scheme. The schools of health technology did not equip the trainees with the skills to set up proper primary health care systems. To do this, they would have required a practice area, and in the event the training provided was aimed mainly at curative services. The health facilities to which the trainees were posted were converted into mini-hospitals, and many of the trainees were sent to work in general hospitals. The aides, in particular, never ventured out into the community but were used as messengers in the clinics, while the assistants behaved like doctors, diagnosing and treating patients and doing ward rounds. Their contact with the community was minimal.

Enormous quantities of sophisticated equipment were purchased, contrary to the principle of self-reliance and the concept
of appropriate technology. Dental chairs, theatre equipment, and X-ray machines were supplied to health centres but could not be used, either because they were beyond the skills available in the area or because there was an inadequate supply of electricity or water. These machines are lying unused and deteriorating in warehouses and health centres all over the country.

**Present programme**

Since 1986 the strategy for the development of Nigeria’s primary health care services has changed. The local government areas in which the system is still being developed have been given the ability to supervise and run the services. Those with the skill to implement the services are being mobilized and put to the task.

Every college of medicine and every school of health technology is assisting a nearby local government to set up its primary health care system. The area will then serve as a practice area for the college to train students in the art of providing the services, whether as doctors or as community health extension workers.

Each local government selected in this way was given a sum of 10,000 naira (US$2200) to collect two sets of data—one on the state of the health services and the other on the local health problems. The former concentrated particularly on the human, material and financial resources available to the local government and on the way in which the services were functioning. The latter dealt mainly with the common diseases in the locality and how the people had tried to tackle them, bearing in mind their culture and traditions. To discuss these data, workshops were held for all the 52 local governments in which primary health care was to be implemented.

Later in the year, further workshops were held to discuss the steps to be taken in implementing the plans and in managing the services. At this point, a sum of 500,000 naira (US$110,000) per local government was deposited in each state to pay for the programme. It is worth noting that the Chairman and Health Counsellor of each local government participated in all these activities, culminating in the design of the health services.

The villagers themselves have, with technical assistance, gone through the same process of identifying local health problems and the resources available for solving them and have
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decided on the most appropriate strategies for achieving their goals within the limits of their resources in personnel, materials, and money.

To facilitate the implementation of the scheme, the country was divided into four zones, and Health Zonal Offices and Coordinators were installed in Ibadan, Kaduna, Bauchi, and Enugu. State and local government health committees were also formed. As decided at the implementation workshops held in 1986, the participating local governments divided their areas into districts, each with a population of about 20,000. In one local government area where there was a long-standing primary health care system, the village health workers within each district constituted themselves into District Health Committees to share experiences; they also participated in a programme of continuing education.

The foundation on which primary health care is built is the village health service. In each village, a person nominated by the villagers is trained to provide care for the main health problems that the villagers themselves have identified. The local government must have the capacity to provide such training.

The primary health care system must finally be linked with the secondary and tertiary health care systems so that a person entering at the primary level can move up to higher levels of health care according to need. The health centres must be upgraded to receive referrals from the periphery. This involves a trained health team with appropriate skills to function in these facilities and the provision of essential equipment, drugs, and other materials.

With the assistance of UNICEF, WHO, and the World Bank, a system for the supply of essential drugs is being developed, based on a revolving fund. A list of essential equipment for village health services has been compiled, and the existing lists for health clinics and health centres have been revised to weed out sophisticated and inessential items that have hitherto been supplied to these facilities.

Management courses were held in 1986 for local government health administrators in all the 52 participating authorities, with technical assistance provided by the Federal Ministry of Health and USAID, as part of a continuing effort to ensure that the services are efficiently managed.

The indicators needed to measure the effectiveness of the services have been chosen and the records to be collected for this
purpose have been designed, ready for use in the village, the health centre, and the central office.

A sum of 10 million naira (approximately US$ 2 million) was allocated in 1986 to all state Ministries of Health to complete and commission some of the abandoned basic health service buildings. The Federal Ministry of Health is providing assistance to the states to upgrade the training of community health extension workers. WHO and UNICEF are working with eight schools of health technology to this end. The United Kingdom is helping to provide books and training materials for the schools, and a contract is expected to be signed with the African Health Consultants’ Agency to review the training programmes in all the other schools and institute remedial measures.

The Federal Ministry of Health has received concrete offers of help for the programme from the EEC, UNDP, and the Ford Foundation. USAID made a grant of US$ 67 million to integrate family planning services into the health care system and to implement the country’s population policy: US$ 15 million has also been given to the Ministry to improve the immunization, malaria, and diarrhoea programmes within the primary health care services.

Primary health care alone cannot be effective. It needs at least a functionally educated community with a reasonable standard of nutrition, a potable water supply, and good communication systems. For this reason, contact has been made with the Directorate of Food, Roads, and Rural Infrastructure, proposing ways in which primary health care activities could be streamlined so that the combined resources could be efficiently utilized. Since the techniques of social mobilization are essential to success, close collaboration with the Directorate of Mass Mobilization for Economic Self-Reliance and Social Justice (MAMSER) is also envisaged.

Emphasis is being placed on training. Doctors, for example, are trained mainly to care for individuals rather than the community. But most of the time the disease being treated results from conditions in the community and so could have been prevented. It is not productive to spend millions of naira maintaining large hospitals filled with patients with preventable diseases. This does not mean that the hospitals are unnecessary; as long as there are sick people, they must be treated as well as the country’s resources permit. Medical schools are beginning to respond to the call for a review of their curricula to meet the
needs of the health care system. Unfortunately there is a fear that the change required will jeopardize the international status of our medical education, that Nigerian doctors will no longer be recognized by the United Kingdom or the USA, and that they will be regarded as inferior. This cannot be so if the quality of the training remains high. All that needs to be done is to ensure that the content reflects the needs of the country’s health system. There should be no compromise with the thoroughness with which the scientific basis of medicine is taught; it is that which dictates the quality of medical practice in any situation.

The above comment applies to other health personnel such as the nurses, who have a similar history to that of doctors. Traditionally they have been trained in curative health care, but they are now taking concrete steps to establish new training programmes in their schools.

I am confident that health care can be brought to every Nigerian by the year 2000 if we abide by the principles of primary health care based on equity and justice, if the services are available, accessible, and acceptable to every individual, if they are available at a price the individual and community can afford, if we concentrate on solving the health problems that take the greatest toll of life, and if we pursue our goal with determination, persistence, and single-mindedness, using all the resources we can muster. The task ahead must never be underestimated, but Nigeria has the men, women, and international goodwill to succeed.
The Declaration of Alma-Ata in 1978 stated that the strategy of health for all should involve people in decision-making for their own health. In the same year a political decision was made in Papua New Guinea to decentralize the administration by setting up provincial governments. The Government believed that only by having administration at provincial level would the rural people themselves have a significant input. Thus each province was divided into electorates according to the population, and everyone over 18 years of age was eligible to vote for members of the Provincial Assembly. Health institutions also began to seek a greater involvement of the public, and management committees were set up for that purpose.

The Department of Health in 1978 was more administrative than technical in nature, but with the devolution of power this had to change. Although responsibility for administration of the health services was delegated to the provincial departments, financial budgeting for some of them remained with the Department of Health. Devolution turned out to be difficult to accomplish, but if the Department of Health was to keep its status and work with the new provincial departments, it had to be seen as a technically competent body—competent not only in preventive and clinical medicine but also in planning, management, and the promotion of community participation in health.

By 1982 the Health Minister was forced to take strong measures to ensure that the Department did change and take on its new role. The health service at provincial level was coordinated under the provincial health officer, who, on the devolution of power, took over control of all aspects of the
government's health service. The church health service was likewise linked into the system.

At the time of devolution there was a hospital in every province staffed with medical officers and of a level of sophistication that depended on the size of the province. Across the province were health centres manned by health extension officers (medical assistants) and support staff. In the area of each health centre were health subcentres, staffed with nurses, and aid posts. Each aid post provided preventive and curative services for 1500 people.

In the provincial health office there were staff for the control of malaria, tuberculosis, and leprosy, in addition to a community health nursing supervisor, a health educator, and a health inspector. A provincial health extension officer coordinated extension work across the province.

With the increased power at provincial level, this whole organization became strengthened and better controlled. Differences in overall organization between one province and another also occurred, and this reflected not only the views of the people but also the geography of the province and the ethnic groupings. Papua New Guinea is a diverse country, the mainland having high rugged mountain terrain as well as coastal plains and swamps, and the surrounding islands varying from coral atolls to active volcanoes.

At the beginning of 1978 the organizational structure of health services across the country was similar in each province, with the Department of Health having full administrative control.

The year in which these changes occurred was also the final year of the country’s first national health plan—a far-sighted and well-thought-out document, which had set down the basic principles of primary health care for the country four years before they were set down for the whole world at Alma-Ata.

The country’s health service was based on aid posts—peripheral preventive and curative units covering 90% of the country. Access to the health service was for most people within two hours’ walking time. A referral system existed for more complex problems—from the aid post to the health centre to the provincial hospital.

The basic principles of health services in 1978 were those set down in the 1974–78 national health plan and reiterated in the 1986–90 plan. They called for a health service that would be:
—participatory, being best received when communities are involved in decision-making about their own health;
—equitable, being available to all, as close to their homes as possible;
—appropriate, being of a standard that reflects the level of community and national development;
—collaborative, working closely with other government departments to achieve improvements in health;
—efficient, achieving maximum benefit from the expenditure of scarce resources.

Perhaps the most difficult of these principles to achieve was that of participation. This was due not only to the bureaucratic system but also to the way in which the health services were regarded—as a government or church service that was given to the people and for which they had no responsibility. The malaria control programme, which involved workers entering people’s homes to spray the interior with DDT, tended to emphasize the authoritarian image of the health service.

Village people also had traditional healers to consult about health problems. These healers followed traditional practices handed down from previous healers, and the type of practice varied widely across the country. However, the effect of modern medicine was seen in an increasing number of remote areas as the road network was extended, especially in the highland region.

In 1978 over half the Government’s expenditure on health was spent outside the 19 hospitals, in line with the health plan’s emphasis on primary health care.

