Structural adjustment: source of structural adversity. Socio-economic stress, health and child nutritional status in Zimbabwe

Bijlmakers, L.

Citation for published version (APA):

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: http://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.
Changing profile of the health system, health indicators and overall health system performance

In 1999 the President of Zimbabwe installed an 11-member Commission of Review into the Health Sector to advise the government on ways of arresting the crisis that had unfolded in the sector and of reversing the deterioration in the quality of health services. The recognition that there was a crisis indeed came after almost an entire decade of adverse circumstances, of which the macro-economic changes, drought and the HIV/AIDS epidemic were principal.

This chapter describes the health system in Zimbabwe and the major changes that have taken place prior to and during the period of economic structural adjustment. It tries to answer the question whether equity in health, which has been the mainstay of Zimbabwe's national health policy since independence, has been enhanced effectively and whether the health system has responded adequately to the macro-economic changes and difficulties that the country has gone through.

The chapter sets out with a description of the legacy of the health care system inherited at independence, followed by an overview of the new policies and structures that were instituted during the 1980s. Next, the general health policy and legislative framework during the 1990s reform period is subject of discussion, focusing on health policy changes as one of the determinants of health in the conceptual framework presented in Chapter 1. The subsequent sections analyse trends in the availability and the use of two main resources – finance and personnel – and changes in the government’s user fee policy for the health sector. We then investigate the epidemiological transition, especially changes in morbidity, mortality and nutritional status, which are the outcome indicators in the conceptual framework. When describing these changes the emphasis is
on the social geography of disease and mortality patterns, highlighting, where possible, differences between residential areas, socio-economic groups and gender. Lastly, an international perspective of Zimbabwe’s health system performance completes the profile, before some conclusions are drawn.

All data presented here derive from secondary sources: policy documents, research reports, journal articles and grey literature, obtained from government departments, research institutes and aid agencies.

The legacy of the pre-independence health care system

At independence in 1980, Zimbabwe inherited the Rhodesian health care system, in which health services were divided along racial lines and available resources were highly skewed towards hospital service provision for the small urban white population to the detriment of primary health care for the black majority in rural and peri-urban areas. Several reviews have extensively described the profound socio-geographical imbalances in the allocation of physical, financial and human resources in the health sector prior to independence (UNICEF, 1985; Agere, 1986; Manga, 1988; Herbst, 1990; Auret, 1990; Sanders, 1993).

For instance, in 1980 the average expenditure for private sector medical aid society members - all white subscribers to private health insurance - was ZWD 144 per person per year, while public health care expenditure was ZWD 31 ZWD per person for the urban population that used public services (mainly black people) and only ZWD 4 per person for people in rural areas (Herbst, 1990). In the late 1970s, the doctor-patient ratio for the 230,000 white Rhodesians was 1:830 and there was one hospital bed for every 219 whites. Hospitals, especially those in the urban areas, offered a level of care comparable to that of hospitals in Western countries. Of the total government budget for health in the financial year 1979/80, almost a third (32%) was allocated to the Andrew Fleming hospital in Harare (later renamed the Parirenyatwa central hospital; Auret, 1990). In contrast, in rural areas where the majority of the black population lived, there was only one doctor for as many as 50,000 to 100,000 people and one hospital bed for 525 people (Herbst, 1990). In many of these areas churches were the only providers of health care. The health facilities were of poor quality and overcrowded.

The concentration of health care resources in the urban areas and for the benefit of the wealthy and healthier segment of the population was the opposite of what one would expect if the distribution of resources was based on needs. Communicable diseases, nutritional deficiencies and factors predisposing to illness - general poverty, lack of education opportunities, lack of access to clean water and unhygienic conditions - were much more prevalent in rural than in urban areas. Several studies found large disparities in mortality rates (infant, child and maternal mortality), incidence of tuberculosis and other infectious diseases and childhood immunisation rates between urban and rural areas.

Footnote:
1 About USD 220 at the time.
and between whites and blacks (Manga, 1988). The first situation analysis of children and women in Zimbabwe, conducted by UNICEF and the Government of Zimbabwe (1985), described in detail the patterns of malnutrition and mortality, but found that little reliable information was available to describe the extent and patterns of morbidity. In exploring geographical differences, the document detected higher levels of child malnutrition in rural areas, in particular in commercial farming areas, where seasonal workers and their families lived in conditions that were sometimes worse than in communal areas. Some of these differences will be described later on in this chapter.

In pre-colonial times, traditional healers and spirit mediums were the only health practitioners in Zimbabwe. Although discouraged by colonial governments and western missionaries, they currently still enjoy a wide popularity among all segments of the population and play an important role in the health sector. They deal not only with health problems, but are consulted for religious, legal and social problems as well.\(^2\) Data on the use of traditional healers and spiritual mediums are scarce, but it is generally known that many patients who require medical treatment will first consult a traditional healer before seeking ‘modern’ health care.

Health policy and organisation in the 1980s

After independence, the Government clearly expressed the view that health is a ‘necessary and primary condition of development’, and that it constitutes ‘a human right of every individual’ (GoZ, 1981). It expressed the intention to focus its efforts on redressing the existing inequalities by investing especially in health services in rural areas. The development of primary health care was the new paradigm that would guide the post-independence government’s health policy, resource allocation decisions and human resource development.

Soon after assuming power, the new government repealed the Medical Services Act, passed in 1979, which reserved certain beds in the best government hospitals to designated medical practitioners for their private patients, and which closed the African wards to private doctors. The quality between ‘open’ and ‘closed’ wards was markedly different and permeated every facet of treatment and care, including food, drugs, the amount of nursing care and even the racial composition of the nursing staff (Manga, 1988). The abolition of the concept of open and closed hospitals in early 1981 was one of

\(^2\) It is difficult to separate religion from medicine in the faith of the Shona, for they are closely linked to each other. The traditional folk practitioner in Zimbabwe is the n'anga or chiremba. Most n'anga are spiritually endowed and have the gift of healing and divining. The total number of traditional folk practitioners in Zimbabwe at the end of 1975 was estimated at more than 8,000, about ten times the number of registered ‘modern’ medical practitioners. More recent estimates range from 35,000 to 45,000 (Wilson and Benoy, 1993). In 1980, the Zimbabwe National Traditional Healers’ Association was formed, which replaced several associations of a similar nature that existed previously. For a detailed description of traditional medical practitioners in Zimbabwe see Gelfand et al. (1985).
the manifestations of the government to bring about a racially integrated health care system, in which access depended less on the purchasing power of the patient.\(^3\)

In the same spirit, the Government decided in 1980 that all Zimbabweans earning less than ZWD 150 per month were entitled to free health services.\(^4\)\(^5\) In 1985 it was estimated that about 90% of the population fell below that income threshold, implying that state-provided health care was free of charge for the large majority of the population and nearly everybody in rural areas.

The government’s commitment to primary health care was most evident in the allocation of resources during the transitional period of 1980/81 to 1984/85 (financial years). The recurrent budget of the Ministry of Health reflected a clear priority for the rural areas and the development of a functional patient referral chain. At the same time, the government’s investment programme foresaw the construction of 316 new rural health centres and the upgrading of 450 existing ones over a three-year period. By the end of 1985, 210 new rural health centres had been constructed since independence (Herbst, 1990). By 1989, the number of rural health centres and clinics had increased from 247 at independence to 1062 (Auret, 1990), resulting in a much better geographical accessibility of primary care services.

The document Planning for equity in health (MoH, 1984), presented the new national health policy, which took its orientation from the principles of primary health care. The policy goal of equity was to be achieved through strategies and programmes including:

- The decentralisation of health services management and administration
- The integration of fragmented curative and preventive services into a comprehensive health care delivery system, with a special focus on maternal and child health
- The upgrading of existing rural health facilities and the construction of new ones
- The reorientation of health personnel towards primary health care and the development of additional human resources for health
- The training of village health workers, and
- The promotion of inter-sectoral collaboration and community participation in health.

The Health for all action plan 1985-90 (MoH, 1985) operationalised the strategies and set targets to be achieved. New structures were set up to strengthen specific services, such as family planning, drug legislation and quality control, drug procurement and distribution, and the promotion of traditional medicine. Box 3.1 describes how public health services are organised in Zimbabwe; Box 3.2 describes the administrative structures within the Ministry of Health and Child Welfare.

---

\(^1\) Other steps to redress racial discrimination in health care included the phasing-out of racially determined pay differentials among nurses; the appointment of blacks to senior medical and administrative posts; and the greater intake of black students in the medical school at the University of Zimbabwe.

\(^2\) About USD 230 at the time.

\(^3\) According to some sources the policy of free health service provision for the lowest income groups was introduced in 1985 (e.g. Zigora et al., 1998), but this is not accurate. In 1985 it was merely a continuation of a policy measure that was made effective in September 1980.
Box 3.1: Organisation of public health services

Public health care is delivered at four levels, each of which has a different function in the system of patient referral. Rural health centres, rural hospitals and town (municipal) clinics serve as the first entry level (primary level of care). District hospitals constitute the first referral level (secondary level of care), while provincial and general hospitals are meant to serve as the second referral level (tertiary level of care). Historically, the general hospitals were hospitals that provided services to the white population before independence. Most general hospitals have since become district hospitals, concentrating on secondary level of care, and only a few general hospitals are left. Central and specialised hospitals are responsible for the third referral level (quaternary level of care). Central hospitals are only found in Zimbabwe’s two largest cities, Harare and Bulawayo, which have two central hospitals each.

A district hospital provides in-patient as well as outpatient care and has emergency surgical and obstetric care. Its staff comprises one or more medical doctors and several nurses midwives, plus a laboratory technician or aide, a pharmacy assistant and a radiology technician. Rural health centres provide limited curative care, including delivery care and referral of high-risk deliveries. They further provide preventive services (antenatal care, post-natal care, family planning, child growth monitoring and vaccination), promotional services (health education and environmental health services) and disease surveillance. The staff at a rural health centre usually consists of one or more nurses - of which at least one has midwifery qualifications – one or more nurse aides, and an environmental health technician. Rural hospitals usually do not have any medical doctors. They resemble rural health centres, except in that they do keep in-patients, mainly for observation.

Apart from the Ministry of Health and Child Welfare, the rural district councils – which fall under the Ministry of Local Government – and municipalities also provide public health services, in particular primary care in rural and urban areas, respectively. In the not-for-profit private sector, the catholic and protestant churches are an important provider of health services with a public purpose. Until independence they were the only providers of health care to the black population in many rural areas, but during the 1980s the church health facilities were gradually integrated into the public sector as part of the government’s effort to increase rural health service delivery and to create uniform and equitable access to care. Like in many other countries – Kenya, Tanzania, Malawi, Zambia – the government started financing staff and part of the recurrent cost of the church health facilities through a grant system, while the churches remained the owners of the facilities. The mission sector provides about 35% of all hospital beds (MoHCW, 1995). Most of its medical doctors are foreigners. Churches operate 60 rural health centres and 78 hospitals, of which 13 have been designated as district hospitals. The latter implies that as private (not-for-profit) institutions they have been officially recognised as

---

6 Accurate figures of the different numbers of institutions for each of the providers are not available, but it is estimated that the Ministry of Child and Child Welfare operates about 400 rural health centres and rural hospitals and 60 hospitals (MoHCW, 1995). The latter include 35 district and general hospitals, seven provincial hospitals, five central hospitals – including Chitungwiza hospital – and most of the 13 specialist hospitals. The municipalities and rural district councils operate about 600 town clinics and rural health centres, a few maternity hospitals and the remaining specialist hospitals (ibid.).

