



Bucking the Trend

How Sri Lanka has achieved good health at low cost:
challenges and policy lessons for the 21st century



Save the Children

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lessons for the 21st century

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Save the Children

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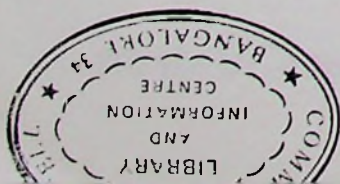
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Abbreviations and acronyms

DFID	Department for International Development
GDP	gross domestic produce
GNP	gross national product
LTTE	Liberation Tigers of Tamil Eelam
MDGs	Millennium Development Goals
NGO	non-governmental organisation
UNICEF	United Nations Children's Fund
WHO	World Health Organisation

Executive summary

There is growing concern that the Millennium Development Goals (MDGs) for child and maternal health will not be met by 2015, recharging the debate on what is required to achieve them. While a 'one size fits all' approach is widely rejected, the prescriptions of international organisations such as the World Bank and the World Health Organisation (WHO) continue to shape the model on offer as they have over the past two decades. The model may be characterised as focusing public expenditure on out-patient care, cost recovery, and growth of the private sector.

In general, poor countries have far higher levels of infant mortality than rich ones, but Sri Lanka's experience, as one of the few countries to have achieved remarkable progress in health and social development despite its low-income status, demonstrates that factors other than income can significantly affect health outcomes, including child mortality. The state has financed and provided a high level of healthcare for its citizens at a relatively low cost (around two per cent of GDP), which has contributed to low infant and maternal mortality and high life expectancy.

Considerable attention has been paid to the Sri Lankan example and this paper investigates the factors that have contributed to its achievements in order to see what can be learnt for the benefit of children elsewhere and to consider how these achievements can be sustained when threatened by new challenges. In certain key areas it can be seen that the policies adopted and implemented by the Sri Lankan government have been and in some cases still are at variance with those proposed and widely followed in the general pursuit of the MDGs.

The factors that have contributed to the Sri Lankan success in improving the health status of its citizens may be categorised into three groups. First, there are cultural, social and historical reasons. These include high levels of women's autonomy and relative gender equality, a democratic system based on universal franchise and a significant level of consensus on national priorities relating to the government's provision of social services.

Second, the government managed a series of complementary policies outside the health sector that have had direct impact on health outcomes. Whilst it may be difficult to quantify the exact impact of relations between interventions, public programmes in other sectors since before independence have undoubtedly created positive synergies with the health sector. Free education since 1947 and high levels of female literacy have engendered attitudinal changes and created a knowledge base that has weathered periods of economic decline. The nutritional status of poor families has been improved through subsidised distribution of rice, and water and sanitation systems have been developed in parallel with the health system.

Third, there have been important health policy decisions, based on principles of equity and efficiency, from which some lessons may be drawn, while bearing in mind the wider context in which they are located:

- a) an emphasis on public financing of in-patient care, rather than out-patient care
- b) creation of a motivated and trained body of health personnel
- c) rejection of cost recovery as a general financing policy.

In-patient care

The focus on freely available in-patient care with equitable access has had a number of effects:

- a) It has created a dynamic for a strong referral system within a wide network of health facilities available across the country and close to where people live. This in turn has created a strong demand for health services and universal understanding of how to use them, as well as of the main health issues. Health provision is an important political issue, and politicians need to ensure that it is present in their constituencies.
- b) Most women elect to give birth in public hospitals as public resources are directed at in-patient delivery care.
- c) A complementary private sector has evolved. Recognising that in-patient provision is wide spread and of adequate quality, a growing private sector has focused on out-patient care and the provision of higher cost care to those who can pay. The division of services between the sectors contributes to a pro-poor¹ redistributive effect: public facilities are available to everyone, but wealthier patients self-select out of the public system for out-patient care, although they continue to use and support it for in-patient services.

Trained health personnel

In addition to Sri Lanka's strong public service ethos, the health sector emphasis on financing in-patient care has encouraged health workers to remain in the public health system, through strong non-financial incentives such as professional development which in turn increases their status. At the same time, they are permitted to work privately, although, until relatively recently, the level of public sector remuneration has been adequate for the purpose of retaining staff, who can add to their income with private work. The focus on in-patient care has provided the infrastructure necessary to maintain a committed health service staff.

Rejection of cost recovery

Sri Lanka has developed its public healthcare system without mobilising resources beyond the level of most other developing countries, and at significantly less cost than the World Bank's 'minimum cost-effective package' of basic preventive and curative health services. Total annual public spending on health has generally averaged less than two per cent of GDP. Maintaining extensive access to and use of services has been achieved through lowering unit costs by high staff productivity and the intensive use of infrastructure. Such improvements in productivity have been sustained over time apparently through careful use of non-financial incentives for staff and a strong institutional service culture among health professionals.

Cost recovery can have perverse effects in that it may reduce the pressure on the public sector to be efficient by allowing it to collect additional income outside the tax system. By denying itself additional non-tax income the government is increasingly pressured to ensure that the system is efficient. As care is free, the poor use the system extensively and the population expects it to deliver their requirements.

Implications of these achievements for the future

Sri Lanka's achievements continue to be sustained but the country now faces some complex health challenges. The Sri Lankan Government's commitment to investing in public health measures was pioneering, both in terms of its early start and the low level of national income at which it began. The decline in mortality began in the 1920s, and a remarkable 'breakthrough' period (1946-53) occurred during which infant mortality fell by 50 per cent, maternal mortality by 68 per cent and life expectancy increased by over a decade. This success in achieving both an epidemiological and demographic transition now means that it has a rapidly ageing population and by 2010 Sri Lanka will be the third oldest country in Asia, after Japan and Singapore. Although data from government hospitals shows that morbidity remains dominated by infectious conditions and injuries, it also shows a clear increasing trend in chronic disease cases associated with older populations, such as heart disease, cerebrovascular conditions, diabetes and cancers. At the same time, continued fertility decline will eventually mean that the ratio of middle-aged women (the primary providers of informal home-based care of the elderly in Sri Lanka) to the elderly will decrease.

These processes raise issues about both the pattern of healthcare expenditure and the level of spending. Sri Lanka's system developed with an emphasis on the prevention and treatment of communicable diseases, but the epidemiological transition means that patterns of healthcare expenditure will have to become more diverse and complex, with pressure for personnel and technology to become increasingly specialised. Additional funding is likely to be needed to meet both these new requirements and the increased demand for formal, government-provided long-term care that accompanies the rise in chronic diseases.