However, financial allocations and political will alone could not ensure a fully consultative and participatory health service. In 1978 neither the bureaucrats nor the people understood the need for decentralized authority and local participation in health management.

Resistance is encountered

In mid-1978 the responsibility for the administration of health services in the provinces was given to the various provincial departments but the budgeting remained with the Department of Health.
What happened in fact was that the Department of Health carried on organizing health services as if no change had occurred. In provinces that looked on their new responsibilities properly this caused frustration and annoyance. When the Department of Health should have been taking on its role as technical adviser and becoming more technically competent, its officers were trying instead to hang on to administrative power.

In 1980 the Secretary of the Department of East New Britain stated that assistance from headquarters personnel had virtually broken down, with very little meaningful advice being given to the province’s health personnel.

In the same year the Minister for Decentralization stated: “We were continually frustrated in our efforts to carry decentralization through, and at a National Executive Council (cabinet) meeting in Rabaul a major effort was made by senior civil servants from three government departments to frustrate and defeat our reorganization efforts. This says a lot about the power of some public servants and indicates the very strong anti-decentralization and anti-provincial sentiment held by some people in Port Moresby. It is a fact of life that bureaucracies do not readily give up power. On the contrary, it is in the nature of the animal to increase its power rather than forgo it. The bureaucratic animal in Port Moresby is strongly aggressive. I think we are now seeing a determined effort by the centre to reassert itself.”

Later in the same year the Secretary of the Department of Western Highlands listed the attitudes he had found in national staff. They feared losing control and declining in status, so they totally opposed decentralization and refused to delegate decisions. Some of them totally ignored decentralization in the belief that it was only a passing phase, that provincialization would be dropped in a couple of years, and that departments would centralize in Port Moresby. They remembered to ask the provinces their opinion on certain matters and informed them of fait accompli decisions on some others but did not consider them proper government departments with the power to make major decisions. Sometimes they totally withdrew from doing anything and refused to make any decisions, saying “That’s for provincial government to decide”. That usually happened when it was a problem that Port Moresby had never been able to solve, and which the provincial government had not been given the staff or resources to tackle.
Unfortunately these problems made it impossible for officials of the Department of Health to implement the Declaration of Alma-Ata to the extent one assumes they would have wished.

After the Department's delegation to the Alma-Ata conference had returned, a paper was submitted to the cabinet to endorse the concept and principles of primary health care. The cabinet gave its full support.

Even though leadership in this area was lacking centrally, some provinces took it up in earnest, as exhibited in their provincial health plans. In New Ireland a major project to organize community participation in health was undertaken with the assistance of the World Health Organization. People were taught to set up village health committees, to set health priorities and targets, and to implement programmes to achieve those targets. After a trial period and much hard work, community participation took root and spread to nearby areas of the province.

Other provinces began similar programmes to increase community involvement. A considerable amount of effort had to be put into education because people did not feel responsible for the health services.

In West New Britain, the programme for community involvement was set out in the provincial health plan as follows:

1. Encourage the formation of village health committees whereby the village members themselves form a committee to examine health needs in their area and attempt to find solutions to their own problems, to which they accord their own order of priority, with the aid of health professionals when asked.

2. Promote health centre area committees whereby community members meet with health personnel to plan and discuss the health services and problems of the area.

3. Promote the Provincial Health Board, which is an advisory board to the provincial minister responsible for health. This board is to consist of members of the community, representatives from the health centre area committee, and representatives of those providing the health services.

4. Promote management committees for aid posts, health subcentres, health centres, and the provincial hospital to help in the management of these institutions, to make the public aware of its responsibility to assist in the running of these services, and to organize community members in the delivery of such assistance.

5. Ensure the preservation and utilization of cultural and traditional practices important for the maintenance of health, and ensure where possible that the useful elements in traditional medicine are integrated into the health services.
6. Increase the availability of medical care by teaching people how to treat certain illnesses, and enable them to obtain the necessary medical supplies to treat themselves.

The actual implementation of the programme was left to the various officers in charge of the health centre areas. This contrasted with the project in New Ireland where one specific area was first surveyed and studied.

The New Ireland project was intended to explore:

— the daily problems of individuals and communities and ways of solving them with special reference to health;
— the kinds of knowledge, attitudes, and skills required by different categories of health workers in promotion, prevention, cure, and rehabilitation and in the socioeconomic sphere;
— the types of workers most suitable for different tiers of services and their training;
— ways and means of involving the community;
— ways and means of developing a link between people in the community and health system staff and of defining their respective areas of responsibility;
— the kind of information system required to monitor the health needs of people and the output of the primary health care programme;
— appropriate financial mechanisms.

A health educator was assigned to work full time as the provincial primary health care coordinator.

At the national level, relations between the Department of Health and the provinces deteriorated, with the Department’s officers resolving to take back the activities that had been delegated to the provinces. This, however, was not followed through, and the next year all the provincial Assistant Secretaries for Health resolved that the delegated activities should be completely decentralized to the provinces.

The Minister of Health intervened at this point, stating in his budget speech of November 1981: “The involvement of my Department’s headquarters is to be strictly limited to the provision of technical advice and assistance.”

The top bureaucrats in the Department of Health, however, did not agree, and the relationship between the senior staff and the Minister worsened. In mid-1982 the Health Minister consulted the Cabinet on the issue and it was resolved to make the
provincial departments fully responsible financially as well as administratively for delegated activities. Subsequently the senior staff of the Department were changed and the Department itself reorganized. From now on it was to take responsibility for:

- all hospitals and the medical, dental, nursing, preventive, and disease control services;
- monitoring the standard of health service activities across the country and ensuring the maintenance of satisfactory standards;
- the pharmaceutical services;
- the mental health, radiotherapy, and specialist medical services;
- national health legislation, planning, policy formulation, and evaluation;
- medical training;
- the provision of services to the Medical Board, the Nursing Council, the Fluoridation Committee, and the standing and ad hoc organizations relating to the functions of the Department.

The aim of the reorganization was to make the Department of Health more technically competent, so that it would be able to advise the provincial health divisions. Three main areas emerged—primary health services, secondary health services, and administration. The small division of policy, planning, and evaluation took up the important role of coordinating the production of the second national health plan (1986–90).

The strategy proposed in this plan was the adoption of a primary health care approach to the improvement of health. It built on the principles set out in the first national health plan (1974–78): that health services should be participatory, equitable, collaborative, and efficient. From these principles a cohesive strategy was developed to help improve the health of the population. It contained a number of elements, the first being to provide basic health services for all through health centres, health subcentres, aid posts, clinics, and community health volunteers, as appropriate. Such services would have a primary health care approach, and would include:

- the treatment of common illnesses;
- extension services for maternal and child health, including immunization, antenatal screening, growth monitoring, and family planning;
— control of communicable diseases such as malaria, diarrhoeal diseases, tuberculosis, leprosy, and sexually transmitted diseases;
— health improvement activities directed at the problems of malnutrition, personal hygiene, dental health, and mental health;
— promotion of environmental health through the provision of safe water supplies and adequate environmental sanitation, vector control, and food sanitation; and
— health education as an integral part of all health activities.

In addition to these services, an effort would be made to involve the community in decision-making and planning and in providing and organizing its own health care. As a necessary support for the basic health services, the Government would ensure that provincial and referral hospitals were available that were able to provide essential nursing, diagnostic, and specialist services. Sufficient numbers of each cadre of health worker would be trained to meet the requirements of the basic and referral health services, and a programme of in-service training would be provided to enable all health workers to upgrade their clinical, administrative, and community health education skills.

The management of the health services would be decentralized to district level, and strong emphasis would be placed on cooperation with other agencies for the formulation of national policies on the environment, nutrition, the population, and other relevant issues. Management at national, provincial, and district levels would be required to gather proper health statistics and to maintain an effective evaluation and planning capability. Health staff would, moreover, be encouraged to recognize the importance of cultural and traditional values in the maintenance of health and where possible to utilize traditional practices and integrate them into the health system.

The principle of participation was followed in the actual writing of the plan. Provincial health officers, doctors, health extension officers, nurses, pharmacists, health inspectors, dentists, church health service workers, representatives of other government departments, and many other people were involved in the formulation of the plan. Twelve working committees were established to thrash out the various policy issues, and early drafts of the plan were widely circulated and discussed.
One development aimed at in the second national health plan was to have the actual administration of health services run from the district level, with supervision and assistance from the provincial level. To enable this to happen, in-service training and supervision programmes were to be upgraded.

Some provinces, however, went further and decentralized all administration to the district level. This resulted in districts becoming independent of the provincial health office. Responsibility for all activities in the area then fell to the district manager, an administrator without medical training. For such a policy to be successful, capable and experienced managers were required.

Progress to date

By 1985 Papua New Guinea's progress towards achieving primary health care could be summarized as follows:

- Primary health care was the focus of the health system.
- A national strategy for primary health care, including policies concerning the provision of essential medical supplies, had been developed.
- Village development committees had been established in some areas to stimulate and coordinate community participation, but much remained to be done to educate and encourage the committees.
- Although the existing physical infrastructure had reached 96% of the population, some groups remained underserved. These were principally rural women needing obstetric care, for whom access to a male aid post orderly was not culturally acceptable, and the 4% of the population for whom the nearest facility was more than two hours' travelling time away.
- The health services offered all eight basic components of primary health care, but the quality of the services needed to be improved.
- Hospitals provided basic medical care in the outpatient and casualty departments and secondary care for patients needing more specialized treatment. However, the vital supervisory role of hospital staff in supporting primary health care through regular supervision of health centres and aid posts required further emphasis and development.
• Political decentralization to the provincial level had substantially improved the opportunities for intersectoral collaboration.

• The concept of district health services, including the district team under the health extension officer, had been introduced but was not widespread and required strengthening.

At present the financial allocations to the health services are consistent with the primary health care approach. Government policies give priority to funding basic health services and strictly controlling recurrent expenditure on hospital services.