7 Turshen (1999) reports that in 1998 only two of 58 physicians working in mission hospitals were nationals, posing at times language and cultural problems.
the referral hospital for the district and they play a role in supervising other health facilities in their respective districts. The Government makes additional funds available to this effect.

The strong policy emphasis on universal provision of health services by the state was further reflected in the government decision, in 1982, to disallow the construction of two out of three new hospitals that private interest groups had wished to build, thereby restricting the expansion of private hospital capacity. The 1984 *Planning for equity in health* policy paper suggested that the private medical sector idealised a style of medical practice that was inconsistent with the primary health care the government wanted to foster. While the paper declared that the government accepted the historical reality of private medicine in Zimbabwe, it also stated that it was “the duty of the government to control the size of this sub-sector (private medicine) in the public interest” (MoH, 1984). Doctors were required to obtain a license to practise privately in urban areas, while private practice by doctors employed on a fulltime basis by the government or the university would be phased out, and all new medical graduates would be bonded to government service for a defined period.

**Box 3.2: Administrative structures within the Ministry of Health and Child Welfare**

The administration of the Ministry of Health and Child Welfare takes place at three levels: the central, provincial and district level. Each of the country’s eight provinces is headed by a Provincial Medical Director (PMD) who is responsible for planning, monitoring and evaluation of the health services in the province. The PMD serves as an extended arm of the ministry’s head office and is responsible for budgetary allocations to the districts through the Provincial Health Executive (PHE), which comprises several senior provincial level staff. The PHE supervises both public and private sector services, including NGOs, missions, and the for-profit sector, although links with the latter group are weak.

At the district level, the District Health Executive (DHE) mirrors the provincial level with the district medical officer, the district nursing officer, the district pharmacist, the district health service administrator and the district environmental health officer as members. The District Health Management Team (DHMT) comprises the five DHE members plus the chairperson of the Health Committee of the Rural District Council (RDC), the RDC executive officer for health, the district administrator and representatives of all health institutions, including the missions. The DHMT has the task to supervise all health facilities in the district, including government, municipal, council and mission clinics. Where there are church hospitals designated as district hospitals, staff from these institutions are members of the DHMT.

During the 1980s, widespread optimism reigned among most observers about the new policy directions and the government’s determination to pursue them. At the end of the decade, only very few people had issued warnings about the direction and sustainability of Zimbabwe’s health system. Manga (1988) pointed out that the Government had neither elaborated a plan for controlling the size of the private sector nor indicated how the
country intended to finance its public health services. Sanders and Davies (1988), bearing in mind the experiences in other countries, specifically mentioned the possible negative influences of macro-economic measures on child survival.

While it is generally accepted, as will be demonstrated later on in this chapter, that the implementation of equity policies in health care was seriously challenged during the 1990s, a few analysts have argued that this process started already during the 1980s. One source attributed this to the spell of economic stagnation in 1983, reported to have led to a reduction in budget allocations to local authorities, an increased pressure to collect fees from patients for services rendered, and a concentration of financial resources and senior manpower at the central level and in the private sector (Loewenson et al., 1991). Woelk (1994) further pointed at the tendencies of bureaucratisation and centralisation, reflecting a de facto lack of support for primary health care by the government. The two views have each been supported by an extensive and solid argumentation, which suggests that they should be seen as complementary rather than contradictory explanations of the same phenomenon, namely that of inadequate support of equity policies during the 1980s.

So far, nobody has explicitly attributed the lack of political support for equity policies in the health sector to a lack of political willingness to redistribute resources to poor areas and lower income groups. This is not an imaginary proposition, though, as the interests of the old (white) bureaucracy and the new (black) one appear to have converged considerably since independence.8 10

Health policy and legislative framework in the 1990s

The second Health for all action plan, which covered the period 1991-95, did not basically differ from its predecessor. While maintaining the focus on equity, the second action plan put more emphasis on quality of care, effective use of resources, value for money and appropriateness of services (MoH, 1991).

Yet, at the time of drafting the second action plan, the economic and social climate had changed considerably. Retrenchments and government budget cuts under the Economic Structural Adjustment Programme were just starting, the country experienced a severe drought spell and there were indications of serious consequences of the impending

---

8 The same author alleged that the post-independence transformation of the health system had two other major weaknesses, but provided insufficient hard evidence to support his argument. He suggested a continued heavy emphasis on hospital and medical care, despite "the strong rhetoric for primary health care and equity": and little recognition of the importance of non-medical measures such as better water supply, sanitation, housing and education, and little substantive ideas for inter-sectoral and inter-ministerial planning and co-ordination.

9 Jenkins (1997) does signal this as a general trend in post-independent Zimbabwe, but she does not connect it to developments in the health sector.

10 Woelk (1994) comes closest to this suggestion by signalling that the Bamako Initiative, which involves community financing through the creation of locally managed revolving funds aimed at avoiding drug shortages and improving general service delivery, has never been popular among policy makers in Zimbabwe, partly because of the complexity of such a system, and partly because of the socio-political implications associated with the local management of financial resources.
HIV/AIDS epidemic. The reduction in budgetary allocations to the health sector, details of which will be presented later in this chapter, inevitably affected implementation of the plan. The early 1990s further showed the beginning of a tendency to decentralise planning and management responsibilities to the provincial level (the PMD office) and to a lesser extent to the district level (the DMO office). However, there was very little corresponding delegation of authority in the area of budgeting and finance, which restricted effective programme implementation at the level of the district and the individual health facility (Bijlmakers and Chihanga, 1996).

The National Health Strategy for Zimbabwe 1997-2007 (MoHCW, 1999a) reaffirmed several of the core principles and values that had guided health policy making in earlier years:

- Equity requires that the government targets resources to those most in need
- Primary health care remains the leading strategy in health development
- Health is a key component in the development of quality of life
- Government must identify priority health problems and target resources accordingly.

The document envisaged the testing of innovative new approaches to manage the delivery of services so as to: enhance access, community satisfaction and local accountability; aim at quality; give priority to disease prevention, health promotion and protection; widened stakeholder participation; develop a consensus building strategy; and establish a wider awareness of the impact of social and economic policies on health. The document set a number of ambitious targets for the year 2007, which were then incorporated into a Three Year Rolling Plan 2000-2002.\(^1\)

Still, the National Health Strategy for Zimbabwe 1997-2007 at the same time guides the health sector reform process.\(^12\) While the basic tenets of Planning for equity in health were maintained, the proposed reform,\(^13\) more than the Health for all action plan of 1990-95, represented a major policy shift from a national health service model, in which the government itself organises and delivers health services, towards a ‘mixed public insurance’ model. Health services would to a large extent continue to be publicly financed, but institutions outside the government would deliver them. The reform thus

\(^1\) Targets include reductions by the year 2007 in infant mortality, neonatal mortality and maternal mortality as well as in the HIV sero-prevalence rate in pregnant women (from 42% to 10%). The three year rolling plan gives seven priority areas: strategic management, financial resource mobilisation and management, human resources, health information and research, infrastructure, logistics and diseases and health conditions. Within the last component several priority diseases have been identified based on the burden of disease concept: HIV/AIDS, sexually transmitted diseases and TB; childhood illnesses; reproductive health conditions; diarrhoeal disease; nutritional conditions; and a few others.

\(^12\) It is not clear when the term health reform was first used in the Zimbabwean situation. Prior to the reforms outlined in the National Health Strategy paper for the period 1997-2007, certain structural changes (for instance the user fee schedule) had obviously been introduced already, mostly under the influence of resource constraints. The government, and the Ministry of Health and Child Welfare in particular, did not refer to these changes as ‘reforms’.

\(^13\) This reform has five priority areas of action: decentralisation, health financing including cost recovery and social health insurance, contracting out service provision to private institutions, management development and private sector regulation.
made provision for the coexistence of business-like health care delivery system, in which private institutions and companies operate on the basis of competition and price quality comparisons of their products. This is a complex transition, which requires simultaneous and synchronised actions in the areas of finance, human resource development and the development of legislative and regulatory instruments.

The complexity of this transition is significantly increased by the fact that the reform must be carried out in a period of extreme stress on the health sector, caused by a massive rise in demand due to HIV/AIDS and by a shortage of financial and human resources. It is therefore not surprising that the health sector reform process took off very slowly. An additional complicating factor was the reticence on the side of donor agencies as a result of the macro-economic and political problems in the late 1990s. It is therefore too early to detect any concrete results.

Some analysts have argued that the health sector reforms of the early 1990s in Zimbabwe came at a bad time, when the country went through a period of economic recession, and that they induced a selective approach to primary health care, moving away from the principle of equity in health (Sanders, 1993; Loewenson, 1994). Others, notably representatives of the international donor community and the World Bank, believe that the Government hardly had a choice as the existing health service model had become unsustainable and was visibly under stress.

Whatever may be the case, towards the end of the 1990s there were growing concerns that Zimbabwe might face the collapse of public health if the reform would not be successful. Similar worries within the government led to the already mentioned installation of a presidential Commission of Review into the Health Sector, which was asked to advise the government and parliament on ways of arresting the decline in the quality of health services. The report of this commission, of which an abridged version was released in April 1999, portrays a grim picture of the health sector and puts much emphasis on the need to strengthen human resources within the sector (Commission of Review into the Health Sector, 1999).

Financial and human resources for health care

The successful functioning any health system ultimately depends on adequate financing and competent staff. This section will therefore describe trends in government allocation of these two types of resources over the two-decade period since 1980.

Financial resources

Several parameters can be used to describe a country’s financial resources available for the health sector. The most easily available data are derived from the annual expenditure by the Ministry of Health: per capita health expenditure, health expenditure as a

---

14 Personal communication with members from the Delegation of the European Commission and Danida (2000).
percentage of the gross domestic product (GDP) and health expenditure as a percentage of total central government expenditure. Data on expenditure on health by other departments of the central government (such as the ministry of labour, ministry of defence, ministry of local government) are usually not part of the expenditure data found in official reports, and Zimbabwe is not an exception in this regard. Data on private health expenditure, and specifically on out-of-pocket expenditure, are also much less readily available, and the same holds for external sources of finance, such as contributions from bilateral and multilateral donor agencies. This section first presents some trends over time in expenditure by the central government in Zimbabwe through the Ministry of Health.