Although there is awareness of a need for reform to meet these challenges, the political consensus, which shaped government priorities in the past, has yet to coalesce. Resource constraints are mounting, and within the health sector there is pressure to increase spending on salaries to pre-empt an exodus of staff to the private sector and to modernise public provision in line with private provision. There is also a lack of managerial capacity at both central and provincial levels to plan and manage the necessary reform.

1. Introduction

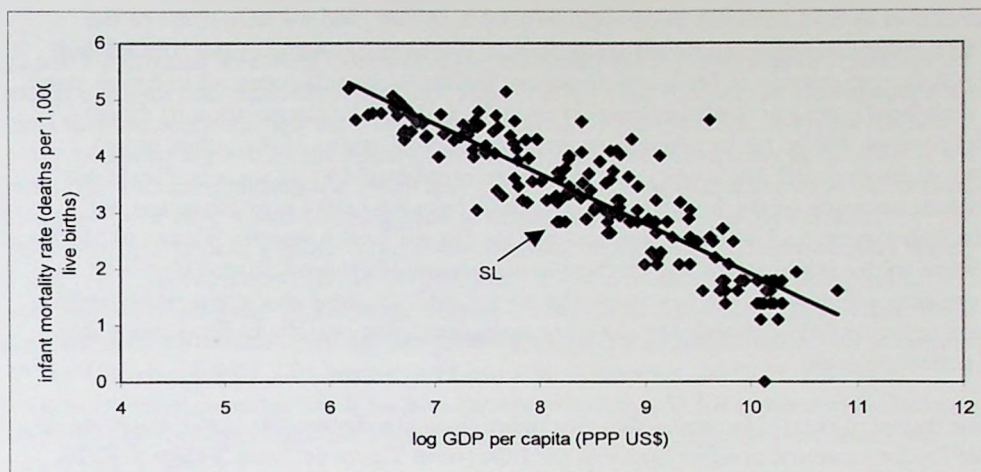
Save the Children UK has over 80 years of experience in maternal and child healthcare. In this time our role as an international non-governmental organisation (NGO) has changed dramatically from only providing relief services following conflicts to supporting nationally owned and led solutions. Throughout this time our focus on supporting the realisation of all children's rights has not changed.² In the last decade Save the Children UK has continually called for increased recurrent resources for health systems in developing countries. These resources remain scarce and child health in the poorest countries has suffered. In 2001 Save the Children UK released a report on the negative impact of economic policies on health expenditure and health indicators (Save the Children UK and Medact, 2001). In the same year WHO also released a report from their Commission on Macroeconomics and Health, linking health to poverty, and including estimates on how much health system strengthening would cost (WHO, 2001). Three years later and despite lots of new disease-specific globally-led initiatives for HIV, TB and malaria, there is still no solid action plan for ensuring that fewer children in the poorest countries die from preventable diseases by 2015.

In 2003 an NGO report was launched by the UK Secretary of State for International Development, entitled '*80 Million Lives: Meeting the Millennium Development Goals in child and maternal survival*'. In it, 20 UK-based NGOs called for urgent policy change, and a return to a social model of health, with more recurrent resources for health and increased accountability from all stakeholders in order to achieve the health-related MDGs. (Grow Up Free from Poverty, 2003). That report highlighted how child-focused and pro-poor health and economic policy changes were urgently needed to move the international health debate away from a focus on cost effectiveness and other neoliberal principles, towards a rights-based pro-poor model to achieve the health-related MDGs by 2015. Save the Children UK's experiences and research point to a need for rapidly increased resources for health, accompanied by dramatic policy change, to enable 76 million children's lives to be saved by 2015.

Sri Lanka has long been put forward as an example of a low-income country that has achieved remarkable progress in health and social development. This paper explores why Sri Lanka, despite widespread poverty, weak economic growth and high levels of malnutrition, still manages to maintain low child and maternal mortality rates at expenditure levels of less than two per cent GDP annually.

The World Bank has presented Sri Lanka as a having a pro-poor health policy when compared to other Asian nations like Bangladesh, which is seen as pro-rich despite allocating 67 per cent of its health sector budget to 'initiatives which target the poor'. In a six-nation Asian study, presented at the World Bank's 2004 Washington conference – 'Reaching the Poor' – the countries classified as pro-poor had used universal access to health as a policy priority. Those ranked as pro-rich had employed user fees combined with targeting measures to reach the poor (World Bank, 2004b). Following the publication of the World Bank's World Development Report 2004 ('*Making Services Work for Poor People*', World Bank, 2004a), and its recognition that progress towards the health-related MDGs will be inadequate unless critical services reach the poorest households with the greatest burden of ill-health, an understanding of how Sri Lanka has achieved pro-poor health success is even more paramount.

Figure 1. Infant mortality rate and GDP per capita, various countries, 2000



Note: The two data points to the right of Sri Lanka represent Jamaica and Ukraine.

Source: United Nations 2002a.

Figure 1 shows GDP per capita and the infant mortality rate for a cross-section of countries for which both indicators are available. The overall relationship clearly indicates that wealth is an important factor in achieving better health status; in general poor countries have far higher levels of infant mortality than do rich ones. However, there are also notable deviations, both positive and negative, from the overall relationship. Sri Lanka's position indicates a positive deviation from the overall relationship; the deviation indicating that given its income level, mortality achievement is higher than expected. Sri Lanka's experience therefore indicates that factors other than income can also be important in realising progress. It can therefore be placed at the centre of the debate about whether income growth is necessarily the driving force behind health and social development, or whether other routes to high achievement are also possible.

Sri Lanka's route is generally characterised as early and sustained government intervention. Drèze and Sen (1989) describe Sri Lanka's path as one of 'support-led security' in which public provisioning of health and social sector services has been used as the crucial means of promoting progress without waiting for economic growth to do so. Other examples of countries following the 'support-led security' path include Chile, China, Costa Rica, Cuba, Jamaica, and the Indian state of Kerala.⁵ However, according to Drèze and Sen, the Sri Lankan experience is particularly interesting because of both its pioneering timing and the fact that it was undertaken at a lower income level than the other examples of 'support-led security'. Drèze and Sen assert that 'Sri Lanka's strategic experience as a pioneer in overcoming the major penalties of low income remains one of great significance for understanding the prospects for support-led security in poor countries.'