The decade between the 1971 and 1980 censuses saw substantial improvements in the health of the population, which must have been due in considerable part to the primary health care approach. Infant mortality decreased from 134 per 1000 live births in 1971 to 72 per 1000 in 1980, while mortality among one-to four-year-old children decreased from 91 per 1000 to 42. Life expectancy at birth rose from 47.4 to 49.6 years in the same period. Maternal mortality, however, remained high. Whether the improvements have continued at the same pace in the present decade will be revealed in the 1990 census.

A comparison of health facilities shows the effect of the policy of extending basic health services. Between 1973 and 1984 the number of aid posts increased by 44% compared with a combined increase in health centres and subcentres of 40%. The closure of some long-stay hospitals for tuberculosis and leprosy patients caused the number of hospitals to fall. Health centre and hospital beds on the other hand increased by 7%.

The result of these changes in the health infrastructure was improved access to health services for the population. Whereas in 1973, 86% of the population were within a two-hour walk of the nearest health service facility, this percentage had risen to 93% by 1980 and by 1985 was estimated to have increased further to 96%. Population per aid post decreased from 1666 in 1973 to 1466 in 1984.

During the decade 1974–84 health manpower resources expanded at a faster rate than population growth.

During 1975 some US$31 million was expended on health, representing 8.7% of government expenditure and 2.6% of the gross domestic product. Throughout the period 1975–84 the proportion of government expenditure on health remained
relatively constant and the proportion of GDP increased consistently. By 1985 expenditure on health had increased to US$ 79 million, which represented 8.8% of government expenditure and 3.7% of GDP.

The per capita expenditure on health in 1988 was US$ 24.3. The ratio between the amounts spent on primary health services and on hospitals was 55:45 in 1984, a figure that had remained approximately constant since 1973.

The coverage for disease control programmes improved with the primary health care approach. Immunizations were generally given by community health nurses at maternal and child health clinics set up in various places. In one province, aid posts were used with great success to improve immunization coverage. Between 1983 and 1986 the coverage increased as follows: DPT from 27% to 47%, polio from 27% to 42%, pig-bel (enteritis necroticans) from 30% to 69%, and BCG from 58% to 75%.

The Department of Health took up the role of motivating provincial leaders to develop primary health care in their provinces. By the end of 1987 all provinces had received these motivational programmes, but not all had implemented them.

In New Ireland the coverage of the project expanded from 1000 to 24,000 people. The project staff became skilled in areas such as community diagnosis, community organization and development, the organization of workshops and meetings, the detailed programming of primary health care activities, review and evaluation, and inter- and intrasectoral coordination. The increased capabilities of community members included the identification of problems, the allocation of priorities, the mobilization of resources, and the formulation of plans.

The most significant development noted by the New Ireland project coordinators was the growing confidence of villagers in themselves. They began to believe that they could control their own lives and improve the quality of life. The primary health care approach was seen to be the means to a good life in the village.

The effectiveness of the project can be illustrated by looking at water supply and sanitation. Between 1980 and 1983 the proportion of families with a toilet increased from 58% to 70%, the proportion using river water fell from 29% to 17%, the proportion using spring water rose from 17% to 26%, and the proportion using a common tank rose from 17% to 33%.
The decentralization of administration from national to provincial level generally improved intersectoral coordination. The increased financial power of the provinces permitted the rationalization of the church health services, because the Government paid the salaries of the church health workers and supplied medicines and subsidies. Duplication was eliminated, and there was more cooperation between the churches, and between churches and Government, which improved the service in all areas.

In the education field the medical faculty of the University of Papua New Guinea introduced a diploma and a Master's course in community health. This was most successful in training provincial health managers. Later, health workers at lower levels also began taking this course.

In-service training improved and increased with the development of a national training support unit in the Department of Health. As well as motivating and teaching provincial in-service teachers, this unit produced general health education material. A diploma course in health education for provincial staff development officers was developed at the Goroka Teachers' College.

The curriculum for aid post orderlies was completely revised with the assistance of the Medex group of the University of Hawaii medical school. A new category of health worker—the community health worker—is now being trained on this task-oriented syllabus. This worker will replace the aid post orderly and the nursing aide.

In the field of nutrition each province was allocated a nutrition educator to educate both rural health workers and the community about improved nutritional practices. These provincial nutrition educators were given technical support by regional nutritionists of the Department of Health.

The national nutrition survey revealed that the main nutritional problems were in the middle altitude areas of the country, and efforts were concentrated there. Nutritional programmes were coordinated by the National Nutrition Council based in the Department of Agriculture and Livestock, with representatives from all sectors involved.

Safe water supply and sanitation programmes were major areas of emphasis. Each province was allocated a considerable amount of money each year for these rural health programmes from an Asian Development Bank loan. Emphasis was placed on gaining full community participation before starting any water
supply project. This slowed down implementation considerably but ensured a long life for the project. It also stopped wastage from faulty systems, which had been a common occurrence in the past.

In the area of maternal and child health, the use of “baby books” looked after by the mother were a great success. As well as being used for clinic attendance and treatments, these books recorded immunization status and nutritional growth by a central graph, which the mother could understand.

Standard treatment regimes were set down in manuals for child and adult health, to ensure that everyone received the best possible treatment. These manuals were well used by health workers.

Family planning programmes received assistance from the United Nations Population Fund (UNFPA) and voluntary agencies. The Government is now formulating a population policy, and it is hoped that in the near future these programmes will be given more emphasis.

The community health nurses, as well as running the maternal and child health programme, were in the main responsible for the immunization programme. The changes in these programmes and the improved coverage have already been mentioned. The most remarkable change has been in the incidence of pig-bel. This used to be a fairly common and often fatal illness in the highlands associated with a sudden protein intake in children who were used to a low protein diet. The vaccine was developed by the Papua New Guinea Institute of Medical Research and introduced to health programmes in the early 1980s. The incidence of pig-bel dropped markedly, falling by half in the first three years, and today it is an uncommon affliction.

In the 1983 reorganization of the Department of Health, regional epidemiological and disease control units were set up to support the provincial programmes by giving in-service training and assisting in epidemic control. This has resulted in a quicker response to disease outbreaks.

The Health Department’s planning division has worked with provincial health divisions to improve the use of information. It was found that many provincial and district health workers were collecting information and just sending in the figures without analysing them themselves. They did not appreciate their importance in assessing coverage trends or changes in incidence. In-service training programmes remedied
this, and the introduction of specially programmed computers at provincial level has given immediate feedback on information collected. Data gathering is now seen by peripheral health workers as being more interesting and relevant. This programme, like that for rural water supplies and national training, was funded with the assistance of a loan from the Asian Development Bank. This loan was also used to improve rural health facilities, by increasing the number of aid posts, vehicles, and staff and by modernizing and upgrading health centres.

The use of standard treatment manuals by all levels of health workers has already been mentioned. A standard medical stores catalogue has also been prepared in which items are listed that can be prescribed by specific categories of health workers. The drugs are distributed through area medical stores after being ordered by the officers in charge of the health institutions. Through a system of competitive ordering, the government was able to get very cheap drugs of good quality. As funding for pharmaceuticals remains good, there have been few drug shortages. Drugs outside the standard treatment regimes can be obtained only with the approval of medical specialists.

What we have learnt

As shown by the 1986–90 national health plan and by the provincial health plans, planning has improved markedly over the period. The ability of staff to analyse data has improved, as has the programming of activities and the setting of time-limited targets. This is continuing to be further strengthened through the Health Department’s programme of management support.

The national health plan has undergone its mid-term review, and this has laid the foundation for the country’s third national health plan.

The diversity of the country and its people is reflected in the organization of health services and programmes. The provincial government system is expensive, and the number of politicians serving the population is high when compared with many other countries. Some members of the national parliament feel that their influence has been eroded by the provincial governments and would like to see them abolished. However this would be very difficult to do, now that the system has been in place for 10 years.
Concern has been raised at the limited support provincial governments have given to health services. Some of them, indeed, have preferred to support economic ventures rather than social services. Central authorities would like to have more control over expenditure, as well as over the appointment of senior health executives in provincial departments. In times of economic constraint however, it is difficult to decide where scarce resources should be allocated.

Because of emphasis on the economic sector, the National Government reduced expenditure on the health sector by 15% during 1986–88. This affected the amount of travel that staff could undertake and restricted any expansion in staffing levels.

In provinces where administration was further decentralized to the district level, problems arose. To be a good manager of economic and social service activities requires considerable knowledge and managerial skill, and unfortunately these attributes were not always available in those appointed. Health has not generally been given high priority by these managers. In some places, for example, transport previously allocated for nurses was reallocated for other activities and the Provincial Health Officer could do nothing about it. One such province has reverted to being administered centrally.

The reorganization and reorientation of the Department of Health took a long time, and in retrospect tough leadership was needed to ensure an early change. This would have greatly assisted the provincial health divisions to become more quickly oriented to their new responsibilities.

The New Ireland community development project (or primary health care project) achieved good results and was well accepted. However, it called for much hard and devoted work from the health workers involved, well beyond normal working hours. The changes and developments in other provinces in this regard have not been so marked, the projects there being more diffuse. It seems that intense effort and follow-up is required if a change in attitude is to be effected in the community and health services.

The programme was strengthened in 1989 by adopting the basic-minimum-needs approach in which quality-of-life indicators were set down for each family to use as an assessment of their development. These indicators—which include housing, sanitation, water supply, security, availability of schools, health services, information and financial income—can also be used to
assess development at village and district level so that funds can be directed more appropriately. The “basic-minimum-needs approach to integral human development” is now national government policy.

Community participation in health, the cornerstone of the primary health care approach, can be seen to depend on many factors, not the least of which is the attitude of the promoters and participants. Much effort has to be made to support such changes and the individuals affected if success is to be achieved.

The progress of the health-for-all programme through primary health care in Papua New Guinea has a good foundation and is progressing well. Much can be gained by looking at past problems, achievements, and failures and learning from these in order to set out on an improved path to health for all.

It takes a long time to achieve community participation in health and to integrate the primary health care approach fully into health services, but in Papua New Guinea, the rewards gained from this course of action have amply justified the effort.
After nearly a century and a half as a British colony, Sri Lanka became a free, independent, and sovereign nation in 1948. Even before this, as far back as the first decade of the twentieth century, national politicians were closely involved in the fight against disease. All governments since independence have been fully committed to the provision of total health care to the entire population.