Real government spending for health increased in the economic boom years immediately after independence. It then declined by about 4% per year until the mid-1980s, but grew to a peak of ZWD 58 per capita per year in 1990/91, just before the start of ESAP (see Figure 3.1, the real per capita health expenditure over the period 1980/81 to 1999, adjusted for inflation).\(^{15}\)\(^{16}\)

![Figure 3.1: Real per capita health expenditure, fiscal years 1980/81-1998](ZWD, at 1990 prices)

Government spending on health as a proportion of GDP and as a proportion of total central government spending also showed an increasing trend during the latter half of the 1980s, reflecting the government’s commitment to further developing the health sector,

\(^{15}\) Sources: Government of Zimbabwe reports of the Comptroller and Auditor General; and the MoHCW budget votes for the years 1998 and 1999. Figures for the latter two years are budgetary allocations; the actual expenditure may be a little less.

\(^{16}\) Financial years used to run from July 1\(^{st}\) to the end of June in the next year; from 1999 onwards the financial years coincide with calendar years (January to December).
with a peak in 1990/91 and a significant decline afterwards (Figure 3.2). The fiscal year 1996/97 suggests some recovery, which unfortunately cannot be confirmed with figures from subsequent years.

**Figure 3.2**: Government health expenditure as a percentage of GDP and of total government expenditure, fiscal years 1980/81-1995/96

Public spending on health other than through the Ministry of Health, such as by the Ministry of Local Government and municipalities, accounts for about one-fifth of public spending on health, but exact data are scarce. Data on private spending – for instance through direct out-of-pocket payments, health insurance payments and employer-based health care – are even more scarce and subject to inaccuracies. There are indications though, that private spending on health has increased from about a third of total expenditure (public and private) in 1987 to almost half in 1994 (Schwartz and Zwizwai, 1995; DANIDA, 2000). The draft National Health Accounts report prepared by a technical team from the Ministry of Health and Child Welfare is not conclusive about the trend during the remaining of the 1990s. It suggests that there has been an increase in the share of public spending on health (versus private spending) between 1994 and 1998 (from 51% to 56% of total health expenditure), followed by a decline in 1999 to 48% (see Figure 3.3; MoHCW, 1999a; MoHCW, 2000). The fact that almost all sources of public and private health financing show a reversal of the trend between 1998 and 1999 compared to the period 1994-98 points at data incompleteness and differences in review

---

17 Alwang et al. (2002) demonstrate that the Ministry of Agriculture's share of the national budget severely suffered from budgetary reallocations among ministries in the early 1990s, arguing that the education and health ministries maintained their budget shares. The latter may give a wrong impression: while the health budget remained relatively unchanged indeed (as a proportion of total government expenditure), the actual expenditure did fall, as demonstrated by our figures.
Historical data about external funding of the health sector by donor agencies are scarce. A review commissioned by the European Union in 1997 estimated that donor assistance to the health sector – including World Bank loans – amounted to ZWD 750 per

---

18 Data on individual direct payments are collected through the Department of Taxes and are underestimated since they do not cover all Zimbabweans (only those in formal employment) and do not include unofficial payments and payments for traditional medicine.

19 An earlier estimate of private health spending was much lower (20-30% of total health expenditure according to a 1996 KPMG report quoted by the 1998 World Bank report on the impact of World Bank support to the health sector in Zimbabwe; WB, 1998) but is not clear whether all possible sources were taken into account.

20 The observed reductions in the share of health insurance benefits and employer-based health care between 1987 and 1998 is doubtful, although it may reflect a decreasing number of formally employed workers following retrenchment of civil servants and reductions in private sector employment due to the difficult macro-economic climate. The increase in 1999 is probably an artefact due to a different methodology used by the reviewers.
year, representing 20\% to 25\% of the public expenditure in health (HERA, 1997).\textsuperscript{21} Figure 3.3 suggests a relative increase in donor involvement in the health sector between 1987 and 1998. However, since that time there has been an important lapse, because of discontent among donor agencies with the government’s slow pace of reforming the health sector (Danida, 2000).

It is useful to introduce the international perspective as well. In 1990, prior to the start of ESAP, Zimbabwe was among the more privileged countries in Africa in terms of government financial contribution to the health sector. Murray \textit{et al.} (1994), in a global analysis of national health expenditure data for the year 1990, ranked Zimbabwe higher than the average for Sub-Saharan Africa in terms of total health expenditure as a proportion of GDP (6.2\% versus 4.2\%) and per capita total health expenditure (USD 39 versus USD 22).\textsuperscript{22} The distribution of total health expenditure by source was not much different from that of the region as a whole: 40\% public, 49\% private, 11\% foreign aid for Zimbabwe compared to 44\% public, 47\% private and 9\% foreign aid for Sub-Saharan Africa.

The World Health Report 2000, which assesses the health systems performance of 191 different countries, estimates that in 1997 Zimbabwe still spent 6.2\% of its GDP on health, with a total per capita health expenditure of USD 46 and per capita out-of-pocket expenditure of USD 24. This compares still favourably with countries such as Ghana (USD 11 and USD 6, respectively) and Zambia (USD 27 and USD 11, respectively), and is almost similar to the expenditure levels found in some countries in Northern Africa (Algeria, Egypt) and in the Philippines.\textsuperscript{23} The same report assesses for each country the fairness of financial contribution and the financial risk protection of the population. Zimbabwe is assigned the 175\textsuperscript{th} rank (out of 191), which suggests an unequal distribution of financial contributions and a relatively high burden on the poor.\textsuperscript{24}

In conclusion, health expenditure data demonstrate a strong reduction of the government’s contribution to the total expenditure on health, public and private sources combined, especially between 1987 and 1994, and a marked increase in both donor support and private out-of-pocket payments. The latter suggests an expanding private sector, price increases and enforced fee collection by public health facilities, all in line with the blueprints of structural adjustment.

\textsuperscript{21} The largest contributions to the health sector in financial terms in 1997 came from the World Bank (in the form of loans), USAID, Japan, Denmark, the United Kingdom and the European Union.

\textsuperscript{22} For further comparison: these expenditure figures were about twice as high as those for neighbouring Zambia (3.2\% of GDP, USD 17 per capita) and for Ghana (3.5\% of GDP, USD 15 per capita).

\textsuperscript{23} Total per capita health expenditure in Algeria is USD 44, with USD 22 of private out-of-pocket expenditure. For Egypt, the figures are USD 44 and USD 32, respectively; for the Philippines USD 40 and USD 19. These three countries spend only 3-4\% of their GDP on health.

\textsuperscript{24} Of the 16 countries ranked lower than Zimbabwe only three are in Africa: Nigeria, Cameroon and Sierra Leone.
**Human resources**

Chronic understaffing and low health worker morale have been widely reported as major constraints to the delivery of quality health care (for instance UNICEF, 1994; MOHCW, 1995 and 1999a).

*Figure 3.4: Number of doctors registered at the Health Professions Council of Zimbabwe and population ratio (number of doctors available per 1000 people), 1981-1997 (source: Gaidzanwa, 1999; MoHCW, 1999a)*

*Figure 3.5: Number of nurses (all grades) registered at the Health Professions Council of Zimbabwe and population ratio (number of nurses available per 1000 people), 1981-1997 (source: Gaidzanwa, 1999; MoHCW, 1999a)*
Figures 3.4 and 3.5 present some trends over time in the number of medical doctors and nurses registered at the Health Professions Council of Zimbabwe. They indicate that the number of doctors has fluctuated over the years with an overall increase of about 40% between 1981 and 1997. This increase has not kept pace, though, with population growth, as indicated by the slight overall decline in the population ratio (Figure 3.4).

The number of nurses has increased almost steadily over the same period, with an overall increase in the population ratio (Figure 3.5). While the WHO norm of one doctor per 5000 people (or 0.2 doctors per 1000) is far from being achieved, the norm of one nurse per 1000 people has been surpassed during the entire period.

Gaidzanwa (1999) reports that a third of the medical doctors registered at the Health Professions Council in 1995 were employed by the Ministry of Health and Child Welfare (33%), the remaining being employed by other government departments or in the private sector. Among the registered nurses more than half were employed by the Ministry of Health and Child Welfare (56%), while this was the case for only 9% of the dentists and 7% of the pharmacists. While several observers have pointed at an exodus during the 1990s of government employed health workers to the private sector. Figure 3.4 supports this to some extent for medical doctors, but Figure 3.5 does not support this for nurses, except for a dip between 1994 and 1995. Anecdotal reports indicate that after 1997 the situation has worsened, but it is unfortunate that exact data are not easily available. The study by Gaidzanwa investigated the motivation of migrant Zimbabwean doctors and nurses, who had resigned from their posts to go to Botswana and South Africa. Although she managed to trace only a small number of people, the deterioration of working and living conditions in Zimbabwe, combined with the better employment opportunities abroad, was the main motivation to migrate.

In 1997 the Ministry for the first time reported vacancy rates for several categories of health staff (MOHCW, 1997). The rates for medical doctors varied from 19% for general doctors working in hospitals and 21% for medical specialists to 37% for doctors in management positions. The vacancy rates for nurses stood at 16% for SRNs and 38% for SCNs. For other staff categories, such as clinical officers and dentists, vacancy rates of more than 40% were reported. It is unlikely that this situation has improved after 1997, since the government decided to ‘freeze’ all posts falling vacant, as one of its measures to...
cut back public expenditure under the new ZIMPREST programme. This implied that these posts could not be filled except with explicit permission from both the Public Service Commission and the Ministry of Finance.

Box 3.3: Profile of medical doctors and nurses

The Medical School of the University of Zimbabwe (UZ) offers a five-years training programme for medical doctors. After these five years, the student undergoes a ‘house training’ for two more years. A newly graduated doctor has to serve in a designated health institution for another year before he or she qualifies for specialised training in Zimbabwe. Some of the newly graduated doctors prefer to go to South Africa or overseas – to the United Kingdom, the United States or Australia – for specialisation or post-graduate training. Since 1994, the Medical School is offering a two-years Master in Public Health (MPH) programme, which prepares participants for senior management positions in the health sector. The programme is open to both people with a medical and a non-medical background.

A State Registered Nurse (SRN) follows three years of training at a nursing school, after completing secondary school (ordinary or advanced levels). A State Certified Nurse (SCN) has a two-years training, but since 1995 the SCN training has been phased out as all nurses are eventually expected to become SRNs. The career path of a nurse leads from SRN to senior sister (after two years of service), sister-in-charge, matron and finally to principal nursing officer. As there are no positions for medical doctors at the rural health centre level and at some of the rural hospitals, nurses are responsible for diagnosing illness in patients and prescribing medical treatment at that level of the health care system.

In the early 1990s the health human resource base of the government was weakened by the decision to afford large numbers of ‘non-professional’ health staff (nurse aides, cleaners, administrative staff) voluntary retirement as part of a retrenchment of the civil service workforce driven by ESAP. An estimated 25% of the administrative and maintenance posts were either eliminated or frozen in the early to mid-1990s (HERA, 1998). A study conducted in three different districts has provided evidence that this measure led to a significant increase in the workload for nursing staff at the level of district hospitals and rural health centres (Bijlmakers and Chihanga, 1996). This may in turn have been one of the factors responsible for the decline in the quality of the services, as Chapter 5 will demonstrate.