With this in mind, the paper outlines Sri Lanka's health achievements and places its current performance within its historical context. Given that this paper has been written to promote the achievement of the United Nation's MDGs 4 and 5 (relating to child and maternal mortality respectively), we emphasise Sri Lanka's progress in lowering these two aspects of mortality. Throughout the paper we comment on some of the implications for

children of Sri Lanka's public intervention in the health sector.⁴ We then discuss the development of the public health system. We also recognise that government intervention in Sri Lanka has been multisectoral in nature, and we note some of the positive synergistic effects of such an approach. We mention some of the cultural and political factors present in Sri Lanka that have facilitated its achievements in health status. We then briefly review the literature that causally links public intervention to those achievements. We go on to investigate several specific features of the public health system in more detail, explaining how they have contributed to its success. Finally we comment on some of the health issues and challenges Sri Lanka now faces, and will face in the near future, and what the implications are for the health system. We pay particular attention to the implications for the healthcare system of epidemiological transition, and the growing presence of the private health sector, and we argue that appropriate health system reform could enhance the already existing complementarity between the public and private systems.

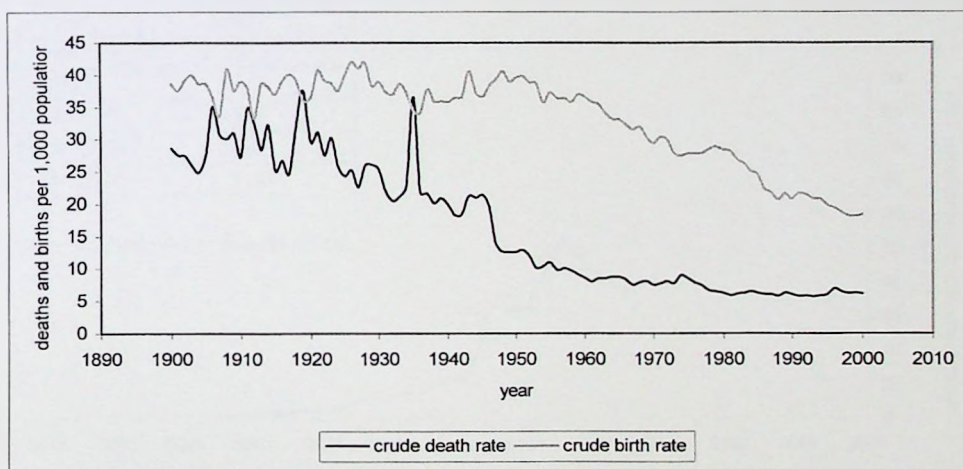
At the outset, it should be noted that this paper does not discuss the health implications of Sri Lanka's internal conflict between the Liberation Tigers of Tamil Eelam (LTTE) and the Sri Lankan Government, although we acknowledge that significant health effects exist. Regional data shows that the conflict-affected Northern and Eastern districts lag behind the rest of Sri Lanka in terms of various demographic and health indicators. For example, the average maternal mortality ratio per 1,000 live births for 1995-96 in the five Northern districts of Jaffna, Kilinochchi, Mannar, Mullaitivu, and Vavuniya is 0.7 compared with a ratio of 0.2 for Sri Lanka as a whole (Department of Census and Statistics, 2002b).⁵ In terms of health services, the Northern and Eastern districts suffer from poor health infrastructure and a lack of health professionals and medical supplies (UNICEF, 2003). Healthcare in the affected regions is characterised by lower access, availability and quality compared with the rest of the country (Reilly et al, 2002). Water and sanitation, and other social sectors such as education, are also adversely affected. Children are especially vulnerable in these conditions. For example, chronic malnutrition is particularly high among children displaced by conflict (Save the Children, 2000). The school drop-out rate in the North and East is 16 per cent compared with the national average of 3.9 per cent, and underage combatant recruitment by the LTTE means that the release and reintegration of child combatants will be a priority in a post-conflict environment (UNICEF, 2003).

Such negative disparities in health and social indicators between the Northern and Eastern provinces and the rest of the country almost wholly date from after the start of continuous insurgency in 1983. Prior to 1983, most of the Northern and Eastern districts reported above average indicators for health, education and general living standards. This implies that if it were not for the conflict, the good health indicators in the rest of the country should have been replicated throughout the island. In this paper we present data at the national level only. We note if districts affected by the conflict are omitted from the national figures.

2. Sri Lanka's health achievements

Figure 2 illustrates Sri Lanka's demographic transition since 1900.⁶ Figure 3 focuses on trends in infant and maternal mortality.⁷ Table 1 shows the increase in life expectancy at birth that has accompanied the trends, and Table 2 shows the fall in the total fertility rate.⁸ As can be seen from the figures, mortality decline began as early as the 1920s, with rapid falls occurring during the 1940s and 1950s, and the secular downward trend being sustained thereafter. Caldwell (1986) refers to the years 1946-53 as Sri Lanka's 'breakthrough' period, a phase of only seven years during which infant mortality fell by 50 per cent, maternal mortality by 68 per cent, and over a decade was added to life expectancy.⁹ During the 1960s to the mid-1970s the infant mortality rate levelled, but then resumed its decline from the late 1970s. Sri Lanka's infant mortality rate is currently 14 per 1,000 live births (Department of Census and Statistics, 2002a).¹⁰ This rate compares with an average of 76 for low-income countries, 33 for lower middle-income countries, 28 for upper middle-income countries and six for high-income countries (World Bank, 2002).¹¹