In 1977, the newly elected Government continued on this path when it pledged to ensure high standards of health care and disease prevention and to make further improvements in the health service, particularly in the rural areas, through both the Ayurvedic and the Western systems.

Therefore Sri Lanka can be considered a country well equipped politically and socially to associate itself with the historic decision of the Thirtieth World Health Assembly on health for all by the year 2000. Having made this commitment, the country reaffirmed it in February 1980 by signing the Charter for Health Development.

**Health care in Sri Lanka up to 1978**

For over 2000 years the people of Sri Lanka have had recourse to an indigenous system of medicine based on Ayurveda. Organized Western-type health care was introduced by the British in the latter part of the nineteenth century. Initially it was largely
curative-oriented and was motivated by the need of the colonists to look after their economic interests in urban and plantation areas, in which an extensive network of well-staffed hospitals was gradually built up. When national leaders were given a limited measure of self-rule in the 1930s, Western-type curative care was made more widely available. Concurrently, organized promotive and preventive services were being made available from the time of the establishment of the health unit system in 1926, which incorporated and put into practice important concepts of the primary health care strategy enunciated 50 years later. There is no doubt that the health unit system in operation throughout Sri Lanka made a strong impression on those who developed the primary health care philosophy prior to the Alma-Ata Conference.

Representatives from Sri Lanka did not go to Alma-Ata merely to listen but to present their experiences and contribute to the development of the primary health care strategy. The underlying philosophy of primary health care, the stress on equity and social justice in the health-for-all goal, had been the framework on which health care was provided to the people of Sri Lanka.

A study on health personnel in 1972 showed that the entire population was within 5 km of a Western-type health care facility and 1.5 km of an Ayurvedic facility. Public transport was subsidized, and the buses and trains of the State-owned transport system reached almost every one of the 24,000 villages in the country. Above all, health care was provided free to all.

So the primary health care approach was not something new and novel to Sri Lanka. It already existed, and the very high literacy in all age groups and the high level of female education made the people more receptive to the primary health care concept when it was formally described, and ensured their cooperation and participation in the advance towards health for all by the year 2000.

The evolution of health-for-all policies

Given this background to the development of health care in Sri Lanka from the early years of the century, it was not difficult for the Government to take the necessary steps to establish the health-for-all policies.
The first was taken in 1980 when Sri Lanka signed the Charter for Health Development. In March of the same year, the National Health Council was established. This council, which is chaired by the Prime Minister, includes as its members the Minister of Health and ministers from other departments related to health. It provides political commitment at the highest level as well as policy guidelines for health development within an intersectoral framework.

The health-for-all policies that have evolved under the direction of the National Health Council specifically aim at correcting existing inequities in health care provision and removing disparities in health status between different sections of the population by making the best possible use of all available resources. The strategies and plans of action that arose out of the health-for-all policies called for the restructuring and re-orientation of the health care system.

Health care system in Sri Lanka

The operational side of the government health services includes different kinds of health personnel working individually or in teams. They carry out their functions in three fairly independent subsystems—medical care services, public health services, and laboratory services.

Medical care services

The medical care services represent the largest part of the government’s Western sector. Their aim is to meet the demand of the population for curative care, which is provided in different types of institutions, as listed in Table 1.

These institutions provide both outpatient and inpatient treatment, and in 1970 there was a ratio of 3.15 hospital beds per 1000 population. In general, better medical care is provided in the larger institutions, but an effort is being made to develop a referral system between the various medical institutions in the country.

The total number of beds in 1964 was 34 454, and by 1970 this figure had increased by about 15%, corresponding roughly to the growth in population.
Table 1. Categories of medical institutions in Sri Lanka operated by the Ministry of Health, 1970

<table>
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<tr>
<th>Medical Institutions</th>
<th>Number of Institutions</th>
<th>Number of Hospital Beds</th>
<th>Hospital beds per 1000 population</th>
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<tr>
<td>Provincial hospitals</td>
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<tr>
<td>Base hospitals</td>
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<td>District hospitals</td>
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<td>Peripheral units</td>
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<td>Cottage hospitals</td>
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<td>Rural hospitals</td>
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<td>Maternity homes</td>
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<td>39780</td>
<td>3.15</td>
</tr>
</tbody>
</table>

Public health services

The main function of the public health services is the promotion of health and the prevention of disease. In Sri Lanka these services are carried out by 98 health units, each of which is generally staffed with eight public health inspectors and 23 public health midwives, who are allotted specific areas of operation (or "ranges"). The inspectors are responsible for environmental sanitation and the control of communicable diseases, the midwives for family health work. There are also 124 school dental clinics and 2694 feeding centres. The organization of public health services is carried out by the medical officer of health, one for each health unit, with the assistance of supervisory staff.

In addition to this general public health work, there are five specialized campaigns concerned with the control of particular diseases — malaria, filariasis, tuberculosis, leprosy, and sexually transmitted diseases. All of them are organized independently;
although some have partly merged their activities with the general medical care and public health services.

These campaigns undertake the diagnosis and treatment of individual cases in addition to the usual preventive work—namely, the spraying of houses with insecticides to control malaria, the spraying and oiling of stagnant water to control filariasis, and BCG vaccination to control tuberculosis.

**Laboratory services**

At the operational level there is only one institution, the Medical Research Institute in Colombo, that performs routine laboratory tests for the medical and public health services and carries out basic laboratory research. However, laboratory facilities are available in the Colombo group of hospitals, provincial hospitals, base hospitals, and district hospitals, as well as for the specialized campaigns. The smaller hospitals and units have no means of making laboratory diagnoses, except by referring cases to one of the above institutions or through the private sector.

**Health problems in 1978**

Data on hospital morbidity and mortality show that the population lives in a challenging environment, which is expressed in the high incidence of communicable diseases. Malaria occupies a prominent place among them and almost overshadows all other diseases in this group. Special problems are also presented by tuberculosis, leprosy, filariasis, and the sexually transmitted diseases, as well as typhoid fever, viral hepatitis A, poliomyelitis, diphtheria, dysentery, rabies, diarrhoeal diseases, and respiratory infections. Numerous accidents and suicides also occur.

Anaemia, malnutrition, and some diseases of infants and children can be related to the living standards of the population. Diseases in this group are among the leading causes of hospitalization and death and occupy second place in the disease pattern in Sri Lanka.

The chronic and degenerative diseases are in the third place. They include heart diseases and malignancies, which are also among the ten leading causes of hospital admission and of death.
Conditions connected with pregnancy and normal or abnormal delivery are responsible for a large number of admissions to hospital.

Therefore, in 1978, when the population of Sri Lanka was 14 million, morbidity and mortality were primarily due to malaria and other communicable diseases whose causes were deeply rooted in the environment. At the same time, diseases related to increased life expectancy and changes in life-style were also beginning to emerge.

It was not possible to expand the health unit system to keep pace with the sharp increases in population, and it became apparent that the efficiency of the organizational structure that had achieved so much was being undermined. It became necessary to refashion the existing structure into more manageable units, within the framework of the health-for-all policies.

**Restructuring the health care services**

Since the establishment of the National Health Council certain changes have taken place. Of particular importance is the increase in the decentralized health divisions from 15 to 21 and the further expected increase in number to match the 24 administrative districts into which the country is divided. This process will no doubt be accelerated with the establishment of Provincial Councils. The heads of the health divisions are now known as Regional Directors of Health Services.

Another major change that is being effected is the restructuring of the health care delivery system into a three-tiered primary health care complex, supported by more specialized secondary and tertiary levels of care. The purpose of this exercise is to make the system more manageable.

The emerging structure within a Regional Director’s area can be depicted as a pyramid (see Fig. 1). At the base of the pyramid will be the village health centre, headed by a midwife, one for each *grama sevaka* area. The public health midwife (family health worker) will be one of the people’s first points of contact with the health care delivery system. She will provide a comprehensive package of primary health care services determined by her level of training and competence. The village health centre, which provides health services to an average population of about 3000, will receive adequate referral, mana-
Fig. 1. Model for delivery of health services adopted by the Ministry of Health

gerial, and logistic support from the higher levels. It is planned to provide all public health midwives with residential quarters and a clinic room. The village health centre will thus be a base for primary health care activities.

Above the village health centre will be the subdivisional health centre, which will be under a registered medical practitioner or assistant medical practitioner and have only outpatient facilities. Two public health inspectors, a supervising public health midwife, and a public health midwife will be attached to the centre, working both there and in the field.
Patients will be referred to the divisional health centre or the district hospital, depending on their condition. As no downgrading of existing institutions is envisaged, the 538 existing rural hospitals, central dispensaries, and maternity homes will be classified as subdivisional health centres. Eventually each division will have about 2–3 subdivisional health centres, each serving a population of 20,000. They will be centres for outpatient care and will integrate curative and preventive care.

At the next level will be the divisional health centres, which will provide all health care services including inpatient care and will also incorporate the service functions of the health units. They will be headed by medical officers. Most of the district hospitals and all the peripheral units will be converted into this category. The divisional health centre will be a 60-bed hospital, and the medical officer in charge or Divisional Health Officer, will be responsible for the health of the 60,000 people within the area. This institution will provide essential health care to a population of 3,000 living around the centre and also function as a referral centre for the rest of the area.

The proposed structure will have at its apex the higher-level health institutions such as teaching hospitals, specialized hospitals, and provincial hospitals as at present. The present base hospitals will be redesignated district hospitals, and will be increased in number so that there is one such hospital for each administrative district. However, provincial or general hospitals, in the districts where they exist, will serve as district referral centres. Owing to the policy of not downgrading any existing hospital, it is possible that some districts will have more than one such institution.

The health care services that will be available in each of the above centres are listed in Table 2.

**Participation and cooperation**

The primary health care strategy stresses the importance of full and organized community participation, with people assuming more responsibility for their own health. The formal system will receive community support through the involvement of voluntary health workers and community leaders.

The newly created village development council—the gramodaya mandalaya—forms the main organization for all com—
munity development activities, including health. It will have a health sector committee, with the public health midwife as secretary, which will be the main body responsible for planning, implementing, and evaluating health activities in the village.