Thus, some of the already existing imbalances in the distribution of human resources were sharpened. The uneven rural/urban distribution of personnel, for instance, due to unattractive conditions in rural areas, has aggravated over the years. The recruitment of expatriate doctors has not been able to remedy this situation. In 1995, about half of the doctors (49%) working at the provincial level were expatriates, while at the district

---

25 Health professionals, such as doctors, nurses and dentists, were officially protected from the targeted 25% reduction in civil service posts under ESAP, as were the education professionals.

26 Housing, allowances and school opportunities for children in rural areas are generally considered unattractive. This makes it difficult to recruit and retain health staff for posts in rural areas.

27 Working either at one of the Provincial Medical Director’s offices or at one of the Provincial Hospitals.
level their presence was even stronger (60% of all doctors). The proportion of expatriate doctors in government service increased from 6-8% during the period 1983-85 to 42% in 1994 (Gandzanwza, 1999). It is obvious that this phenomenon undermines the sustainability of the Zimbabwean health system.

The consequences of staff shortages and the general working conditions, in particular the way it affected professionalism and quality of care as perceived by the public in Chitungwiza and Murchwa district, will be described in more qualitative terms in Chapter 5.

User fees

As pointed out earlier, after independence the Government of Zimbabwe committed itself to establishing a new health system in which priority was given to increasing the availability of medical care to the black population in underserved rural areas.

In September 1980 all Zimbabweans earning less than ZWD 150 per month were entitled to free health services. Manga (1988) has asserted that this led to a two to three-fold increase in clinic attendance throughout the country, but it is likely that other factors, such as the opening up of the health care system to the black population and the increased attention for primary health care, have played a role as well. The entitlement to free health care for those earning less than ZWD 150 per month was reconfirmed in the 1984 Planning for equity in health policy document. The income-based exemption rule was applied only to persons engaged in formal or informal sector 'wage employment'. It is estimated that in 1982, all of the roughly 550,000 workers on commercial farms and in domestic employment and 46% of the remaining 750,000 wage earners had incomes of less than ZWD 150 per month and thus qualified for free health care (Hecht et al., 1993). In 1985 it was estimated that about 90% of the population fell below that income threshold, implying that health care was free for the large majority of the population and nearly everybody in rural areas. While those earning more than ZWD 150 per month were required to pay for the services obtained, there was little compliance to this rule especially at the primary and secondary levels of care, mainly because the Ministry of Health did not insist much and the necessary invoicing and fee collection mechanisms were not in place in all institutions. The World Bank was harsh in concluding that the system of exemptions was 'imperfect' and inadequate to achieve the equity objective (Hecht et al., 1993). It rather appears that people's ability to pay was underestimated because the exemption criteria did not consider self-employed people, such as farmers, merchants and shop owners, some of whom may well have earned substantial incomes.

---

32 The figures are derived from the 1995 Report of the Secretary for Health (MOHCW, 1995).
33 In addition, those who earned between ZWD 150 and 800 per month could obtain some services at central and provincial hospitals at a reduced price.
34 The government also accorded free medical care to special groups, such as members of the armed forces, the police, clinical staff of the medical school and cabinet staff. While there does not seem to be
In 1991, at the beginning of the Economic Structural Adjustment Programme, it was clear that the health sector would have to face declining budget allocations during the years to come. This led to a review of alternative funding options for the social sector and the institution of new measures for cost recovery. The World Bank, which found that the fee schedules were badly aligned with the actual costs of medical care and that there was a large potential for additional revenue generation (World Bank, 1992; Hecht et al., 1993), exerted much pressure on the Government of Zimbabwe to take steps to reinforce its cost recovery system. It estimated that recoveries could increase fourfold, from 5% to 20% of government spending for clinical care if the right measures were taken. Fees needed to be adjusted in line with inflation in the cost of medical treatment; the invoicing system and actual collection of fees would need strengthening; and incentives were required for revenue generation. The World Bank argued that improved exemption procedures would ensure access of the poor to government health services. It pleaded for an increase of the exemption threshold, abolition of special exemptions for non-poor people and changing the system of determining eligibility for free care.

In the course of 1991, a number of initiatives were taken by the Ministry of Health to strengthen cost recovery. These included: (a) setting revenue targets, both overall and at the level of individual health facilities; (b) preparation of a manual on service fees to be used by health facilities; (c) carrying out a media campaign to inform the public of the fee schedule and the importance of adhering to it; (d) training of senior staff and clerks; and (e) developing a monitoring system. These measures were put in place, without changing the fee levels, though, and without changing the income threshold of ZWD 150 per month for exemption. The explicit reason for this enforcement of user fee collection was two-fold: more revenues needed to be generated, in line with the aims of ESAP, and the referral system needed strengthening.

In late 1992, the income level below which families were exempt from paying for health services was increased from ZWD 150 per month to ZWD 400 per month. In real terms—taking inflation into account—the new exemption level was lower than the level when the exemption rule was instituted in 1980. The rise in the income-based exemption threshold was much welcomed by the public and justified, since inflation had practically eliminated the exemption for the country’s entire wage labour force. It is estimated that by 1989 less than five percent of non-agricultural and non-domestic

---

any equity basis for such special exemptions, this provides further proof that the ability to pay was larger than generally estimated.

The patient carried the burden of proof for eligibility for free care: he/she was required to either show a pay slip or obtain a letter from the Department of Social Welfare. This was difficult to enforce, mainly because patients often require immediate attention and cannot afford to visit social welfare officers who are based in provincial or district capitals, sometimes far away from the health institutions where patients seek their treatment.

Using deflators (based on mid-year consumer price indices) of 0.29 for 1980 and 1.75 for 1992 (1990 prices), ZWD 150 in 1980 corresponds to ZWD 517 in real terms, while ZWD 400 in 1992 corresponds to ZWD 229 in real terms. In order to keep up with inflation and be at the same level as in 1980, the exemption threshold should have been risen to ZWD 905 in 1992.
workers qualified for free health care. At the time, the government was about to raise minimum wages for farm and domestic workers to ZWD 150 per month.

No estimates were made of the proportion of the population qualifying for exemption with the new ZWD 400 threshold, but it is likely that it was much less than the 90% estimate of 1985.

The changes in user fee policy during the rest of the 1990s have been multiple and drastic (see Box 3.4), and the effects have been felt by everyone, especially people in rural areas. In January 1993, the government instructed rural health centres to stop charging fees. This measure was meant to cushion the effects of the severe drought of 1991/92. Most council and mission clinics, though, continued to charge fees. The measure was revoked some five months later. Some health facilities, however, were not officially informed and continued to provide free services until later in the year (Bijlmakers and Chihanga, 1996). In January 1994, the system of user fees for health services was revised dramatically, with substantial increases in charges for all services. Apart from increasing cost recovery, the new guidelines were intended to rationalise user charges across institutions, so as to encourage patients to seek care from their nearest health facility and to discourage them from going straight to a referral hospital. It was therefore anticipated that the increase in fees at provincial and district hospitals would result in a reduction in their patient load. Then in March 1995, user fees in rural health facilities were abolished altogether, in government as well as in council and mission institutions. The rationale behind this measure was that the referral system needed further strengthening and there should not be any financial barrier to service utilisation at the primary care level.

Box 3.4: Changes in user fee policy during the 1990s

| Early 1991 | Enforcement of user fee collection at all health facilities at the start of ESAP |
| November 1992 | User fee exemption level raised from ZWD 150 to ZWD 400 |
| January 1993 | Temporary abolition of fees at rural health centres because of the drought |
| June 1993 | Reinstitution of user fees at rural health centres |
| January 1994 | Substantial increase in user fees at all health institutions |
| March 1995 | Abolition of user fees at rural health centres and rural hospitals |
| October 1996 | Increase in user fees at all referral hospitals; services at rural hospitals remain free of charge |
| January 1997 | Start of the Health Services Fund; retention of user fee revenues at the district level; reinstitution of user fees at (some) rural mission hospitals |
| 1998 | No more health grants for the municipalities; higher than average increase in user fees |
| November 1999 | Substantial increase in user fees at government health institutions |
Several health professionals and researchers in Zimbabwe have issued warnings in the early 1990s about the negative effects of increases in user fees. They voiced their concern in several ways, often providing anecdotal evidence of the effects on the poor people in society.\(^5\) Chapter 5 will review some of these references against the background of our own observations on the implications of changes in user fee policies in Chitungwiza and Murehwa district.

It is further noted that until 1997 revenues from user fees generated by government-run health facilities were not retained by the health facilities concerned. *De facto* they were not even retained by the Ministry of Health, but instead reverted to the Ministry of Finance. This situation constituted a disincentive on the part of the individual institutions and the Ministry of Health in general to collect fees (Zigoras *et al.*, 1998). With the creation of the *Health Services Fund*, which started in January 1997, management structures were put in place for the administration of funds – including revenues from user charges – at the national, provincial as well as the district level. The retention of user fee revenues at the point of collection was allowed in an effort to improve quality of care, referral patterns and local participation in the management of health institutions. The fees structure was also revised upwards and in such a manner that patients who bypassed the primary levels of care and went straight to a referral hospital would be charged the full fees, irrespective of their exemption status. Little has been documented so far about the adherence to these new measures and their effects.

In summary, the rationale for charging user fees in the health sector and for applying exemptions has changed over the years. While the system after independence was meant to enhance equity in health, with ESAP it became an instrument for the state to recover part of the cost of health care provision, then an instrument for improving the referral system and finally an instrument for raising revenue for individual health institutions to compensate for insufficient budgetary allocations by the state.

### The private for-profit sector

The 1990s exhibited a steady increase in the number of private facilities, ranging from relatively small industry-owned clinics to large institutions with highly sophisticated facilities. There was an explosion of even smaller facilities, such as general practitioner clinics and surgeries, which was confined initially to urban areas. The increased demand from a growing population that perceived a deterioration in the quality of public services appears to have triggered the expansion of the private sector. Stagnant salaries in the public sector led many medical doctors, nurses and other professionals to respond to the new demand. The expansion was facilitated by the fact that government employed doctors were silently allowed to do part-time private work, while nurses were allowed to open private maternities, child clinics and nursing homes.

There is little readily available information on the volume of private health facilities. Hongoro and Kumaranayake (2000) estimated that in 1996 about 45% of registered doctors in Zimbabwe worked full-time in the private sector, 56% of whom were based in Harare. The 1995 annual report of the Ministry of Health and Child Welfare mentioned a figure of 39 industrial and private hospitals, out of a total of 199 hospitals nationwide (MoHCW, 1995). However, in July 1997, the Harare City Health Department alone counted 328 registered private facilities and received five new applications per week. The Chitungwiza City Health Department had 32 registered private facilities in 1995, a number which had increased to 49 by 1999. The number of registered pharmacies increased as well. Countrywide, the number was static at about 70 to 80 until 1995. In 1997, 211 pharmacies were registered, almost exclusively located in the urban and peri-urban areas. Poor drug supplies in the public sector are likely to have fuelled the expansion of private pharmacies, as medical doctors and nurses resorted to giving patients prescriptions to be taken to private pharmacies.