Figure 2. Sri Lanka's demographic transition, 1900-2000

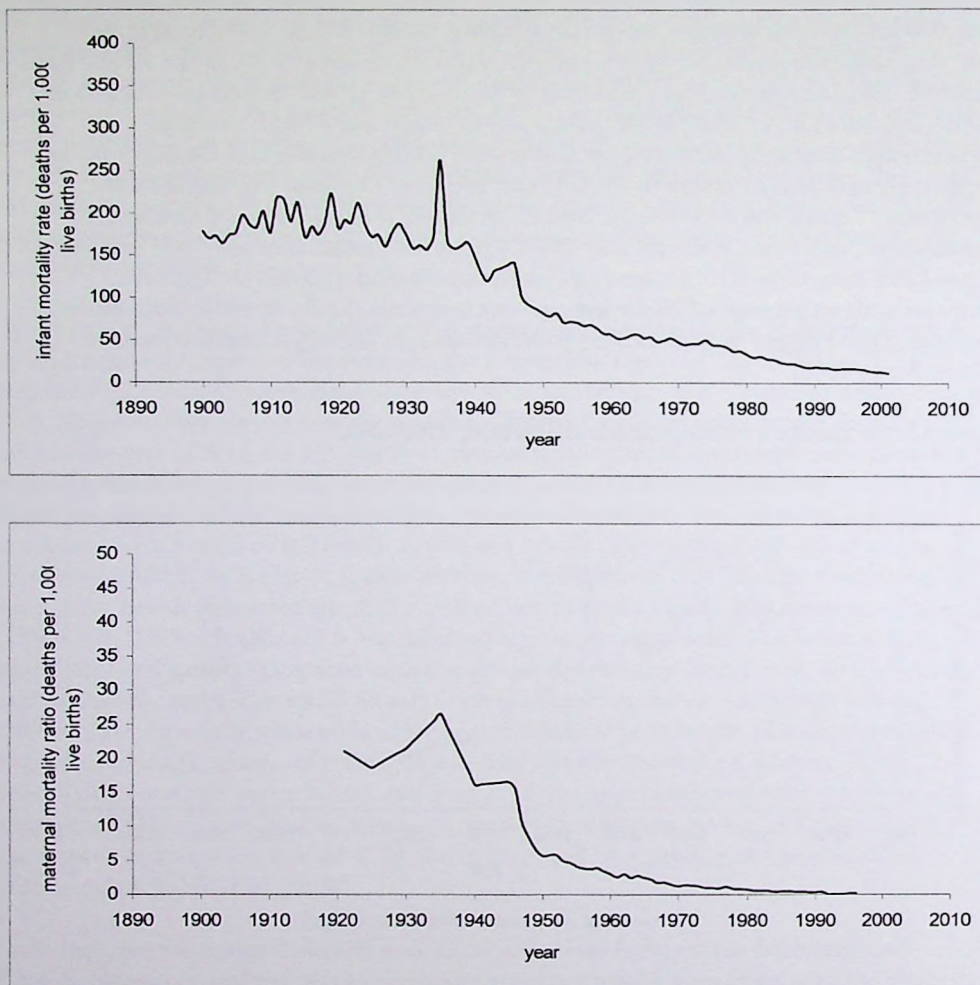


Sources: Anand and Kanbur 1995; Department of Census and Statistics website accessed at www.statistics.gov.lk

The child mortality rate for those under five years of age has also continued its decline in recent years; the Demographic and Health Survey 2000 indicates that during the 1990s it fell from 27 per 1,000 live births to 15 (Department of Census and Statistics, 2002a). In the mid 1990s, the maternal mortality ratio was 0.2 per 1,000 live births (Department of Census and Statistics, 2002b). Life expectancy in Sri Lanka is now 71 years for males and 75 years for females (Department of Health, 2001) and total fertility is below replacement level, at 1.9 (Department of Census and Statistics, 2002a). Many commentators point out that these overall achievements do not mask large disparities in progress between rural and urban location or between different population groups (Hsiao, 2000; Rannan-Eliya et al, 2000). One exception is the significantly higher

mortality experienced by plantation estate workers producing products such as tea, rubber and coconut, although recently this has also been declining.¹²

Figure 3. Infant mortality rate and maternal mortality ratio, Sri Lanka 1900-2000



Note: Between 1921 and 1945, the maternal mortality ratio trend is based on linear interpolation between values at 1921, 1925, 1930, 1935, 1940, and 1945. For 1945 onwards, annual values are plotted.

Sources: Anand and Kanbur 1995; Department of Census and Statistics website accessed at www.statistics.gov.lk

Table 1. Trend in life expectancy, Sri Lanka, 1946-2001

	Life expectancy male	Life expectancy, female
1946	43.9	41.6
1953	58.8	57.5
1963	61.9	61.4
1967	64.8	66.9
1971	64.2	67.1
1981	67.8	71.7
1991-1996	69.5	74.2
1996-2001	70.7	75.4

Source: Department of Health 2001

Table 2. Trend in total fertility rate, Sri Lanka, 1963-2000

	Total fertility rate
1963	5.0
1974	3.4
1981	3.7
1982-1987	2.8
1988-1993	2.3
1995-2000	1.9

Source: Department of Health 2001.

3. Development of the public health system in Sri Lanka

Most writers agree that government inputs into the health sector have been decisive in Sri Lanka's health achievements both prior to and during the 'breakthrough' period, and subsequently. The early expansion of public health interventions gave increasing emphasis to preventive measures. Cholera was contained through quarantine measures and sanitary improvements, major infectious diseases like smallpox and plague were brought under control through vaccination programmes, and health education campaigns helped reduce hookworm (Caldwell, 1986; Gunatilleke, 2000). In 1926, preventive and curative services were amalgamated under the Ministry of Public Health and the first health unit staffed with a physician, nurses, midwives, and a sanitary inspector was established. The devastating malaria outbreak in 1934-35 stimulated plans to expand health units across all rural areas and, following the end of the Second World War, a dense but well-dispersed network of health facilities was developed.¹³ These have been organised as an effective health referral system, ranging from maternity homes and dispensaries at the lower levels to sophisticated teaching and national hospitals at the top (Rannan-Eliya et al, 2000). Table 3 shows the growth of public sector health infrastructure since the early twentieth century. The rapid extension in public health facilities meant that, by 1950, Sri Lanka was already enjoying a higher bed-to-population ratio and was providing more hospital admissions per capita, than any other country in South or South-East Asia in 2000, except Singapore and Malaysia (Rannan-Eliya, 2001a).

Newly available health technologies were also embraced. For example, Sri Lanka's campaign against malaria through DDT spraying (and later through the use of malathion) is well known, and the debate about its contribution to total mortality decline during the 'breakthrough' period has been particularly vigorous.¹⁴ The attention given to maternal and infant healthcare early in the twentieth century was further enhanced mid-century. Household visits by health workers to identify pregnant women and encourage their referral for antenatal services and institutional delivery assisted by trained midwives, and to provide care and immunisation of their newborns, expanded. Gunatilleke (2000) states that by 1951, 50 per cent of births already occurred in medical institutions or with the care of trained personnel. A World Bank mission to Sri Lanka in 1952 noted the growing demand for institutional childbirth, saying 'Practically everywhere one goes, be it a provincial, district, or rural hospital or maternity home, there are a large number of waiting maternity patients and like other hospital cases they are fed and treated free of charge' (IBRD, 1952, p. 397, cited in Pathmanathan et al, 2003). In 1953 public healthcare was made freely available to the entire population. In 1968, Sri Lanka's (non-coercive) family planning programme was operationalised with the establishment of the Family Health Bureau.