A large number of educated youth groups (health volunteers) are actively involved in identifying and meeting the health needs of the community. They have become important agents of change in the village.

Primary health care relies on a team of health workers, a significant member of which is the traditional practitioner. The practitioner serves as a traditional physician in the areas of

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Table 2. Health care services provided by various centres

<table>
<thead>
<tr>
<th>Village health centre</th>
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<tbody>
<tr>
<td>Family health</td>
</tr>
<tr>
<td>Antenatal care</td>
</tr>
<tr>
<td>Care during childbirth</td>
</tr>
<tr>
<td>Postnatal care</td>
</tr>
<tr>
<td>Child care</td>
</tr>
<tr>
<td>Family planning</td>
</tr>
<tr>
<td>Immunization</td>
</tr>
<tr>
<td>Diarrhoeal disease control</td>
</tr>
<tr>
<td>Nutrition</td>
</tr>
<tr>
<td>School health</td>
</tr>
<tr>
<td>Family life and care of adolescents</td>
</tr>
<tr>
<td>Control of communicable diseases</td>
</tr>
<tr>
<td>Management of minor ailments and injuries</td>
</tr>
<tr>
<td>Health education</td>
</tr>
<tr>
<td>Simple investigations</td>
</tr>
<tr>
<td>Blood: haemoglobin</td>
</tr>
<tr>
<td>Urine: sugar, albumin</td>
</tr>
<tr>
<td>Blood films for malaria parasites</td>
</tr>
<tr>
<td>Passive screening of patients for malaria</td>
</tr>
<tr>
<td>Subdivisional health centre</td>
</tr>
<tr>
<td>All the above activities plus:</td>
</tr>
<tr>
<td>- Outpatient medical care</td>
</tr>
<tr>
<td>- Environmental sanitation</td>
</tr>
<tr>
<td>Divisional health centre</td>
</tr>
<tr>
<td>All the above activities plus:</td>
</tr>
<tr>
<td>- Inpatient medical care</td>
</tr>
<tr>
<td>- Dental care</td>
</tr>
<tr>
<td>- Minor surgery, including sterilization</td>
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<tr>
<td>- Medicolegal work</td>
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</table>

Health promotion and disease prevention, and can give collaborative support to community care.

Health cannot be attained by the health sector alone. Economic development, anti-poverty measures, food production, water, sanitation, housing, environmental protection, and education all contribute to health. The housing programme, for instance, which was accelerated further during the International Year of Shelter for the Homeless, is playing an important role in improving the health status of the urban and rural poor.

As primary health care forms part of the overall development of social and economic life, a proper coordination mechanism has to be established between health and other sectors.

National health development network

The National Health Council is serviced by the National Health Development Committee, which is chaired by the Secretary of the Ministry of Health and has as its members the secretaries of all the ministries represented on the National Health Council, together with a few senior officials from related departments. This committee provides the National Health Council with advice on national policy formulation and is also directly responsible for intersectoral coordination in the planning, programming, implementation, and monitoring of health policies and programmes.

The National Health Development Committee is in turn supported by six technical standing committees with a very wide representation from government departments, academic institutions, and nongovernmental organizations. The six standing committees are on:

- primary health care
- health manpower and training
- drugs policies and management
- health and medical research
- indigenous systems of medicine
- technical cooperation among developing countries and appropriate technology for health.

In order to ensure intersectoral coordination and community participation at district level and below, health sector
committees are being established for the development councils in each district, subdistrict, and village.

The Government has embarked on a far-reaching decentralization of its administration, involving people at the level of the village, subdistrict, and district. The three-tier primary health care complex will fit neatly into this decentralized model.

Each district development council in the 24 districts has responsibility for the socioeconomic development of the district, including health planning and health development. This responsibility has been further strengthened by the delegation of certain health functions from the Minister of Health to the District Ministers. The health sector committee of the district development council provides advice and technical support for health development through the primary health care approach. The subdistrict and village health sector committees are responsible for the planning and development of health care services, with primary health care as the key intervention.

The main thrust of decentralization is towards the total development of the people at village level. Therefore the restructuring and reorganization of the health care delivery system has been carried out as an integral part of the overall development process and not as an isolated exercise, which should enhance the probability of success.

Although the three-tiered primary health care complex that is being developed has potential for establishing an effective referral system, such a system has not so far proved workable in Sri Lanka. People are exercising their fundamental right to seek health care at a facility of their choice. It is not possible within a democratic framework to enforce a referral system by legal means. However, studies are under way in certain areas of the country to determine the feasibility of a referral system. A limited degree of success has been demonstrated, but the weakness of the system lies in the fact that cases are referred first of all by the public health midwife so that the referral system is confined to mothers and children. More work is required to design an acceptable referral system.

Reorientation of health manpower

The need to implement the concepts of community participation and intersectoral action for health in relation to primary health
care involves the reorientation of existing health workers and a change in emphasis in the preservice training of such cadres.

The Ministry of Health established the National Institute of Health Sciences in 1979 to undertake the task of training health manpower. The Institute has since assumed the leadership role in curriculum revision and reorientation of training of primary health care workers, their supervisors, and their teachers. In the next two years the Institute is planning to upgrade four existing training centres in four provinces (Northern, Southern, Central and North-Western) to expand the scope of in-service training. Concurrently with changes in approach to health manpower training, the Ministry of Health has also initiated a health systems research study on the quality of health manpower training.

In spite of progress made in many fields, there is one particular problem that remains acute; this is the reluctance of doctors to take up preventive medicine or to serve in rural areas. The Government has recently awarded a substantial salary increase to doctors, and it is hoped that this will be an incentive for them to enter these new fields of work, but the Ministry of Health continues to seek ways and means of overcoming this problem.

How the health care system works at district level

Currently Sri Lanka is divided into 24 administrative districts in nine provinces. The administrative unit in Sri Lanka is the district. The Ministry of Health is divided into 21 regional health divisions and each division is in the charge of a Regional Director of Health. The Ministry of Health plans to increase the regional health divisions to 24 within the next two years in keeping with the administrative districts.

Since 1978 political administration in a district has been under a District Minister, who is a democratically elected Member of Parliament. The Government Agent is the administrative head of the district and also functions as the District Secretary to the District Minister. Responsibility for some of the functions of the health services have been delegated to District Ministers, who thus have a vital leadership role to play in achieving health for all. They are involved in reviewing the implementation of service and support programmes such as maternal and child
care, family planning, nutrition, immunization, school health services, health education, rabies control, and environmental health.

Other functions devolving to the District Minister include the mobilization of community resources for health development and the promotion of intersectoral coordination and community participation.

The Regional Director of Health Services assists the District Minister in drawing up and implementing the district health plan, and also works closely with the District Secretary in coordinating input from other sectors of the economy.

An important feature of the health system in Sri Lanka is its uniformity. There are no "pilot-project" districts. The rest of this section will be an account of the health system in one particular district, but it will be applicable to all other districts in the country. The district chosen is Kalutara in the Western Province of Sri Lanka. The vital statistics there are typical of those for other districts—crude birth rate 19.6 per 1000 population (1986), crude death rate 6.1 per 1000 population (1986), maternal mortality rate 0.5 per 1000 deliveries (1982), infant mortality rate 20 per 1000 live births (1982), and neonatal mortality rate 12.4 per 1000 live births (1982).

The estimated mid-year population in Kalutara in 1987 was 896,000, which makes it the sixth most populous district in the country. Kalutara District is the home of the National Institute of Health Sciences, so expertise is readily available. The district has four health units, while the field practice area of the National Institute of Health Sciences functions as a fifth. It is anticipated that the primary health care complex will be introduced shortly, once its efficacy in other areas has been proved.

A major achievement has been the increased availability of public health midwives who are the front-line health care providers. In Kalutara District it has been possible to achieve the target of having one public health midwife for 3000 persons. Together with public health inspectors and assistant medical practitioners, the primary health care services are now equally accessible to people in all parts of the district. The public health midwife bears a major responsibility for the extended programme of immunization. In many parts of the country including Kalutara, public health inspectors actively assist the public health midwives in carrying out immunization. There has been a steady increase in coverage of infants with BCG, DPT, and polio
Table 3. Percentages of children vaccinated, 1984 and 1986

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<thead>
<tr>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalutara</td>
<td>75.8</td>
<td>93.6</td>
<td>84.5</td>
<td>83.3</td>
<td>79.1</td>
<td>86.7</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>66.8</td>
<td>73.8</td>
<td>66.4</td>
<td>74.9</td>
<td>65.4</td>
<td>74.7</td>
</tr>
</tbody>
</table>

Source: Annual health bulletin. Colombo, Ministry of Health, 1986

The continuing improvement in immunization coverage is not only because of increased numbers of health personnel and better education. Several other strategies inherent in the primary health care approach have contributed to it.

First, the national health development network established in 1980 has led to the effective mobilization of intersectoral action and community participation. The network is very dynamic in Kalutara District and has been able to mobilize and coordinate the activities of formal, informal, governmental, and nongovernmental agencies for health development. Using the network, the District Secretary has been able to make health centres more accessible to people. Mobile clinics have been instituted to serve the more remote areas. Affluent members of the community have donated land for the construction of health centres. Rural development officers, with advice and guidance from health staff, have developed a series of first aid posts for the treatment of minor ailments. A unique feature of these first aid posts is that users contribute voluntarily to their maintenance.

Secondly, the effectiveness of the preventive and promotive programmes has been greatly enhanced by the quarterly monitoring of the progress made in implementing the district health
plan. The development of the national health information system has also contributed to this improvement.

The improvement in immunization coverage is also due to the retraining of all categories of health staff involved in primary health care. All staff involved in the different sectors of the health development network have been trained through workshops and seminars. Special emphasis has been placed on leadership development and management training.

Lastly, intensive health education has also played a major role. Health education officers are now active in every district, and they assist the health staff in communicating the new health strategy to everyone in the community. In the battle against malaria, a concerted effort was made to explain to the public why certain measures were being taken, and this resulted in a remarkable increase in the number of houses sprayed with insecticide.