One study suggests that 90% of the private facility users are covered by medical aid, virtually all of whom are formal sector employees or their dependants. It estimated that in 1997 about one million people were covered by some sort of medical aid scheme. but Tursheen (1999) reports a much lower figure, suggesting that only 4.6% of the population has private insurance. She reports that 75% of insurance payments in 1997 were made to private practitioners, suggesting that formal sector employees and their dependants make little use of government health services.

In 1994, an estimated 49% of the total expenditure on health was private, mostly through individual direct payments (Schwartz and Zwizwai, 1995), but again Tursheen (1999) reports a much lower figure, suggesting that the insured group accounts for about a quarter (24.8%) of total health expenditure. Another study estimated the private sector share in 1994 at 37% (Hongoro et al., unpublished). It would appear that private sector spending, whilst comprising a high proportion of total spending, is benefiting at most 10% of the population. This is in fact not surprising given the highly skewed income distribution in Zimbabwe.

Recent analyses of how Zimbabwe regulates the health sector in general (Kumaranayake, 2000) and in particular the for-profit providers involved in the sector (Hongoro and Kumaranayake, 2000) show that there is some progress, though it is still insufficient. With the adoption of the Medical Services Act in 1998, the Minister of Health and Child Welfare received the authority to regulate a wide variety of practices and actors related to the private for-profit sector. Specific measures, however, have not been identified or put into practice. One of the weaknesses that remain is related to

---

18 The Health Professions Council, mandated (since 1995) to carry out the registration of health professionals and institutions and to monitor and control practice standards in health care delivery, amongst others, does not have information about the composition and size of the private sector. Hongoro and Kumaranayake (2000) confirm this by suggesting that urban local authorities may be better informed about the number of private practitioners in their localities.

19 Personal communication with Chitungwiza town council officers.

inspection and control, which so far focus on entry criteria and quality of private health care providers rather than explicitly quantity, price or distribution. Also, the government does not combat anti-competitive practices by certain institutions and individuals and does not sufficiently address the lack of patient rights.11

In conclusion, while the 1980s were characterised by a strong role of the government in providing primary health care service, especially in rural areas, the 1990s showed a receding influence of the state in health service provision and a fast emergence of the private sector. The rhetoric about equity in health, priority for underprivileged groups in society and quality of care has remained, though. In the absence of regulatory mechanisms to ensure quality of care and equitable access, private for-profit health care providers have so far been relatively free to operate. While the possible effects—negative or positive—on people’s health status and the overall principle of equity in health have not yet been documented, it appears that the quality of care varies widely and a small proportion of the population spends a relatively large amount of money on selected, mostly private services.

The epidemiological transition: changing patterns of morbidity and mortality

The post independence period is far from uniform when it comes to health statistics such as health service utilisation rates, incidence and prevalence of disease and mortality rates. This section discusses the most important trends and explores the determining factors. When describing the trends, a distinction is made between the 1980s, when most indicators improved, at least until 1988, and the 1990s, when most of the indicators stagnated or deteriorated. The extent to which these changes should be attributed to changes within the health sector itself, to the HIV/AIDS epidemic or to general socio-economic changes will be discussed.

The 1980s

Zimbabwe achieved impressive improvements in almost all of its major health indicators during the 1980s. This has been widely attributed to the general improvements in living conditions and to the expansion and improvements in the area of primary health care, including nutrition and water and sanitation (UNICEF, 1990 and 1994; Sanders, 1993).

The most marked change in health outcomes during the 1980s was the reduction in infant mortality.12 The infant mortality rate, which is influenced by the utilisation and

11 The two studies give various examples. For instance, young, unqualified physicians are running private clinics under the license of experienced practitioners; nurses are operating private clinics without the required back-up of licensed physicians; 'over-serving' of patients who are referred to other doctors without reason or who undergo unnecessary medical procedures; defrauding of medical aid societies, for example by asking patients to sign for drugs which they never receive or by colluding patients to claim reimbursements for visits which have not taken place; and government employed physicians promoting their own financial interest by referring patients to their own private clinics or laboratories.  
12 Death of a child before its fifth birthday.
effectiveness of health care services, declined from pre-independence levels of 120 to 150 deaths per 1000 live births to 79 in 1981, 69 in 1984 and 61 in 1988. Child mortality declined from 37 per 1000 live births in 1978 to 23 in 1988, reflecting an overall improvement in socio-economic circumstances. As an aggregate, the mortality rate among all infants and children below five years of age (the under five mortality rate) also declined (MOHCW, 1999).

*Morbidity* data in Zimbabwe are less reliable than mortality statistics as they are mainly based on clinic-based inpatient and outpatient statistics that may differ considerably from the true morbidity pattern in the community. Moreover, full aggregation of data is often not possible because of differences in disease classifications (between inpatient and outpatient statistics) and changes in classifications over time. It is therefore difficult to observe any trend during the 1980s, although it is clear that some of the diseases that can be prevented through immunisation – such as neonatal tetanus, poliomyelitis and diphtheria – have been considerably reduced (UNICEF, 1994).

*Morbidity* data in Zimbabwe are less reliable than mortality statistics as they are mainly based on clinic-based inpatient and outpatient statistics that may differ considerably from the true morbidity pattern in the community. Moreover, full aggregation of data is often not possible because of differences in disease classifications (between inpatient and outpatient statistics) and changes in classifications over time. It is therefore difficult to observe any trend during the 1980s, although it is clear that some of the diseases that can be prevented through immunisation – such as neonatal tetanus, poliomyelitis and diphtheria – have been considerably reduced (UNICEF, 1994).

**Figure 3.6**: Child immunisation rates, 1982-1999 (source: MoHCW, 1991a; CSO, 2000)

Most community-based surveys in the 1980s concentrated on measuring *service output* (rather than outcome) indicators, such as vaccination coverage rates, knowledge and use of oral re-hydration therapy, knowledge about family planning and use of contraceptives and use of maternity services. These indicators all showed significant improvements during the 1980s, which was rightfully seen as an achievement of the

---

43 Death of a child between its first and fifth birthday.
45 A method to avoid dehydration in case of diarrhoea.
primary health care approach. Figure 3.6, for instance, shows several child immunisation rates, which increased until 1991, reflecting an improvement in service access and increased awareness of the importance of vaccination for the prevention of child illness. After 1991, the immunisation rates declined.

It is difficult to assess to what extent the increased service output during the 1980s directly led to improved health outcomes, as other factors such as socio-economic and environmental conditions are likely to have played a role as well. Moreover, few community-based surveys during that period included morbidity or mortality statistics. The studies that investigated child nutritional status are an exception.

Zimbabwe is quite an exceptional country in Sub-Saharan Africa in that it was able to successfully reduce the high levels of child malnutrition inherited at independence in 1980, despite some early economic setbacks and recurrent drought. Results of various national surveys suggest that levels of stunted growth among children in the 1980s remained fairly constant and that nutritional wasting declined rapidly in the first years after independence, remaining at very low levels at least until 1988. A reanalysis of the data of the national Demographic and health surveys conducted in 1982 and 1988, however, suggested that the values for both nutritional wasting and stunting in 1988 were less than half of those found in 1982 (reported by Tagwireyi and Greiner, 1994). The 1988 survey estimated that 28.6% of children aged 3 to 60 months (five years) were stunted, with significantly more stunting in rural areas (34%) than in urban areas (14%). High nutritional wasting rates of up to 14% were reported during the early 1980s, especially from urban areas. They declined rapidly in the mid-1980s, which was believed to be due to the end of the war and a decrease in transient acute malnutrition from droughts and episodes of acute illness in children. Tagwireyi and Greiner (1994) further stated that in the early 1990s nutritional wasting was seen only rarely and that stunting had declined dramatically, possibly by half. At the time, Zimbabwe had much better nutrition indicators than most other Sub-Saharan African countries (see Table 3.1).

Much of the progress can be attributed to improvements in public health care, in particular the better vaccination coverage, the huge expansion in rural health care services, the strong focus on primary health care – including water and sanitation and control of diarrhoea and acute respiratory infections and a very successful family planning programme. Other efforts that have contributed to the improvement include the intensification of child growth monitoring activities (since 1984) and the Community Food and Nutrition Programme. Food distribution programmes, supplementary feeding.

The 1994 Zimbabwe Demographic and Health Survey found that more than 65% of the children were completely immunised during the first year of life; this figure had declined though from more than 80% in 1988. The use of modern contraception rose from 14% in 1980 to 36% in 1988 and then to 42% in 1994.

Wasting and stunting are two commonly used indicators of child nutritional status. Nutritional wasting refers to low body weight for a child's height and reflects acute malnutrition. Stunting refers to short stature (small height) for a child's age and reflects chronic malnutrition. These indicators and how they should be interpreted are discussed in more detail in Chapter 7.

Tagwireyi and Greiner (1994) have provided a detailed update of the achievements in the area of nutrition and people's nutritional status in Zimbabwe for the period 1980 to 1992.
drought relief and subsidies are likely to have helped prevent starvation in times of crises. The country’s nutritional improvements are remarkable in view of the modest gains in real income in the 1980s and the persistent highly skewed distribution of land and income.

<table>
<thead>
<tr>
<th>Country</th>
<th>Year of survey</th>
<th>Stunting (%)</th>
<th>Underweight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burkina Faso</td>
<td>1992-93</td>
<td>33.3</td>
<td>32.7</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>1992</td>
<td>64.2</td>
<td>47.7</td>
</tr>
<tr>
<td>Ghana</td>
<td>1993-94</td>
<td>25.9</td>
<td>27.3</td>
</tr>
<tr>
<td>Kenya</td>
<td>1994</td>
<td>33.6</td>
<td>22.5</td>
</tr>
<tr>
<td>Malawi</td>
<td>1995</td>
<td>48.3</td>
<td>29.9</td>
</tr>
<tr>
<td>Namibia</td>
<td>1992</td>
<td>28.5</td>
<td>26.2</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1993</td>
<td>37.7</td>
<td>39.1</td>
</tr>
<tr>
<td>South Africa</td>
<td>1994-95</td>
<td>22.8</td>
<td>9.2</td>
</tr>
<tr>
<td>Tanzania</td>
<td>1996</td>
<td>43.4</td>
<td>30.6</td>
</tr>
<tr>
<td>Uganda</td>
<td>1995</td>
<td>38.3</td>
<td>25.5</td>
</tr>
<tr>
<td>Zambia</td>
<td>1996-97</td>
<td>42.4</td>
<td>23.5</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>1994</td>
<td>21.4</td>
<td>15.5</td>
</tr>
</tbody>
</table>

1 Underweight refers to low body weight for a child’s age and reflects the combined effects of acute and chronic malnutrition. These data are more widely available than data on wasting.