Authors argue that the dynamism of public health intervention slackened somewhat in the 1970s and 1980s, as from 1977 the government progressively implemented reform measures aimed at liberalising the economy and confronted fiscal pressures (UNICEF, Colombo, 1988; Drèze and Sen, 1989; World Bank, 1998). In 1987, following the passing of the 13th Amendment to the Sri Lankan constitution, responsibility for lower-level health services was devolved from the central Ministry of Health to eight Provincial Councils, each of which established its own Provincial Health Ministry (Hsiao, 2000). From the 1960s, Sri Lanka also witnessed the growth of a private health sector, especially

Table 3. Growth of public health facilities and personnel, Sri Lanka, 1926-2001

	1926	1930	1935	1940	1945	1950	1955	1960	1965	1970	1975	1980	1984	1988	1994	1998	2000	2001
No. of beds *	8089	9477	11893	11992	15650	19959	24821	29816	35167	37735	39518	42275	43877	44454	49577	53507	57027	57197
No. of hospitals	98	112	112	126	153	263	274	289	296	326	345	380	408	413	415	469	558	498
No. of maternity homes	-	-	-	12	38	107	107	108	72	82	103	104	93	35	75	-	-	-
No. of central dispensaries	543	595	632	632	260	2340	283	283	292	332	355	339	336	350	370	395	404	-
No. of doctors	285	341	339	404	514	674	952	1173	1494	1932	2118	2055	2239	2316	4047	6427	7963	8384
No. of assistant MPs	380	409	416	469	548	676	990	1107	1242	1205	1068	1018	984	1100	1357	1324	1349	1343
No. of nurses	437	605	618	744	1165	1387	2210	3232	3642	5542	5685	6834	7400	8317	13060	14621	14716	15797
Population per bed	609	554	472	534	425	385	359	332	317	332	342	349	355	371	360	351	339	327
Population per health worker	4472	3876	4084	3693	2986	2805	2100	1795	1750	1442	1522	1489	1509	1406	968	836	806	734

*Notes: *excludes maternity homes.*

Sources: for data to 1994: Gunatilleke 2000; for 1998 onwards: Department of Census and Statistics 2002b.

for out-patient care.¹⁵ Private practitioners consist largely of public sector staff working in a private capacity outside their official working hours, as well as full-time private practitioners. Out-of-pocket fees fund private services, and the role played by health insurance is small.¹⁶ Rannan-Eliya et al (2001) estimate that between 50 and 70 per cent of the private sector case load is dealt with by government doctors acting in their private capacity. A recent survey of full-time private doctors undertaken by the Institute of Policy Studies in 2000 (Rannan-Eliya et al, 2003) indicates that there are now between 600 to 650 private practices employing about 1,200 physicians who provide about 15 per cent of annual out-patient consultations. Table 4 shows the trends in public and private sector services during the 1990s. By the late 1990s, it can be seen that while the two sectors divide out-patient care almost equally, in-patient provision continues to be overwhelmingly dominated by the public sector, the latter providing 94 per cent of such care.¹⁷

Table 4. Trends in public and private provision of health services, Sri Lanka, 1990s

	1990	1992	1994	1996*	1997
<i>Public sector</i>					
In-patient admissions (thousands)	2,533*	3,023	3,204	3,339	3,454
Out-patient visits (thousands)	28,401*	36,827	35,276	35,348	39,503
<i>Private sector (total)</i>					
In-patient admissions (thousands)	117	135	153	176	204
Out-patient visits (thousands)	30-34,000	32-35,000			32-36,000
<i>Private sector (hospital)</i>					
In-patient admissions (thousands)	117	135	153	176	204
Out-patient visits (thousands)	568	810	986	1,502	1,617

*Note: *excludes some districts in Northern and Eastern provinces.*

Source: Hsiao 2000.

3.1. Other interventionist policies and factors facilitating Sri Lanka's health achievements

Before we review the evidence on the causal links between Sri Lanka's public health system and its health achievements and examine specific characteristics of the public healthcare system in more detail, it is worth noting that public intervention in Sri Lanka has not been confined only to the health sector but has been multisectoral in nature. This point is important because the broad scope of government support in Sri Lanka is argued to have significantly enhanced social progress via positive synergies between different sectors of intervention (Gunatilleke, 1985; Alailama and Sanderatne, 1998). Government intervention in education has been active since before independence. A major expansion of schools in the 1930s and 1940s, and the enactment of free education in 1947, meant that literacy rates for the population aged five and above increased from 58 per cent in 1946 to 65 per cent in 1963 (Gunatilleke, 2000). Female education has increased rapidly, and 77 per cent of (ever married) women in Sri Lanka now have above primary schooling (Department of Census and Statistics, 2002a). Although gradually eliminated during the 1980s, the Sri Lankan government was also noted for its free or heavily subsidised

distribution of rice, which provided a minimum consumption level for the poor (Drèze and Sen, 1989).

Interactions between these interventions and those in the health sector have been beneficial. For example, in many developing country contexts, female education has been shown repeatedly to have a strong depressing effect on child mortality and fertility.¹⁸ These relationships are present in the Sri Lankan context, indicating that in addition to the direct benefits of schooling that children gain from a positive government educational policy, they also benefit from their mothers' education. Table 5 shows that the under-five mortality rate is over 30 per 1,000 live births among mothers with no education or only primary schooling, and less than 20 among mothers with above primary schooling (Department of Census and Statistics, 2002a). Evidence suggests that this relationship exists because educated women are better able to deal with their children's illness episodes; they are more likely to take them to modern health facilities for treatment, follow health providers' instructions carefully, and take their children back if medication does not seem to be working. For Sri Lanka, writers also emphasise links between female education and women's use of healthcare for themselves.¹⁹ Gunatilleke (2000) comments that the associations between health and education have contributed to the country's intrinsic capacity for progress, stating that 'gains in health and education keep compounding even during periods of economic decline because they have created institutions, a knowledge base, and attitudinal changes that are all conducive to further progress'.

Table 5. Under-five child mortality rates by educational level of mother, Sri Lanka, 2000

	Under five child mortality rate(per 1,000 live births)
No schooling	(31.8)
Primary	33.3
Secondary	18.8
G.C.E (O/L)	14.5
G.C.E. (A/L) and higher	13.8
All educational levels	20.8

Notes: the child mortality rates are for the ten-year period preceding the survey. Figures in parentheses are based on fewer than 500 cases.