The increase in the number of health personnel, combined with improvements in training and management, community participation and intersectoral cooperation in a decentralized district administration have contributed to primary health care. The immunization programme is only one example of an area in which progress has been made. Others are the supply of safe drinking-water and sanitation.
Thailand: from policy to implementation

Amorn Nondasuta
Formerly Permanent Secretary of Health, Ministry of Public Health, Thailand

Raden Husdee
District Health Officer, Nonthai District, Thailand

Thailand has had five 5-year plans so far, beginning in 1961. The first placed an emphasis on the construction and expansion of health facilities. The second and third recognized health as an important part of the social sector together with education and social welfare. These plans accelerated the growth of rural health and medical care and the improvement of existing services, especially for the low-income groups. Public health activities were expanded, medical care services improved, and research carried out in the medical and public health fields. Coordination between planning of the national, regional, and provincial levels improved, resulting in an increase in the resources available for public health activities. Emphasis was also laid on maternal and child care and family planning, communicable disease control and eradication, the improvement and expansion of medical care, the development of environmental health, integrated health services, health personnel development, public participation and community psychology, and mental health.

The budget allocations for health for the first, second, and third plans comprised 4.90%, 6.12%, and 6.32% of the total national budgets. Towards the end of the third development plan, the emphasis was on both supply and training of health personnel since they were unevenly distributed between rural and urban areas. Moreover the universities producing doctors, nurses, and other health personnel were usually left out of the
health sector plan because they came under the Office of the Prime Minister. There was therefore poor coordination between consumer and producer. Basically, health planning in this period was based on short-term (annual) and medium-term (5-year) plans. Long-term planning was practically nonexistent, except in a few cases where population projections were made for different fertility levels.

The fourth 5-year plan came into operation in 1977, with a budget allocation of 5.1%. In this plan, primary health care schemes were to be developed to cover 50% of villages in the country. These schemes would rely heavily on existing organizations in the villages, would try to embrace traditional medicine and practices when relevant, and would use community resources to approach and solve health problems, mainly through a network of village health volunteers and health communicators. An effort was to be made to integrate primary health care into the village’s total socioeconomic development endeavour. The Buddhist temples and the monks had been recognized as major agents of social development. Primary health care would be a private system developed and executed by the rural people themselves with the support of the Government.

Looking back over those early stages in the introduction of primary health care, we realized that many ideas, concepts, and strategies applied to develop the programme in Thailand were consolidated from fragments of research and from past experiences gained in working in the rural areas. In this chapter some of the factors underlying those concepts will be reviewed. They will be followed by an account of the implementation of primary health care in Nonthai District, Nakhon Ratchasima Province.

We started with the concept of community participation, which is the key strategy of health for all and was born out of the necessity of having to provide care for a large number of people with very few staff. The idea emerged while working in rural villages, when we experienced the willingness of the people to help in the activities — primarily immunization at that time. The experience led to an attempt to organize the people’s efforts in a more systematic manner. This eventually culminated in the creation of village health volunteers and communicators.

The concept of village communicator was derived from the observation that in any community people tend to group together in clusters, based on their pattern of communication. It
was possible to identify the focal point of this informal communication network, and this person was then assigned the function of village health communicator.

The village health volunteer concept was based on the traditional pattern of caring for the sick. In most families and communities there is someone who is entrusted with this responsibility, be it the mother or grandmother of the family or the traditional village healer. If these people were given a more scientific training to continue in this role, it was believed that the situation could be improved with the least amount of input. There would be no danger of non-acceptance, and no remuneration would be required for their services because they would continue to work within the context of the local tradition.

The other subject we would like to mention is the community financing of primary health care. There are many kinds of funds in the village—the single-purpose fund such as the nutrition or sanitation fund, and the multipurpose fund such as the community development fund.

When primary health care based on village health volunteers was introduced in 1978, a scheme to finance it in the form of a revolving fund was initiated. The Ministry of Public Health gave US$20 to the village health volunteers to purchase essential drugs to be sold to the people who needed them. Owing to the attitude of people towards government money, it was presumed to be a grant to be given away, thus making replenishment of the fund impossible. The funds vanished in a short time. This experience led to the recognition of community-financing as a key element for village-based development. Ideally, such a fund had to be mobilized from available local resources. This concept led to the creation of the village drug cooperatives in which community members participated by buying shares. Once a village cooperative started functioning, the Ministry provided an initial instalment of essential drugs costing US$40. Where the drug cooperatives were established, the performance of village health volunteers was found to be more effective than elsewhere. The observable changes were not only the availability of essential drugs in the village but the increasing skill of the cooperative committee in financial management. This management skill was further applied in transferring other primary health care technologies to the community, beginning with water supply and sanitation and followed by nutrition. These projects were equally successful. After the villagers had acquired experience and
skill in the management of single-purpose funds, developments that called for skill in mobilizing finance and managing a programme became possible. It was a natural phenomenon that those single-purpose funds should be combined and expanded into village development funds with multipurpose objectives. Such village development funds have grown in size and number across the country and now amount to about US$2 million in 53 provinces. These funds are essential to the success of self-managed primary health care in Thailand.

Another innovative project implemented in stages since 1984 is the health card system—a village pre-paid health care scheme that provides care for its members (families and individuals) and guarantees referral services from the village health centre through hospitals at district, provincial, and regional level according to the seriousness of the case. The project was later accepted as part of the current health development plan.

In addition, there was the so-called Technical Cooperation among Developing Villages, or TCDV, which refers to a phenomenon seen in the villages, when people from one village visited another to learn from them. The process was tested by asking the skilled workers from the villages who had been trained under the primary health care programme to train their counterparts from other villages. The experiment took place in the province of Khon Kaen, where the regional sanitation headquarters for the north-east was situated. The director, Mr Suchin Yusawasdi, was instrumental in developing the first successful TCDV programme in Thailand.

The other strategy successfully implemented was that of basic minimum needs in rural development. Many countries in Asia had developed the basic-minimum-needs approach, but none had utilized it as a planning and development instrument. The idea of using this approach started as a result of the difficulty encountered in bringing about intersectoral collaboration as part of the health for all strategy.

We had tried the concept of the health council but found it redundant. Then we initiated a National Economic and Social Development Board, with the aim of developing a long-term social goal for the country, based on the basic-minimum-needs concept. The breakthrough came when we eventually transformed the basic needs into quantifiable indicators. The basic-minimum-needs approach was finally adopted as a national
campaign for the quality of life, which covered a 3-year period ending in 1987.

**Implementation of the strategy in Nonthai District**

Nonthai District is in the northern part of Nakhon Ratchasima Province in the north-east of Thailand, 28 km from the provincial capital. It is divided into 14 subdistricts and 160 villages with a total population of 1,200,000.

Before the era of primary health care, Nonthai had no local hospital. Twelve health centres were the sole government health and medical service outlet. These health centres were staffed by a mere 17 individuals, who clearly could not provide adequate service coverage to their needy catchment population. Health centre services were usually reactive responses to episodes of illness and mostly directed towards the communities in the immediate vicinity of the health centre. While the province had a mobile medical service, the number of visits rarely exceeded one or two a year.

A clear image of the health status of Nonthai District could be obtained by examining specific health sectors individually, such as environmental sanitation. Most villagers in Nonthai collected their drinking-water from reservoirs, which stored rainfall for only part of the year. It was reported that only 2% of households had a year-round supply of drinking-water. The problem of adequate clean water was of the highest priority for the villagers.

Waterseal latrines were found in only 18% of Nonthai households, and garbage was dumped either underneath or near the house. Very few households reported burning their refuse. The common practice of constructing the living quarters directly over livestock pens contributed to an unhealthy environment prone to the spread of disease.

Preschool malnutrition in Nonthai had been well documented; it had important adverse effects on the development and learning ability of rural children. Previous data showed that 56% of children under five were normal, 31% had first-degree malnutrition, 10% had second-degree malnutrition, and 3% had third-degree malnutrition. Nonthai used to have the highest percentages of malnourished children of any district in Nakhon Ratchasima Province.
The Nonthai villagers practised spirit worship extensively and when methods of modern or traditional treatment did not result in a cure a medium would often be consulted and a seance held to purge the sick of the evil spirit.

From the first we were interested in finding ways of improving the health status of the entire population and of increasing service coverage, and we discussed the problem with many people. One conclusion was that the staff would have to spend more time in outreach activities. Morning, afternoon, and evening workplans were drawn up for each health centre, but after a year it became clear that this approach had not been very successful because the shortage of staff and facilities was too great for the extra effort to make a significant difference.

The Ministry of Public Health first introduced the concept of primary health care in 1977. A key principle was that the community should play an important role in pursuing and maintaining its health status while the health centre assumed more and more of a supporting and facilitating role in this process. We agreed totally with these principles and decided to pursue them vigorously in Nonthai.

Volunteers and communicators

The key elements of primary health care are nutrition, immunization, first aid, maternal and child health and family planning, sanitation and water supply, essential drugs, control of endemic diseases, and health education. In the early stages we were sceptical whether the approach could truly advance the country towards health for all by the year 2000, although it appeared to be the best strategy available for dealing with the monumental task that lay before us. One of our earliest inputs was the recruitment and training of a cadre of village health communicators and village health volunteers. The former were locally selected male or female community residents who were trained for five days in public health, problem identification, group work, and coordination skills. The latter were trained in the same curriculum and also received some basic training in first aid, the total course lasting 15 days. The volunteers were then instructed to return to their communities and inform their fellow villagers of what they had learnt. They thus became the key force for local health development at the community level.
Initially, the communicators and volunteers did not have much credibility because they were familiar members of the community and known not to have any formal health or medical skill. However, from frequent visits and ongoing training by the local subdistrict health personnel, they gradually gained the skills and credibility to make them successful agents in the eyes of their fellow villagers.

One of the first villages to be successful in the primary health care concept was Dan Krong Krang, one of the poorest villages in the district. Despite the prevailing poverty, the level of local cooperation was high, especially on the part of the village headman, who gave his total support to the village health volunteers.