Nutrition surveillance data for children aged 2 to 5 years for the period 1987-90 also show that there was a general trend towards improvement. Yet, malnutrition appeared unevenly distributed throughout the country. The drought-prone provinces of Masvingo and Matabeleland North and South exhibited the highest rates of malnutrition; malnutrition appeared consistently more prevalent in rural than in urban areas; and children in resettlement areas exhibited the highest rates of stunting (chronic malnutrition), followed by communal areas and large-scale farming areas. Some studies found that wasting, which reflects acute malnutrition, was most prevalent in resettlement areas, followed by urban areas (CSO, 1988), but other sources suggest that children in large-scale commercial farms, such as in Mashonaland Central province with its high concentration of seasonal labourers, were worst off because of food insecurity at the household level (UNICEF, 1990).

The nutritional status of school-age children, as far as data are available, was rather poor during the 1980s. A gradual reduction in stunting among urban first-graders was observed, along with some improvement as school children got older. Tagwireyi and Greiner (1994), however, remark that this may simply reflect higher dropout rates among more malnourished children.
The 1990s

While the 1980s showed a general improvement in several service utilisation and mortality indicators, the 1990s showed a completely different picture, since most indicators became either static or showed signs of deterioration. Some of the mortality rates already started rising in the late 1980s. This trend continued into the 1990s, thus reversing the gains made in the previous decade.

Both the infant mortality and the child mortality rates rose between 1988 and 1997 to levels comparable to those found in the early 1980s (see Figure 3.7). This is corroborated by a recent analysis of data from three demographic and health surveys (in 1988, 1994 and 1999), which compared infant and under-five mortality rates for the five-year periods preceding each survey (CSO and Macro International Inc., 2000). The consistency between the data from the three surveys is remarkable and confirms that child survival prospects improved up until the late 1980s, after which they declined significantly.

Figure 3.7: Infant and child mortality rates, 1978-1997 (source: MoHCW, 1999a)

Hospital-based statistics obtained through the national health information system show an almost steady increase in the rates of stillbirths, neonatal mortality and perinatal mortality during the period 1990 to 1996, with a slight improvement in 1997 (see Figure 3.8). This suggests a worsening of the physical condition of mothers along with a worsening of the clinical management of newborn babies.

---

A baby born dead after at least 28 weeks of pregnancy is considered a stillbirth. Neonatal mortality refers to a child's death in the first month after birth. Perinatal mortality comprises stillbirth and death of children in the first week (7 days) after birth.
An unpublished report of 1993 suggested that maternal deaths in Harare hospitals had doubled since 1990. The authors attributed this to increased poverty due to structural adjustment and the increase in user fees for maternity services (UNICEF, 1993). The 1992 Demographic and Health Survey (CSO, 1993) estimated the maternal mortality ratio\(^{50}\) at 283 per 100,000 live births, while the 1992 Census found a ratio of 395 per 100,000 (CSO, 1994). This difference has been attributed to differences in data collection methodologies, but much more important is that both figures were much higher than expected. The 1999 DHS demonstrates that in the remainder of the 1990s the problem of maternal mortality has further aggravated: the maternal mortality ratio for the period 1995-99 was estimated to be 695 per 100,000, which exceeds by a factor 2.5 the estimate from the 1994 DHS. Maternal deaths reported through the routine national health information system – which are much less reliable since many cases of maternal death are not notified – also showed a steadily rising rate, from 73 per 100,000 in 1987 to 150 in 1994 and 169 in 1996. A detailed study of maternal mortality in Harare and Masvingo province estimated that almost a third of maternal deaths were AIDS related. This indicates that AIDS only partially accounts for the observed increase in the total cases of maternal death. The study further suggested that 90% of maternal deaths were preventable, including part of the AIDS related cases. In Harare the major preventable factors were delays in treatment, inappropriate diagnosis and other factors related to the quality of clinical care. In rural areas the major factors were lack of transport and communication facilities, as well as poor quality of care in rural hospitals (MoHCW, 1999a).

Low birth weight is a sensitive indicator of foetal underdevelopment and maternal undernutrition and influences the survival chances of the baby. Health facility-based

---

\(^{50}\) The maternal mortality ratio is calculated as the maternal mortality rate (due to causes related to pregnancy and child bearing) divided by the general fertility rate; it is expressed per 100,000 live births.
statistics show an almost continuous deterioration from 7% of all live births occurring in health institutions in 1990 to 12.5% in 1997 (see Figure 3.9).

The rise in HIV infection rates and associated societal problems has been described in Chapter 2. The incidence of AIDS and AIDS related conditions (ARC) shows a dramatic increase from 1989 onwards, indicating a change in the disease profile of patients and treatment requirements at the hospital level. There is a close correlation between HIV/AIDS and the incidence of sexually transmitted infections (STI). As STIs increase the risk of HIV infection, very high HIV prevalence rates have been reported among STI patients. Sentinel studies show HIV prevalence rates among STI patients ranging from 24% to 60%. STIs accounted for nearly six percent of all outpatient attendance (‘new’ patients) countrywide in 1996 and more than 10% in the major cities. The number of episodes of STI being treated at health institutions, stagnated at about 850,000 new episodes per year between 1992 and 1996, after a decline from 1.2 million cases in 1992 (Figure 3.10). This may reflect a change in behaviour following the intensification of information and education campaigns, although it cannot be excluded that death due to AIDS of people who otherwise would have developed STI may have played a role as well.

*Figure 3.9:* Low birth weight incidence, 1990-1997 (health facility based data; source: MoHCW, 1999a)
Further, there has been an explosion of new cases of tuberculosis (TB), an opportunistic infection associated with HIV/AIDS (see Figure 3.10).\textsuperscript{51} Tuberculosis appeared to be under control in the early 1980s, but the TB incidence trebled from 97 per 100,000 people in 1990 to 267 in 1995 and then to 299 in 1996. There is a fairly large geographical variation, ranging from 190 per 100,000 in Mashonaland East province to 340 and 400 per 100,000 in Harare and Bulawayo, respectively (in 1996). Annual reports of the Harare City Health Department indicate that the number of TB cases (of all forms) presenting at municipal clinics doubled in just two years: from 3457 in 1995 to 7013 in 1997. The increase was six-fold over the ten years period from 1988 to 1998, with a slight decrease in 1998, the first in a decade (City of Harare, 1996 & 1998). The TB cure rate, which is threatened by the increasing demand without a corresponding increase in resources, was as low as 43\% in 1997. The case fatality rate of tuberculosis increased from 6.2\% in 1989 to 10.9\% in 1995 (MoHCW, 1999a). No doubt AIDS played a role in this, but this cannot be proven.

Chokunonga et al. (1999) argue that the AIDS epidemic also had a dramatic effect on the profile of cancer in Zimbabwe. An observed increase in the incidence of cancer in the 1990s in Zimbabwe involves several types of cancer, which were previously linked to AIDS in North America and Europe.

The first report of the 1999 Zimbabwe national Burden of disease study suggests that the relative burden of HIV related diseases may be as high as 40\%.\textsuperscript{52} HIV/AIDS has become the priority problem that the government and the health work force are currently facing. A comparison between 1984 and 1995 of age-specific mortality rates involving all

\textsuperscript{51} The connection between HIV and tuberculosis, which is known from the international literature, was demonstrated through studies in Harare, which showed that the HIV prevalence rates among tuberculosis patients had increased from 34\% in 1988 to 80\% in 1998 (Danida, 2000).

\textsuperscript{52} The study reviewed death certificates of 1995.
causes of death shows a clear peak in 1995 among children 0 to 4 years of age reflecting an increase in cases that have acquired HIV through vertical transmission and a consistently higher mortality rate in 1995 from the age group of 15-19 years onwards, because of HIV through sexual transmission (MoHCW, 1999b).

National trends in the prevalence of child malnutrition during the 1990s can best be assessed by comparing the 1999 Zimbabwe DHS results with those obtained from the 1994 DHS (see Table 3.2). Both nutritional wasting and stunting levels had increased over the five-years period in all age categories, indicating a deterioration in acute and chronic malnutrition. Both surveys found that stunting is more common among boys than girls, among the one-year old children (12-23 months), in children residing in rural areas (as opposed to those in urban areas), and in children whose mothers had low levels of education. Urban-rural and maternal education differentials for wasting were small in 1994, but appeared to have increased by 1999, with children living in rural areas, particularly those in Mashonaland West and Mashonaland East provinces, and children of uneducated mothers being more prone to wasting.

<table>
<thead>
<tr>
<th>Age group</th>
<th>1994</th>
<th>1999</th>
<th>1994</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months</td>
<td>3.5</td>
<td>6.0</td>
<td>3.0</td>
<td>7.2</td>
</tr>
<tr>
<td>6-11 months</td>
<td>10.2</td>
<td>17.4</td>
<td>7.6</td>
<td>7.0</td>
</tr>
<tr>
<td>12-23 months</td>
<td>31.0</td>
<td>36.9</td>
<td>7.4</td>
<td>9.7</td>
</tr>
<tr>
<td>24-35 months</td>
<td>28.7</td>
<td>30.1</td>
<td>3.6</td>
<td>4.5</td>
</tr>
<tr>
<td>All children under three</td>
<td>21.4</td>
<td>26.4</td>
<td>5.5</td>
<td>7.2</td>
</tr>
<tr>
<td>36-47 months</td>
<td>-</td>
<td>25.8</td>
<td>-</td>
<td>5.3</td>
</tr>
<tr>
<td>48-59 months</td>
<td>-</td>
<td>27.2</td>
<td>-</td>
<td>5.1</td>
</tr>
<tr>
<td>All children under five</td>
<td>-</td>
<td>26.5</td>
<td>-</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Table 3.2: Child nutritional status in 1994 and 1999 (source: CSO ML, 1995; CSO ML, 2000)

The 1994 DHS sampled children below three years of age (N = 2014); the 1999 DHS extended the age range and sampled children below five years of age (N = 2520).

"n" of children whose height-for-age was below 2 standard deviations of the median of the reference population

"n" of children whose weight-for-height was below 2 standard deviations of the median of the reference population

Repeat nutritional surveys on the same population to document changes over time are very scarce. Chapter 7 will present the results of our own longitudinal study of child anthropometric indices in Chitungwiza and Murehwa district. It will also discuss the results of the study by Kinsey in selected resettlement areas, which involved series of anthropometric measurements taken since the 1983-84 drought season.

Comparison with the 1988 DHS results is problematic since a different cut-off point was used to define 'stunting' and 'wasting'.
The epidemiological transition

The impact of the change in disease profiles and health indicators on the demography and the population pyramid – referred to as the epidemiological or health transition (Boerma et al., 1998) – is not entirely clear. A comparison of the population pyramids of 1992 and 1999 (see Figures 2.1 and 2.2 in Chapter 2) indicates that the proportion of children below 10 years of age has declined. The crude death rate in Zimbabwe declined from 10.8 deaths per 1000 people in 1982 to 6.1 deaths in 1987, and then rose to 9.5 in 1992 and 12.2 in 1997 and 1999. The total fertility rate has been declining almost steadily over the past three decades, from 7.9 children per woman in 1969 to 6.5 in 1984 and 5.5 in 1988 and further to 4.3 in 1994 and 1997 and to 4.0 in 1999 (CSO and Macro International Inc., 2000). This is probably the combined result of an increase in the incidence of HIV/AIDS and in the practice of family planning.