Source: Department of Census and Statistics, 2002a.

In addition to the government's crucial role in expanding the supply of health and educational facilities, factors within Sri Lankan society have fostered a high level of demand for such services and have therefore enhanced receptivity to them (Caldwell, 1986; Caldwell et al, 1989). Historically high levels of women's autonomy, and interest in education for girls as well as boys, have been important drivers in the use of government-led supplies. Female children in particular are likely to have benefited from Sri Lanka's relative gender equality; the country is noted for having significantly lower son preference than its South Asian neighbours. Unlike in these countries little girls in Sri Lanka are less likely to die in infancy and early childhood than boys and, similarly, anthropometric indicators of health do not indicate gender bias against females in the allocation of resources such as food and healthcare (Abeykoon, 1995).

The high level of demand for and receptivity to publicly provided social services have also facilitated a broad social consensus as to Sri Lanka's priorities, both among successive governments and among the general population (Alailama and Sanderatne, 1998). Moreover, Sri Lanka's competitive democratic political system and universal adult franchise has enabled these priorities to be translated into actual government policy.²⁰ In fact, in 1928 the Donoughmore Commissioners specifically advocated the franchise of women as well as men on the grounds that political pressure from women was required to make health services, particularly those implicated in lowering infant mortality, a priority (Rannan-Eliya, 2001a). Rannan-Eliya (*ibid*) further asserts that 'the introduction of universal franchise is the single most important determinant of subsequent social policy in Sri Lanka, and its health achievements. It led rapidly to the establishment of comprehensive health services throughout the island in response to electoral demand, as well as the introduction of universal free primary and secondary education'. Rannan-Eliya goes on to explain that electoral pressures reflecting the public preference for equity and universalism of access have influenced certain characteristics of the Sri Lankan public health system. Such characteristics help account for the system's success, and are examined in more detail below.

3.2. Evidence on the causal links between Sri Lanka's health achievements and the public healthcare system

While the temporal connection between Sri Lanka's health achievements and government intervention in the health sector seems clear, establishing a direct causal relationship between the two is more complex, and during the 1980s in particular, was the subject of a great deal of analysis. There now exists much empirical work supporting such a causal relationship. Some such studies employ a 'cross-country' approach that attempts to identify whether Sri Lanka is an outlier in terms of its social achievements and to explain its relative position in terms of public intervention (see for example the debate between Bhalla and Glewwe (1986) and Bhalla (1988), Isenman (1980; 1987) and Sen (1981; 1988)). Recent contributions to this literature include Hertz et al (1994) and Shiffman (2000).²¹ In the former analysis, Sri Lanka remains a positive outlier in the sample in terms of its rates of infant and maternal mortality and life expectancy, even when variables relating to the availability of medical personnel and hospital beds, sanitation, education, and wealth are included in the regression. Hertz et al attribute this result to the government's multisectoral interventionist approach and argue that the resulting interactions between different interventions are impossible to capture statistically. The absence of variables that adequately capture Sri Lanka's facilitating factors – such as women's autonomy and political processes – may also be relevant.

Another approach is to use econometric analysis of Sri Lankan time-series data. For example, Anand and Kanbur (1995) find that for the period 1952-81 income growth alone would not have achieved Sri Lanka's positive health outcomes; public intervention has had a significant effect. Rannan-Eliya (2001b) incorporates Sri Lankan time-series data for the period 1947-98 with data from four other countries with similar healthcare systems to form a panel data set.²² Having controlled for income growth, he finds a government health spending impact that is larger than that found in previous studies for Sri Lanka and for other countries, and argues that this result may indicate the particular value of the specific health strategies pursued in these five countries.²³ In all these studies, public intervention in the health sector is shown to have a positive impact on the level of infant mortality, consistently indicating that children have benefited from the government's pro-active policy.

4. What makes Sri Lanka's public healthcare system successful?

Having outlined the development of Sri Lanka's public health system, as well as the literature attributing a causal relationship between it and the country's health achievements, we now consider some of the characteristics of the system that have made it unusually successful. Why has Sri Lanka's public health system made such a difference? We discuss a number of characteristics in turn. Where appropriate, we focus on these aspects of the health system as they relate particularly to child and maternal health.

4.1. The public healthcare system as an equitable system

Equity applies to different aspects of the healthcare system. Writers note that Sri Lanka's system is equitable in several respects and that its equitable nature contributes to its success. Equity of access and service delivery is one of the system's strengths and has been achieved via several mechanisms (Rannan-Eliya, 2001a). The expansion of a dense but well-dispersed network of health facilities has minimised travel costs to them. Hsiao (2000) states that most rural people live within 5-10km of a peripheral health facility. The proximity of health facilities has also meant that information and knowledge about their services and willingness to use them has spread quickly.

Other barriers to access have been avoided by providing services free of charge. Even in the face of resource constraints, user fees have remained an undesirable policy option partly because Sri Lanka's democratic system makes them politically costly (Hsiao, 2000).²⁴ The egalitarian values to which the political system responds has meant that equity of access has remained a priority, and given the government's resource constraints, it has been maintained by reducing unit costs (see more on this below). The rapid growth of a private hospital sector – which could have creamed off the best medical staff and left the poor with access to inferior services – has been discouraged by maintaining the technical quality of government facilities at a level similar to that offered by private practitioners.²⁵

All these mechanisms are associated with high levels of use of public health services. Moreover, the well-developed network of facilities means that poor rural populations benefit disproportionately, and access is more or less equal across income groups, gender, and location. In terms of reproductive healthcare for example, Sri Lanka's Demographic and Health Survey 2000 (Department of Census and Statistics, 2002a), indicates that 92 per cent of the births occurring in the five years prior to the survey took place in government hospitals or maternity homes. Compare this high proportion with the corresponding statistic for Sri Lanka's neighbour, India: data from India's 1998/99 National Family Health Survey shows that only 16 per cent of births occurring in the three years preceding the Survey took place in government medical institutions (IIPS and ORC Macro, 2000).²⁶ Sri Lanka's Demographic and Health Survey 2000 (Department of Census and Statistics, 2002a) also shows that only 0.3 per cent of last births in the five years preceding the survey occurred among mothers who had received no prenatal care. Only 1.1 per cent of last births that occurred among mothers in the estate sector were without such care. The 2000 Survey also indicates that 97 per cent of children under five years of age (excluding infants), with a Child Health Development Record issued by the health authorities, have complete immunisation coverage (Department of Census and Statistics, 2002a).²⁷

Commentators agree that the high level use of publicly provided reproductive health services reflects the fact that the government successfully provides mothers with integrated and convenient maternal and child health, family planning, and infant care services of acceptable quality (Somanathan and Jayawardhane, 2001). These services include visits to pregnant women at home and provision of postnatal follow-up for all mothers in the community. Rannan-Eliya et al (2000) argue that the public sector has inherent comparative advantages over the private sector in providing such services associated with economies of scale in the logistics involved. The provision of these services and their widespread use have clear positive implications for both maternal and child health.