In due course, immunization for under-fives was brought into line with Ministry of Health guidelines, pregnant women received the requisite prenatal care from trained practitioners, and nutritional surveillance was carried out correctly for all small children. If any child was diagnosed as malnourished the mother was given health education and food supplements. Village health volunteers and communicators helped to maintain a good standard of nutrition by regularly conducting weighing sessions for young children.

On the subject of clean water supply and sanitation, the village health communicators and volunteers were able to convince the majority of households to arrange for a year-round supply of drinking-water. Rainwater collection tanks were constructed to help meet this need. Latrines were also constructed and eventually covered 100% of households.

This success was the result of the persistence and skill of the village health communicators and volunteers, the village headman, and the support of the local health centre staff and community residents themselves.

Encouraged by this initial success, we were interested to see whether we could replicate the primary health care formula in other needy villages in the district. One by one, neighbouring villages recruited village health communicators and volunteers for training. However, success was not as readily forthcoming as in the initial effort. One obstacle was that the normal occupations of the volunteers consumed too much of their time and left them little opportunity to pursue their duties as health workers. Some volunteers migrated temporarily to work elsewhere, and in other cases the local village development com-
mittee did not fully support the volunteers. Moreover, because of the lack of subdistrict-level staff, the frequency of in-service training visits to the volunteers declined steadily as the number of volunteers increased. In other cases, the health centre staff had an incorrect approach to the community.

Village funds

How could these problems be resolved? One conclusion, drawn from discussions with colleagues such as Dr Preecha Deesawat and Dr Paijit Pawabutra, was that the communities had to do more to mobilize local resources if they were to become more active and supportive of primary health care. The concept was thus devised of the village revolving drug fund. An initial seed supply of drugs would enable the fund to start, and it would then become self-perpetuating through drug sales and regular re-supply from the local health centre. Early on, however, the drug fund scheme encountered difficulty when it failed to collect payments for the drugs and supplies distributed. In time, a number of drug funds lost all their seed supply of drugs.

To rectify this, the fund system was modified into a cooperative, with local shareholders providing the start-up funds so that there would be greater community interest in preserving the integrity of the fund. This led to a major policy change in the management of the primary health care programme, which proclaimed the importance of three factors:

— the full development of local manpower resources,
— the creation of village funds to generate local income for sustaining medical supplies,
— the establishment of a village committee to manage the primary health care institutions, with full knowledge of local circumstances.

This new policy enabled us to define the obstacles more effectively and so try to resolve them. In the villages that were proceeding slowly we redoubled our efforts to promote the three factors. This was a joint effort between the district, subdistrict, and village health workers.

Gradually a distinct improvement began to be seen in the primary health care status of the district. Nevertheless, there still remained some obstacles that we could not overcome. For
example, there were some communities that were particularly resistant to the ideas of primary health care, regardless of how much information was given to them. We then adopted the idea of inter-village communication and support. We selected our first and most successful village, Dan Krong Krang, and its villagers to be the spearhead for resistant areas. They would orient others in the concept of primary health care and help establish the local health cooperatives, potable water storage vessels, latrine construction, and other health promoting activities. Some expenditure was required in conducting the inter-village development, which was provided by outside sources.

**Intersectoral coordination**

By 1985 we realized that over the 6–7 years of work on primary health care we had not addressed the issue of intersectoral coordination with other ministries that were beginning to implement programmes parallel to the primary health care activities being conducted in Nonthai. It was proposed to rectify this lack of coordination by means of the basic-minimum-needs strategy and the quality-of-life development project. The local district and subdistrict development staff were given an initial orientation and training in basic minimum needs. We then saw the great benefit that could occur if we were to pool our resources with those of other sectors and adopt the same development goals at the peripheral level, instead of working through independent vertical programmes. For example, in an area where the village health volunteers diagnose a high level of malnutrition, the agricultural extension agents could promote the cultivation of nutritious crops for use as food supplements. Through cooperation and coordination such as this, development problems suddenly seem much more solvable.

**Basic minimum needs**

The basic-minimum-needs approach allows villagers to collect information on their own development status and to assess their needs. This fosters a greater awareness of development and instils a sense of power to affect the fate of the community. The local village development committee conducts the assessment while extension agents serve in an advisory capacity.
In 1986, basic-minimum-needs assessment exercises were conducted in one village in each of the 14 subdistricts of Nonthai. In the early stages the district development staff worked with the village committees to learn the process together, and this was a very rewarding experience. Given this tool to diagnose and address their development needs, the villagers have a new-found ability to shape their destiny.

From 1986 to 1987 further improvements were observed in primary health care in Nonthai. Other related developments were observed too. The basic-minimum-needs exercise exposed a need for more current news in the villages, and so newspaper reading stands and public address systems were established through local effort and resources. In agriculture, more crop rotation was being practised, and farmers were becoming less dependent on a single annual rice harvest by growing other crops during the off-season, and this was fostering an improved economic status of the population.

Over these ten years of effort and development there have been many successes and many failures. Even with strong support from higher administrative authorities it has been an arduous, though most rewarding, experience to have reached our present position. In fact, it can be said that many villages in Nonthai have already achieved health for all. With continued support, though at the same time increased self-reliance, there is every reason to expect that every village in Thailand will achieve health for all by the year 2000.

The achievement of Nonthai is a case of health of the people, by the people, and for the people. The people of Nonthai will continue to develop their quality of life to ever higher levels.

The impact at national level

During the year immediately following the 1978 Declaration of Alma-Ata, the Government adopted primary health care as the key approach to health development and ratified the health charter promoted by WHO, in which primary health care features as central to the strategy for health for all.

Resources from WHO and other international organizations became the major source of funding, which helped the Ministry of Public Health to carry out the initial stage of the primary
Table 1. Important public health statistics (1975–87); year of measurement in brackets

<table>
<thead>
<tr>
<th></th>
<th>Previous data</th>
<th>Latest data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude birth rate (per 1000 population)</td>
<td>37.6 (75)</td>
<td>21.2 (85)</td>
</tr>
<tr>
<td>Crude death rate (per 1000 population)</td>
<td>9.1 (75)</td>
<td>5.7 (85)</td>
</tr>
<tr>
<td>Population growth rate (%)</td>
<td>2.5 (75)</td>
<td>1.6 (85)</td>
</tr>
<tr>
<td>Infant death rate (per 1000 live births)</td>
<td>48.6 (80)</td>
<td>41.3 (85)</td>
</tr>
<tr>
<td>Maternal death rate (per 1000 live births)</td>
<td>1.0 (80)</td>
<td>0.5 (86)</td>
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<tr>
<td>Average life expectancy:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>57.7 (75)</td>
<td>60.8 (85)</td>
</tr>
<tr>
<td>female</td>
<td>61.6 (75)</td>
<td>66.2 (85)</td>
</tr>
<tr>
<td>Children under 5 years with:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>normal weight for age (%)</td>
<td>47.0 (82)</td>
<td>76.5 (87)</td>
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<tr>
<td>2nd-degree protein and energy malnutrition (%)</td>
<td>13.0 (82)</td>
<td>2.4 (87)</td>
</tr>
<tr>
<td>3rd-degree protein and energy malnutrition (%)</td>
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<td>0.6 (87)</td>
</tr>
<tr>
<td>Households with sanitary latrines (%)</td>
<td>41.7 (79)</td>
<td>47.1 (85)</td>
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<tr>
<td>Families having safe drinking-water (2 litres/person/day) (%)</td>
<td>32.0 (82)</td>
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<tr>
<td>Children under 1 year receiving complete vaccinations (%)::</td>
<td></td>
<td></td>
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<tr>
<td>BCG</td>
<td>73.0 (85)</td>
<td>94.8 (86)</td>
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<tr>
<td>diphtheria, pertussis, tetanus</td>
<td>53.0 (82)</td>
<td>71.1 (86)</td>
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<td>poliomyelitis</td>
<td>21.0 (82)</td>
<td>70.3 (86)</td>
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<tr>
<td>measles</td>
<td>5.9 (84)</td>
<td>44.9 (86)</td>
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<tr>
<td>Pregnant women receiving tetanus vaccine and booster (%)</td>
<td>30.0 (82)</td>
<td>53.1 (86)</td>
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<tr>
<td>Deliveries performed by auxiliary midwives and trained traditional birth attendants (%)</td>
<td>44.2 (82)</td>
<td>51.7 (86)</td>
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<tr>
<td>Married women provided with family planning services (%)</td>
<td>59.0 (81)</td>
<td>65.0 (84)</td>
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<td>Morbidity rate, malaria (per 1000 population)</td>
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<td>5.0 (86)</td>
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<tr>
<td>Morbidity rate, diarrhoea (per 1000 population)</td>
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<td>8.6 (85)</td>
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<tr>
<td>Morbidity rate, vaccine-preventable diseases (per 100 000 population):</td>
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<td></td>
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<td>diphtheria</td>
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<td>1.2 (86)</td>
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<tr>
<td>tetanus of newborn (per 100 000 births)</td>
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<tr>
<td>other tetanus</td>
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<td>1.6 (86)</td>
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<td>whooping cough</td>
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<td>0.2 (86)</td>
</tr>
<tr>
<td>tuberculosis in children</td>
<td>90.7 (75)</td>
<td>30.7 (87)</td>
</tr>
<tr>
<td>measles</td>
<td>57.1 (82)</td>
<td>37.3 (86)</td>
</tr>
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</table>
health care project without requesting extra funds from the Government. Although some reallocation of the budget had to be made, this was done during the fifth 5-year plan. Again, this arrangement strengthened the position of the Minister of Public Health in the Cabinet since he was able to prove that such a policy as health for all was feasible without creating an unnecessary burden on government resources. As a matter of fact, a policy that reflects people's involvement need not be expensive; if it is, the whole scheme becomes extraneous and artificial.

By the time Thailand approached the end of the Fifth National Health Development Plan (1982–86), the percentage of the total national budget allocated to health had declined from 5.1% to 4.3%, while most of the major health problems identified at the beginning of the period had been taken care of using primary health care as the main strategy.