The combined impact of AIDS and other influences on child and adult mortality can best be captured by the parameter life expectancy at birth. Different sources, however, provide different figures for life expectancy at birth in Zimbabwe. The 1997 Intercensal Demographic Survey calculated the life expectancy at birth at 53 years for males (down from 58 years in the 1992 Census) and 57 years for females (down from 62 in 1992), with an overall life expectancy of 55 years for the two sexes combined (down from 61 in 1992; CSO, 1998a). UNDP (1998) reported that life expectancy had fallen from 59.6 years in 1991, to 53.4 years in 1993 and 48.9 years in 1995. These figures suggest a decrease in life expectancy of 8-9% over just five years (see Figure 3.11; MoHCW, 1999a).

---

Figure 3.11: Life expectancy at birth, 1978-1997 (source: MoHCW, 1999a; WHO, 2000)

---

54 WHO (2000) reports a total fertility rate of 3.7 for 1999, but the source of this figure is not indicated.
Both sources (CSO and UNDP) attribute the decrease in life expectancy to the HIV/AIDS pandemic, but it cannot be ruled out that non-HIV related mortality also plays a role since drought and deteriorated socio-economic conditions may have led to a deterioration in people’s nutritional and general health status. More recently, the World Health Organisation reported that the life expectancy at birth in Zimbabwe has fallen to 40.9 years for males and 40.0 years for females, among the lowest in the world (WHO, 2000). This suggests a decrease in life expectancy of 30-35% since 1992.

An analysis of data from demographic and health surveys conducted in 25 different countries estimates the contribution of adult HIV prevalence to the observed level of under-five mortality in Zimbabwe at 61%—higher than in any other country—suggesting that causes other than HIV/AIDS play a relatively less important role (Adetunji, 2000). Hamner and White (1999) investigated how much of the rise in childhood mortality in Zimbabwe (and in Zambia) after 1990 can be explained by HIV/AIDS and came to a similar conclusion. They found that by 1994 AIDS in Zimbabwe accounted for at least 34% of the under-five mortality in rural areas and 64% in urban areas. They argue that under-five mortality among children born HIV negative has fallen between 1980 and 1994 and suggest that other factors, which improve child survival prospects, have improved and thus offset the negative impact of HIV/AIDS. The authors suggest that their estimates imply that, in the absence of HIV/AIDS, under-five mortality in Zimbabwe would have continued to fall. There is insufficient evidence, though, for this hypothesis: the study by Hamner and White does not cover the period after 1994, when, along with the further unfolding of the HIV/AIDS epidemic, important changes took place in the health sector and in society in general. It implicitly assumes that the environment remained unchanged, which is obviously a false premise.

Table 3.3 summarises the main trends in health and demographic indicators observed from either community-based or health facility-based surveys and routine monitoring systems. For each indicator we have indicated whether it is considered sensitive to: i) changes in the utilisation and or quality of health services; ii) changes in the occurrence of HIV/AIDS; and iii) changes in people’s socio-economic conditions.

---

Out of 191 countries reviewed, only for Sierra Leone, Zambia and Niger the life expectancy is reported to be lower.

They based their calculations on the HIV prevalence rate among pregnant women and assumptions about the vertical transmission rate of HIV (from mother to child) and the life expectancy of a child born HIV positive using a high scenario and a low scenario for both the vertical transmission rate and the HIV fatality rate in children.

Their conclusion for Zambia is different: here, HIV/AIDS accounts for all of the increase in under-five mortality in urban areas (between 1980 and 1996), but in rural areas the increase in under-five mortality is attributed to a deterioration in socio-economic factors.
Table 3.3: Summary of observed trends in health indicators obtained from community-based and health facility-based sources

<table>
<thead>
<tr>
<th>Indicator</th>
<th>C/HF</th>
<th>Observed national trends</th>
<th>Indicator considered mainly sensitive to</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Indicator utilisation, quality of services, HIV/AIDS, Socio-economic conditions</td>
<td></td>
</tr>
<tr>
<td>Service utilisation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Immunisation coverage</td>
<td>C</td>
<td>Improved 1982-91, decline 1991-93, recovery 1993-97, decline 1997-99</td>
<td>-</td>
</tr>
<tr>
<td>* Antenatal consultations</td>
<td>HF</td>
<td>Decline 1988-92, slight recovery 1992-95, slight fall 1995-97</td>
<td>-</td>
</tr>
<tr>
<td>* Institutional deliveries</td>
<td>HF</td>
<td>Slight annual fall 1995-97</td>
<td>-</td>
</tr>
<tr>
<td>* Institutional deliveries</td>
<td>C</td>
<td>Increase between 1994 and '99</td>
<td>-</td>
</tr>
<tr>
<td>* Use of contraceptives</td>
<td>C</td>
<td>Steady increase between 1984 and '99</td>
<td>+</td>
</tr>
<tr>
<td>Morbidity:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* HIV prevalence</td>
<td>C</td>
<td>Steep increase 1990-98</td>
<td>+</td>
</tr>
<tr>
<td>* AIDS and related cases</td>
<td>HF</td>
<td>Annual increase 1989-95, slight fall in 1996</td>
<td>-</td>
</tr>
<tr>
<td>* TB incidence</td>
<td>HF</td>
<td>Steep annual increase 1989-96</td>
<td>+</td>
</tr>
<tr>
<td>* TB cure rate</td>
<td>HF</td>
<td>Decline 1989-96</td>
<td>-</td>
</tr>
<tr>
<td>* Case fatality from TB</td>
<td>HF</td>
<td>Increase 1989-96</td>
<td>-</td>
</tr>
<tr>
<td>* Respiratory diseases</td>
<td>HF</td>
<td>Decline 1989-93, increase 1993-96</td>
<td>-</td>
</tr>
<tr>
<td>* Malaria</td>
<td>HF</td>
<td>Seasonal, high in 1996</td>
<td>-</td>
</tr>
<tr>
<td>* Measles cases</td>
<td>HF</td>
<td>Epidemic outbreaks every 3-4 years; overall decline 1989-95; peak 1996</td>
<td>-</td>
</tr>
<tr>
<td>Nutritional status:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Stunting</td>
<td>C</td>
<td>Decline 1980-85, increase after 1988, up to 1999</td>
<td>-</td>
</tr>
<tr>
<td>* Wasting</td>
<td>C</td>
<td>Decline 1980-88, then increase up to 1999</td>
<td>+</td>
</tr>
<tr>
<td>* Underweight</td>
<td>C, HF</td>
<td>Decline 1980-85, increase 1985-99</td>
<td>-</td>
</tr>
<tr>
<td>* Low birth weight</td>
<td>HF</td>
<td>Yearly increase 1991-97 (except '96)</td>
<td>-</td>
</tr>
<tr>
<td>Mortality rates:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Infant mortality</td>
<td>C</td>
<td>Decline until 1988, then increase</td>
<td>-</td>
</tr>
<tr>
<td>* Child mortality</td>
<td>C</td>
<td>Decline until 1988, then increase</td>
<td>-</td>
</tr>
<tr>
<td>* Maternal mortality</td>
<td>C</td>
<td>No clear pattern, high rate in '92</td>
<td>-</td>
</tr>
<tr>
<td>* Maternal mortality</td>
<td>HF</td>
<td>Yearly increase 1987-96 (except '95)</td>
<td>-</td>
</tr>
</tbody>
</table>
Service utilisation rates such as immunisation coverage, antenatal consultations and institutional deliveries are not likely to be responsive to HIV/AIDS. They show a varied picture with improvements and stagnation at different intervals, with some contradictory evidence with regard to the trend in the number of deliveries taking place within health institutions. Episodes of stagnation should be attributed either to a reduced willingness to utilise the services because of a decline in the quality (or the perceived quality) of the services provided, or to a reduced ability to utilise the services because of financial reasons. The data suggest that there have been several such episodes in the course of the 1990s. Chapter 5 will analyse in detail the observed trends in people’s ability and willingness to utilise health services in Chitungwiza and Murehwa district.

Most of the changes in morbidity and mortality rates seem to be associated with changes in HIV/AIDS. The increase in hospital-based stillbirths, neonatal mortality and perinatal mortality, however, are more likely to be caused by declining standards of care, deteriorating socio-economic conditions or a combination of the two.

The deterioration in indicators that reflect child nutritional status is associated with either HIV/AIDS (because of vertical transmission from infected mothers to their children) or changes in the socio-economic environment or a combination of the two. The two influences cannot be disentangled unless the HIV status of the child is known, but this is not the case in any of the studies concerned.

Socio-economic differences
Since attribution of the observed trends remains problematic because of the multiple determinants of morbidity, nutritional status and mortality, an appropriate way of answering our question of interest — has Zimbabwe’s national health policy been a sufficient response in view of the changing environment? — would be to look into
differences in morbidity, nutritional status and mortality indicators between socio-economic groups within the country and to investigate possible trends in these differences. While several studies have analysed differences between rural and urban areas or between provinces (some of which we have discussed above), only one study looked into differences between socio-economic groups: Gwatkin et al. (2000) used data from the 1994 Zimbabwe Demographic and health survey to this effect. Since they did not make any comparison with data sets from previous or subsequent years, the study does not show any trends over time, but at least it provides some insight into intra-country socio-economic differences, which could form the basis for future monitoring. Some of the methodological aspects of the study are described in Box 3.5.

**Box 3.5: The measurement of socio-economic differences in health and nutrition indicators in Zimbabwe**

The study used the data set from the 1994 demographic and health survey (DHS) to highlight differences in health, nutrition and population status and service use among individuals belonging to different socio-economic classes. This was done in preparation for subsequent World Bank country analyses and the development of interventions for the disadvantaged.

Socio-economic status is defined mainly for pragmatic reasons – in terms of asset holding (or wealth), rather than in terms of income or consumption, which would be more conventional. The information on assets was gathered through the DHS questionnaire, which included questions posed to heads of households, concerning the household’s ownership of a number of consumer items, ranging from a fan to a television and a car, dwelling characteristics, such as flooring material, and type of drinking water and toilet facilities used. An asset index was used, on the basis of which each household surveyed was assigned a total score and individuals were ranked according to the total score of the household in which they resided. The total sample was then divided into population quintiles: five groups with equal numbers of individuals in each.

Two statistical indicators were used to express inequality.

- **Poor rich ratio**: this is the ratio between the rate of interest (for instance, infant mortality) prevailing in the poorest asset quintile and the rate found in the richest quintile. The index is rather crude as it provides no information about the middle three quintiles.

- **Concentration index**: this index measures the extent to which a particular variable is distributed unequally across all five ‘asset wealth quintiles’. The value of the concentration index varies between −1 and 1. The closer the index is to zero for any indicator, the less concentrated is the asset inequality for that indicator; conversely, the further away the index is from zero, the greater is the inequality. The sign of the index (negative or positive) reflects the direction of the relationship between the indicator of interest and wealth.