Sri Lanka's public healthcare system is equitably funded. It is financed largely by indirect taxation, which has been found to be mildly progressive (Rannan-Eliya, 2001a). Redistribution is further enhanced because it is the poorer income groups that benefit most from public healthcare services: Hsiao (2000) shows that the poorest income quintiles receive a larger share of the benefits of taxation-funded health expenditure than do the richest quintiles.²⁸ Out-of-pocket expenses to private healthcare providers increase monotonically with income (Rannan-Eliya, 2001a). Sri Lanka has not achieved this redistributive effect by attempting to explicitly target or means-test access to public health services (ibid). Such services are available to the entire population, and exist alongside a private health sector of similar technical quality. We noted above that the private sector mainly provides out-patient care, while there continues to be a near public sector monopoly in the provision of in-patient services. This healthcare structure enables wealthier patients both to self-select out of the public sector for out-patient care in response to the private sector's better quality in terms of aspects such as waiting times and overcrowding, but to continue to benefit from and support the public sector for in-patient care. Pro-poor targeting is therefore implicit, but is much more effective than that achieved in most other developing countries. This point is clearly shown in Table 6 on the relative distribution of public health spending by the poorest and richest income quintiles for a cross-section of countries.²⁹

Table 6. Distribution of public health spending by the poorest and richest income quintiles, various countries, 1980s and 1990s

		Poorest quintile	Richest quintile
Sri Lanka	1991	30	9
Jamaica	1989	30	9
Malaysia	1989	29	11
Hong Kong	1989	27	16
Ireland	1987	27	15
Bangladesh	1996	17	25
Brazil	1985	17	42
Egypt	1995	16	24
Kenya	1993	14	24
Indonesia	1989	12	29
Vietnam	1992	12	29
Ghana	1992	11	34

Note: Note the similarities between Sri Lanka, Jamaica, Malaysia, Hong Kong, and Ireland - see endnote 29.

Source: Rannan-Eliya 2001a.

These characteristics indicate that equity of access and pro-poor redistribution are important elements in Sri Lanka's healthcare system success. However, Rannan-Eliya (2001a) points out that both are rejected by the WHO's health system assessment framework (WHO, 2000), suggesting that international health policy advisers give insufficient recognition to them.³⁰ The Sri Lankan experience suggests that ensuring universal access to public health services makes for their high utilisation among all population groups, and together with a complementary private healthcare system, effectively redistributes health spending and health services towards the poor without the need for explicit targeting (Rannan-Eliya, 2001a).

4.2. The public healthcare system as an efficient system

Sri Lanka's public healthcare system has developed without mobilising resources beyond what most other developing countries spend, and at significantly less cost than the World Bank's 'minimum cost-effective package' of basic preventive and curative health services (World Bank, 1994). Total annual public spending on health has generally averaged less than two per cent of GDP, although Gunatilleke (2000) shows that in the second half of the 1950s and the 1960s, expenditure was slightly more than two per cent. Government intervention in other areas, including education and food subsidy provision, has tended to be higher than that in health. Table 7 compares Sri Lanka's recent health expenditure as a proportion of GDP with that of a cross-section of other countries of comparable life expectancy. Sri Lanka has not resorted to other methods of financing public health services, such as user fees, or attempted to restrict access to healthcare.

Table 7. Public health expenditure as a percentage of GDP, various countries, late 1990s

	Life expectancy	Public health expenditure (% of GDP)		Life expectancy	Public health expenditure (% of GDP)
	2000	1998		2000	1998
Croatia	73.8	9.5*	Argentina	73.4	2.4*
Slovakia	73.3	5.7	Tunisia	70.2	2.2
Columbia	71.2	5.2	China	70.5	2.1*
Estonia	70.6	5.1*	Albania	73.2	2.0
Poland	73.3	4.7	Thailand	70.2	1.9
Lithuania	72.1	4.7*	Mauritius	71.3	1.8
Bulgaria	70.8	3.9*	Sri Lanka	72.1	1.7*
Oman	71.0	2.9	Paraguay	70.1	1.7
Mexico	72.6	2.6	Ecuador	70.0	1.7
Venezuela	72.9	2.6	Malaysia	72.5	1.4

*Note: *public health expenditure data refer to 1999.*

Source: United Nations 2002a

Instead, the Sri Lankan government has managed to achieve and maintain extensive access to and use of healthcare facilities by continuously attaining efficiency gains in the operation of facilities. Using personnel and infrastructure more intensively has lowered unit costs, and the country is noted for its efficient use of facilities. For example, a recent comparison of total national per capita expenditure on reproductive health services in Sri Lanka and Egypt illustrates that despite lower total expenditure levels in

Sri Lanka than Egypt, utilisation of services is higher in the former country (Rannan-Eliya et al, 2000).³¹ Once standardised in 1995 US dollars, Sri Lanka is estimated to have spent \$4.94 per capita in 1997 and Egypt is estimated to have spent \$5.29 per capita in 1994/95. The public sector component of this expenditure is only slightly higher in Sri Lanka than in Egypt. Yet in Sri Lanka for example, 92 per cent of women give birth in government medical institutions (Department of Census and Statistics, 2002a). This proportion compares with 56 per cent in Egypt.³² Rannan-Eliya (2001a) comments that 'Sri Lanka's unit costs are considerably below those achieved in virtually all developing countries. These low unit costs are achieved through high staff productivity, high throughput rates, and correspondingly low lengths of stay'. He notes that this high productivity is not a static characteristic, but is a product of an institutional system that is able to achieve sustained improvements in performance over time. Specific explanations of such ability are poorly understood, but possibilities include a strong and shared institutional culture of serving the people as well as significant non-financial incentives among staff that favour good performance.