The results of the efforts have proved satisfactory, as may be seen in Table 1. The population growth had declined to 1.6% by 1985. The problem of malnutrition had been tackled through various community activities, and by the end of 1987 the prevalence of third-degree malnutrition was only 0.27%, compared to 2.13% in 1980. About 70% of the population in the rural area now has access to a safe water supply.
The lessons of the country reports

The country experiences are fascinating in several ways. They provide evidence of both the qualitative and quantitative achievements and setbacks the countries have encountered in the decade since Alma-Ata. Together they contain many lessons that can guide future action in each of the 15 countries and can also be taken into account by other countries as they struggle with difficult obstacles to achieve the goal of health for all in the remaining decade. Given that the experiences gained in implementing primary health care differ widely from one country to another, the conclusions and lessons to be drawn from the country reports can be expected to vary a great deal. Below, under nine headings, are some of the lessons that need to be taken seriously in future efforts in primary health care.

“The health sector is not an island”

Mozambique’s account refers to the late President Samora Machel’s observation that the health sector is not an island. This concept is one of the three pillars of primary health care. It must be admitted that progress in moving beyond sectoral divisions has been much less successful than was hoped for. Yet some of the reported activities in this area are exemplary. The health sector in Canada has been very skilful in getting health issues discussed beyond its walls. At the federal level, the Lalonde report of 1974, *A new perspective on the health of Canadians*, and the 1986 statement, *Achieving health for all: a framework for health promotion*, have provided a challenge to the Government. Equally illuminating are the provincial activities—the Premier’s Council on Health Strategy in Ontario, the District Health Councils, and Toronto’s 1976 Health Planning Steering Committee reports on *Public health in the 1980s*, *The unequal society*, and *Healthy Toronto 2000*. These have increas-
ingly focused on social, environmental, and economic challenges. Some of the issues raised in these reports have been taken up in political elections.

In Finland under the Ministry of Social Affairs and Health, the Government compiled its first health policy report to Parliament in 1985. The report included proposals concerning other sectors of public policy.

The various chapters give many other examples of activities that help in breaking down the isolation of sectors. The role of the Womens’ Family Welfare Movement—the Pembinaan Kesejatitenraan Keluarga (PKK)—in Indonesia, which was awarded the 1988 Sasakawa Foundation Prize by the WHO Executive Board, is an example of an effective link between the health sector and a nongovernmental organization. The National Health Council in Sri Lanka and similar mechanisms in Hungary and other countries, including district and village development committees, play a role in facilitating contacts, exchange of information, and joint planning.

It is often asked whether health development is a non-political matter to be dealt with by the technical staff and ministries of health. The experiences summarized in the book show clearly that this is not the case. Admittedly there are a number of countries where concerns for primary health care have not moved very far beyond the Ministry of Health. Primary health care implies a change in the pattern of resource allocation to favour populations that are currently underserved. It also calls for the introduction of other measures, such as adoption of the concept of essential drugs, and regulations dealing with tobacco use and pollution. These measures often threaten the interests of various privileged groups, and political courage will be needed to introduce and implement them.

The experiences in this book provide examples of how the health sector can be more sensitive to opportunities for putting primary health care on the country’s agenda. Such an agenda should deal with broad health issues and not only health service concerns. The five main objectives to be attained by the year 2000 in Indonesia (the pancakarsa husada) and the basic-minimum-needs initiative in Thailand are examples of well-planned agendas.
The infrastructure must be put first

The improvement of health systems goes through two fairly distinct phases. The first phase is the development of the infrastructure so as to ensure reasonable access for individuals, families, and communities on a continuous basis. This is done through increases in health facilities of various types, particularly the smaller ones, and the training and deployment of health workers to staff the facilities. Included in the infrastructure are government, voluntary agency, private sector, and volunteer components. The situation in the 15 countries is very varied. For Canada, Finland, Hungary, and the Netherlands this development took place in the 1950s and 1960s. For Indonesia, Thailand, and Malaysia, the period was the early 1970s. On the other hand, Burkina Faso, Ethiopia, Papua New Guinea, and to some extent Nigeria are currently struggling with the development of their infrastructures.

It follows that countries with scanty resources have a double challenge. They have to develop their infrastructures and at the same time improve delivery of programmes. How should a country proceed? What experiences are available?

There has been a tendency to put more resources at the point of delivery of programmes rather than develop the infrastructure. The examples provided below indicate that this temptation needs to be strongly resisted.

Making the infrastructure work

Several examples of ways of improving the operation of the health infrastructure can be drawn from the reports. These include integrated approaches, emphasis on outreach programmes, health promotion, and making better use of resources. The provision of integrated health care is a goal in all 15 countries. Programmes that focus only on well-defined health problems fail to develop either the community or the health care infrastructure. They run the risk of overlooking local priorities and patterns of disease. In Mozambique the expanded programme of immunization was carried out as a campaign immediately after independence. It achieved a coverage of 95% of the eligible population. Between 1982 and 1984 that figure fell to 45%. To ensure that it is sustained at the proper level the
programme has now been integrated with maternal and child health.

The integrated approach described in the chapters may be reflected in legislation. The 1972 Primary Health Care Act in Finland, the 1974 White Paper on *Structure of health care* in the Netherlands, the *poshyandu* in Indonesia, and the emphasis on health centres in many countries are examples of legislation that strengthens the integrated approach. Several problems, however, remain. These include how to integrate preventive and curative care and how to strengthen linkages between universities and ministries of health. In Sri Lanka the debate on whether public health midwives should provide curative care has occupied health planners and others over the past 40 years. A similar debate regarding community health volunteers goes on in Thailand and Indonesia. The role of hospitals in primary health care is also under serious discussion. It has proved much easier to integrate health centres into primary health care than to integrate hospitals. One view is well summarized in the contribution from Canada—hospitals set their own agenda. On the other hand, it has been claimed that Alma-Ata disregarded hospitals. This matter was considered by a WHO Expert Committee, which examined in detail the issues involved and the experience in several countries and ended with important recommendations on ways of getting out of the impasse. There is also the question of the role of physicians. Often they are private entrepreneurs, practising wherever they wish and as they see fit as long as they comply with laid-down requirements and standards. Coordination or integration of their efforts and that of organized public health activities is often deficient. The involvement of professional associations in primary health care, which is one of the mechanisms through which understanding between physicians and others could be strengthened, is not specifically commented on in the reports but is certainly an important area for future action.

“The universities producing doctors, nurses and other health personnel were usually left out of the health sector plan because they came under the Office of the Prime Minister. There was therefore poor coordination between consumer and producer.” This observation from Thailand summarizes a common
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problem. The report also raised the related issues of curriculum development and lack of specific national health manpower policies. While ways of resolving some of these problems, particularly in relation to nurses, are described, most of them continue to pose a challenge.

The reports mention several other problems that make the working of the infrastructure difficult, such as poor motivation of staff and deficiencies in logistics, but no solutions are proposed.

Outreach programmes

Another important development that emerges from several chapters is that health staff are spending more time in outreach activities to increase coverage. In many other countries, underutilized staff could become further involved in outreach work at little or no additional cost, thus achieving greater impact with their skills.

The dasa wisma initiative in Indonesia, which identifies a health volunteer for every 10 families, the avoidance of “inventory patients” in the same country, and the strengthening of the Cross Organization in the Netherlands are good examples of how nongovernmental resources can be mobilized for outreach programmes. The need for reallocation of government resources to support outreach programmes is also emphasized. Patients are increasingly being discharged earlier from hospitals. Is money saved? Is it released to ensure that necessary community care is provided? Or does it remain in the hospitals?

From risk-factor orientation to health promotion

During the 1970s many industrial countries with well developed infrastructures took steps to ensure that services were available to all according to need and risk. Two developments characterize this period—de-institutionalization of services and strengthening of services for risk groups. Risk-oriented services include maternal and child health, school health, and occupational health. A focus on health promotion has evolved in the 1980s in Canada, the Netherlands, and several other developed countries. This approach centres on promoting a healthy en-
environment and a healthy lifestyle. It is also taking root in some developing countries; the “health life movement” in Indonesia is an example. The general conclusion is that this approach can be used along with activities for developing and improving infrastructures in the least developed countries. Since it centres on formal and informal health education programmes through multisectoral activities, it can be adopted in all countries.

Empowering communities

The story of the struggle for decentralization, which is essential for community participation in the Netherlands, Papua New Guinea and some of the other countries, is revealing. “It is in the nature of the animal to increase its power rather than forgo it”. This reminder indicates the magnitude and complexity of the problem. The strategies adopted in the two countries and the outcome in each are equally illuminating.

The reports indicate that for the most part those providing health care are not accountable to the local population. There is general agreement that much more effort is needed to ensure that communities are the main actors in health and the controllers of health care. The formation of health consumer groups might be an important way of overcoming the powerlessness that people often feel as individuals, particularly with regard to the information available to them.

Doing more with less money

Well developed outreach services illustrate how more efficient use may be made of existing resources. The percentage of gross national product devoted to health in the developing countries has declined considerably in the last 10 years, particularly in the poorest countries. How can the health of the poorest and most vulnerable groups be protected? What alternative resources can be mobilized? What are the possibilities of the developed countries providing more support? While the experiences presented deal with a number of these issues, the last is scarcely touched on, but the Forty-first World Health Assembly in 1988 made a special call for the developed countries to provide more support to the least developed countries.
Obviously, the elimination of waste and the better use of available resources will be a challenge in the coming decade. At the same time, there is no agreed formula on the most appropriate way of apportioning resources between sectors. The health sectors in both developed and developing countries have to improve both their performance and their economic information base if they are to put strong arguments for a maintained share of resources.

**Accountability, monitoring, and evaluation**

The "operation room" approach in Malaysia is one of several innovative ways of ensuring that information on what is happening in primary health care is readily available. However, few of the other contributions deal extensively with this question. Improvement in coverage has been shown in all countries, even those with serious difficulties such as Mozambique. While mortality rates are going down, the levels remain very high.

**The way forward**

All 15 countries have taken steps to implement primary health care, and the achievements are impressive. It is sobering to recall that the main problems discussed at Alma-Ata still feature prominently in the country reports, and clearly there are no simple solutions to such ingrained problems. A learning-by-doing approach is the way forward, and it must be backed up by an intensified exchange of experiences to ensure that we learn from acquired experiences and from each other.