The authors rightfully emphasise that the relationships presented in their report should not be taken to imply any direct causal relationship between asset holding and the health, nutrition and population indicators concerned.

\[\text{By Gwatkin et al. (2000)}\]

The study found some important differences between poor and rich people in society, as well as between males and females and between urban and rural residents. For instance, the infant mortality rate in the poorest quintile of the population was 1.25 times
as high as in the richest quintile, while the under-five mortality rate among the poorest was 1.50 times as high as among the richest (as indicated by poor rich ratios of 1.25 and 1.50, respectively). In spite of this, the concentration index, which measures the extent to which a particular variable is distributed unequally among all five 'asset-wealth quintiles', was low, suggesting a relatively high degree of equality. Nutritional stunting among children below three years of age and the proportion of children underweight (weight-for-age) were also higher in the poorest quintile (1.93 times and 2.04 times as high, respectively, as in the highest quintile). The two concentration indices were fairly high, suggesting inequality. Poor nutritional status of mothers, as indicated by body mass index was even 4.75 times higher in the poorest category compared with the richest category, with a corresponding high concentration index (-0.17) indicating asset-wealth inequality between well-nourished and poorly nourished women.

With regard to health service utilisation indicators, the study showed fairly uniform immunisation coverage and antenatal clinic attendance rates across socio-economic categories. Conversely, strong positive associations were found between socio-economic status and institutional deliveries, use of modern contraception (both among males and females) and knowledge about HIV/AIDS prevention. These findings should not be taken to imply any direct causal relationships, since not only the ability to pay for health services may play a role but also other factors, such as for instance educational attainment. They do however provide a good basis for monitoring how the observed inequalities develop over time, despite the rather limited definition of socio-economic status. Moreover, they are the first serious attempt of any major (national or international) institution at disaggregating health indicators by socio-economic strata since the UNICEF supported situation analyses of children and women in Zimbabwe of 1985 and 1990.

Our own study in one urban and one rural area in Zimbabwe has tried to analyse the differential impact of changes in society, and in particular in the health sector, on health service utilisation (see Chapter 5) and child nutritional status as an indicator of outcome (see Chapter 8) between urban and rural residents and between poor and rich people.

An international perspective on health system performance

While the time dimension has guided the argument in this chapter so far, this section will now introduce an international perspective to complete the profile of Zimbabwe’s health sector.

Earlier in this chapter we have demonstrated that in 1990, prior to ESAP and at the beginning of the HIV/AIDS epidemic, Zimbabwe’s total health expenditure was much higher than the average for Sub-Saharan Africa. Along with the impressive achievements of the 1980s, this was one of the reasons why the international community held the health sector in Zimbabwe in high esteem.

---

Body mass index (BMI, weight height\(^2\)) is a measure of chronic energy deficiency in adults. A BMI value of less than 18.5 is considered below normal.
A more recent assessment of health system performance worldwide, published in the World Health Report 2000, is far less positive (WHO, 2000). On five separate indicators of goal achievement and performance Zimbabwe has been assigned the following rankings out of 191 surveyed countries worldwide:

a. Overall level of health (in 1999): 184th rank (or the 8th lowest)
b. Distribution of health in the population (1997): 98th rank
c. Overall level of responsiveness (1999): 122nd rank
d. Distribution of responsiveness (1999): 166th 167th rank

Box 3.6 provides a background to the methodology used in this assessment of health performance and explains what the indicators represent.


The report defines a health system to include all the activities whose primary purpose is to promote, restore or maintain health. A health system thus includes not only formal health services, but also the actions of traditional healers, all use of medication, whether prescribed by a provider or not, and home care for the sick. Apart from conventional public health activities, such as health promotion and disease prevention, other health enhancing interventions, such as road and environmental safety improvement are also considered part of the health system. Beyond the boundaries of the definition are those activities whose primary purpose is something other than health – such as education, for example – even if these activities have a secondary, health enhancing benefit.

The report distinguishes between three fundamental objectives of a health system that are universal, irrespective of how rich or poor a country is:

- Improving the health of the population it serves (‘good health’)
- Responding to people’s non-medical expectations (‘responsiveness’)
- Providing financial protection against the cost of ill-health (‘fair financial contribution’).

It then considers two main questions important for assessing a country’s health system:

a. Attainment: what is achieved with respect to the above three objectives of good health, responsiveness and fair financial contribution

b. Performance: How to compare attainment with what the system should be able to accomplish (i.e. the best it could be achieved with the same resources).

From these, five dimensions are derived for assessing a health system, each of which are measured or estimated with a specific methodology:

1. Overall level of health: expressed in disability adjusted life expectancy (DALE), based on estimates of disability at birth and at age 60 and estimates of the percentage of lifespan lived with disability.

2. Distribution of health in the population: in terms of an index for equality of child survival, based on birth histories from demographic and health surveys and small area vital registration data on child mortality.

3. Overall level of responsiveness: in terms of an index derived from a survey of key informant.

4. Distribution of responsiveness: in terms of an index derived from the same key informant survey.


The assessment of the health system attainment and performance of 191 different countries on each of these dimensions has resulted in rankings, ranging from 1 (best) to 191 (worst). A combination of the five dimensions has resulted in a measure for overall goal attainment. And finally, the overall health system performance is expressed in two indices that indicate how efficiently the health system translates available health system expenditure into health, as measured by DALE only, and into overall achievement as measured by all its five dimensions.
In terms of overall goal attainment, based on the above five indicators, Zimbabwe ranks 147th out of 191. While there is scope for refinement of the methodology as well as in the accuracy of data collection, the inter-country comparisons do give an idea where Zimbabwe stands internationally.59

The report further presents for each country an index of performance on health level, as well as an index for overall performance, both based on 1997 data. Zimbabwe occupies the lowest ranking of all countries (191st position) for health system performance in terms of the level of health (as measured by disability adjusted life expectancy).60 This is due to the combination of relatively high health expenditure and high education levels on the one hand, and low life expectancy on the other, as a result of high child mortality and very high adult mortality. The report stresses the “disturbingly” large variations in life expectancy despite the relatively high health spending and high educational attainments. Surely, the HIV/AIDS epidemic forms a large part of the explanation for the fact that Zimbabwe comes out lowest, just as it is responsible for the fact that the 25 worst-off countries are all African nations that suffer from a severe burden of AIDS.61

In terms of overall health system performance, taking all five dimensions of goal achievement into account, and given the country’s health expenditure pattern and educational levels, Zimbabwe occupies the 155th rank.62 This reflects that the country compensates to some extent for its very poor performance on health alone by doing somewhat better in responsiveness and dealing with health inequalities.

Conclusion

The main intention of this chapter was to assess whether the national health policy and the way it was implemented and supported by aid agencies, has been a sufficient response to the negative overall environment, characterised by ESAP, drought and HIV/AIDS. Health indicators in Zimbabwe improved greatly during the first decade of independence as resource allocation targeted previously disadvantaged groups in rural areas and the urban poor. Around 1990 a reversal occurred in many of the observed achievements of the 1980s, as reflected by stagnating and deteriorating indicators of health service utilisation and coverage (output) and health status (outcome). These changes are associated with declines in resource allocation (input) and a regression in the quality of services (process), along with the rapid spread of HIV AIDS, and occurred, as we will

59 The uncertainty interval belonging to Zimbabwe’s 147th position ranges from 141 to 159, with an 80% probability of falling within the uncertainty interval.
60 No uncertainty interval is given. Zimbabwe’s bottom position for this index is uncontested.
61 Most of these are countries in Central, Eastern and Southern Africa, which relatively more affected than countries in West Africa, such as Sierra Leone (ranked 183rd), Liberia (176th) and Nigeria (178th).
62 Uncertainty interval from 143 to 167 (80%, probability).
demonstrate in chapter 6, when people’s living conditions deteriorated during a period of macro-economic changes and drought.

UNICEF was one of the first to attribute the deterioration of mortality statistics to the increase in HIV/AIDS, but Sanders and Davies (1988) warned already in a much earlier stage against the possible negative effects of economic recession and structural adjustment on child survival. One of our own earlier publications attributed the reversed trends to several factors that we believed to reinforce each other: the declining per capita expenditure on health and the declining quality of services, the drought, the HIV/AIDS epidemic and the general deterioration in living conditions of large segments of the population (Bijlmakers et al., 1996). Despite these warnings it has taken time before the worsening of mortality and morbidity indicators were generally acknowledged. This may be so because the trends, although some of them had set in before 1990, only became fully apparent from 1992 onwards. But it was only in 1999 that the Government admitted that the trends reflected a major decline in socio-economic conditions affecting the population (MoHCW, 1999a). Prior to that the ministry did not seem to appreciate what was happening to the health sector and to fight back against budget cuts.

While equity in health, as the mainstay of Zimbabwe’s national health policy in the 1980s, has not been abandoned as a principle in official health policy documents, the response to the macro-economic changes in the early 1990s and the impact of the HIV/AIDS epidemic, has been inadequate in three ways.

Firstly, the emphasis within the health sector has remained on the equitable distribution of resources and on obtaining high coverage rates, which would reflect equal access to health services. It was implicitly assumed that this would help achieving the equity objective. The multitude of studies that focussed on the effects of user fees on health service utilisation is testimony of this preoccupation. Health outcome statistics, however, have proven that access should not be the sole interest of health policy makers and programme managers, but that it is as much as important to ensure good quality services and work towards improvement of people’s general living conditions. Clearly, the Ministry of Health and Child Welfare has failed to appreciate what was happening in the health sector and to fight back against budget cuts and the impact of inflation, drought and population growth. When the Ministry started recognising the importance of good quality services in the latter half of the 1990s – with the adoption of the National Health Strategy for the period 1997-2007 – much of the damage had already been done. This made it extremely difficult to restore people’s confidence in the health sector – both that of clients and that of health workers – and to regain the positive trends that characterised the 1980s. Little insight is available how the process of delivering good quality services can be influenced so as to achieve better health outcomes. Chapter 5 tries to provide a better understanding of the concept of quality of care, its determinants and the possible effects of changes in service quality.

Secondly, the monitoring of changes in the health sector, especially of changes in health outcomes, has paid little attention to possible intra-country variations. While there have been attempts to describe rural-urban disparities and regional variations, differences between socio-economic population strata have largely remained unexplored. This is
remarkable, given the pronounced value attached to equity in all policy documents. Meanwhile, the private for-profit health sector has expanded to the detriment of state-provided health services, without the necessary regulatory mechanisms to ensure quality and equitable access.

Thirdly, and this pertains to the wider policy environment (not the health sector alone), there has been little attention for the deterioration in people's conditions which predispose to poor health outcomes. Little is known how people cope with the adverse socio-economic climate and how interventions could be geared to improve the living conditions or at least to help people cope with the adverse effects. Chapter 6 tries to address this issue by describing and analysing changes in households' social and economic situation and the way they cope with poverty.