This aspect of Sri Lanka's public healthcare system is important because it illustrates that centrally administered government systems can be inherently capable of continuous productivity improvements, and that this characteristic enables such systems to maintain universal access to healthcare (Rannan-Eliya, 2001a). Further investigation of the institutional and organisational factors facilitating such improvements in the Sri Lankan system would provide valuable information about possible ways to improve the performance of public health providers in other developing countries.

4.3. The public healthcare system as an insurance mechanism against catastrophic³³ illness

Sri Lanka's public health system devotes an unusually high proportion of funds to providing freely available in-patient hospital care. Using national health accounts estimates for 1996, Hsiao (2000) shows that 69 per cent of government health spending is on government hospitals. Table 4 shows that in-patient care is overwhelmingly provided by such hospitals. Based on arguments about cost-effectiveness of resource allocation, this strategy has been persistently criticised by international bodies, including the World Bank. Their advice has been to reallocate money to non-hospital, out-patient care because such treatments are typically more cost-effective (ibid). However, writers argue that cost-effectiveness of resource allocation has never been the underlying objective behind the Sri Lankan government's use of funds. Instead, the government's orientation towards hospital care reflects a political concern to meet public demand for such services in a situation where demand has risen faster than the capacity to pay for private services and the supply of private providers, and where there is major market failure in health insurance for in-patient care.³⁴ The facilitating role of Sri Lanka's political system is important here, and Hsiao (2000) comments that 'the state responded to aggregate social preferences as expressed through the ballot box, when it emphasized hospital care and not to some technical view of what was optimal or rational'.

In the Sri Lankan context therefore, the government recognises that, irrespective of its cost-effectiveness or indeed its impact on health, there are strong insurance arguments in favour of committing substantial public funds to provide in-patient care. Such a commitment maximises marginal social welfare and is pro-poor because the less well-off are unlikely to be able to afford either private sector care or insurance for hospital treatment, and in the absence of publicly provided services, would struggle to cope with

illness costs.³⁵ In the area of reproductive healthcare, Rannan-Eliya et al (2000) point out that a large proportion of government resources is devoted to in-patient delivery care and that this is reflected in the fact that most mothers give birth in an institution. As we have seen from the Demographic and Health Survey 2000 (Department of Census and Statistics, 2002a), most choose to do so in a public institution rather than incur the expense of delivering in a private hospital. To the extent that fertility is higher among poorer women, the public provision of free delivery services benefits them disproportionately, protecting them from either going without care or having to pay for it. In the light of the Sri Lankan experience, Rannan-Eliya (2001a) notes that the WHO's health system assessment framework (WHO, 2000), that recognises only health goals as being health system goals, is likely to result in a seriously deficient view of health policy that may discourage interventions that are pro-poor in a much more general sense. One policy implication that emerges from this characteristic of Sri Lanka's public healthcare system is to ensure delivery of public sector healthcare, particularly those aspects of care whose provision represents a form of social insurance for the poor.

4.4. Complementarity between the public and private healthcare systems

We have already commented on some aspects of the complementarity between the public and private healthcare systems in Sri Lanka. We have mentioned that the public system focuses on in-patient care, while the private emphasises out-patient services, and that this division, together with the maintenance of similar levels of technical quality but differentials in consumer quality across the two sectors, makes for a pro-poor redistributive effect. The latter is achieved as public facilities are available to everyone, but wealthier patients self-select out of the public system for out-patient care, although continue to use and support it for in-patient services.

We have already noted above that in terms of reproductive health practices, most mothers in Sri Lanka choose to give birth in government institutions, so it is important that the public sector can deliver such services. We have also noted that infant and child health services are also predominantly provided by the government sector, indicating that children's health benefits from a well functioning public healthcare system. On the other hand, general gynaecological care is largely privately provided and most women choose to consult a private practitioner for such care; it is less expensive than assistance at childbirth, and is more suited to out-patient services as it tends to be client-initiated and individually-specific (Rannan-Eliya et al, 2000). In addition, in such cases patients may value quality aspects such as privacy and confidentiality that they may feel are more forthcoming from a private practitioner.

The Sri Lankan experience therefore indicates that reproductive healthcare is not solely dependent on public health services, and health policy in general must take account of the varied choices women make when accessing care. That they may prefer to use the private sector for certain aspects of care, even when the public system is working well, means that attention should be given to its performance in addition to that of the public sector. Specifically, greater awareness should be given to the private sector's role in providing out-patient services. Rannan-Eliya et al (2003) note that this has not been the case in the World Bank's 2001 Poverty Reduction Strategy Paper for Sri Lanka, in which expansion of the private hospital sector is given more consideration as part of a poverty-reducing health strategy. The Sri Lankan experience calls forth the need for more data to

be collected on the private out-patient sector so that we are better able to understand its role.

Other aspects of complementarity are also significant, and contribute to the success of Sri Lanka's healthcare system as a whole. Rannan-Eliya (2001a) argues that the public healthcare system has played a crucial role in creating and maintaining quality in Sri Lanka's private healthcare system. This has occurred in several ways. Firstly, the early and widespread expansion of public health facilities has encouraged Sri Lankans to learn about and use modern health facilities, better enabling them to select appropriate providers, whether public or private. This has meant that although use of the private sector has grown, it has not involved the expansion of unqualified, informal providers that characterise this sector in many other developing countries. Hsiao (2000) provides survey data showing that only two per cent and 7.6 per cent of patients who reported themselves sick in 1996/97 consulted Ayurvedic practitioners in the government and private sector respectively.

Secondly, as we noted above, the majority of private sector health providers are government staff working in their private capacity outside official working hours. The government provides the opportunity of private practice to public sector doctors because it recognises their need to supplement their income as well as the role of the private sector in relieving pressure on the government system.³⁶ This structure means that most private sector practitioners are trained in the public sector and that the public sector is also able to retain their services.³⁷ Studies of the characteristics of full-time private general practitioners (GPs) indicate that they also provide quality services. Among his sample of private GPs and Ministry of Health providers taken during the mid-1980s, Varnam (1987) reports that the private providers were older and more experienced than the public providers and had all completed some post-graduate training in addition to the compulsory government service. He also comments that they spent longer with patients and were more likely to keep patient records, perform immunisations, and conduct tests. A recent survey undertaken in 2000 (Rannan-Eliya et al, 2003) confirms the existence of relatively high quality care among full-time private practitioners. It is important to note that this quality exists without regulation of the private health sector and in a situation where lack of capacity may make effective regulation difficult (*ibid*).

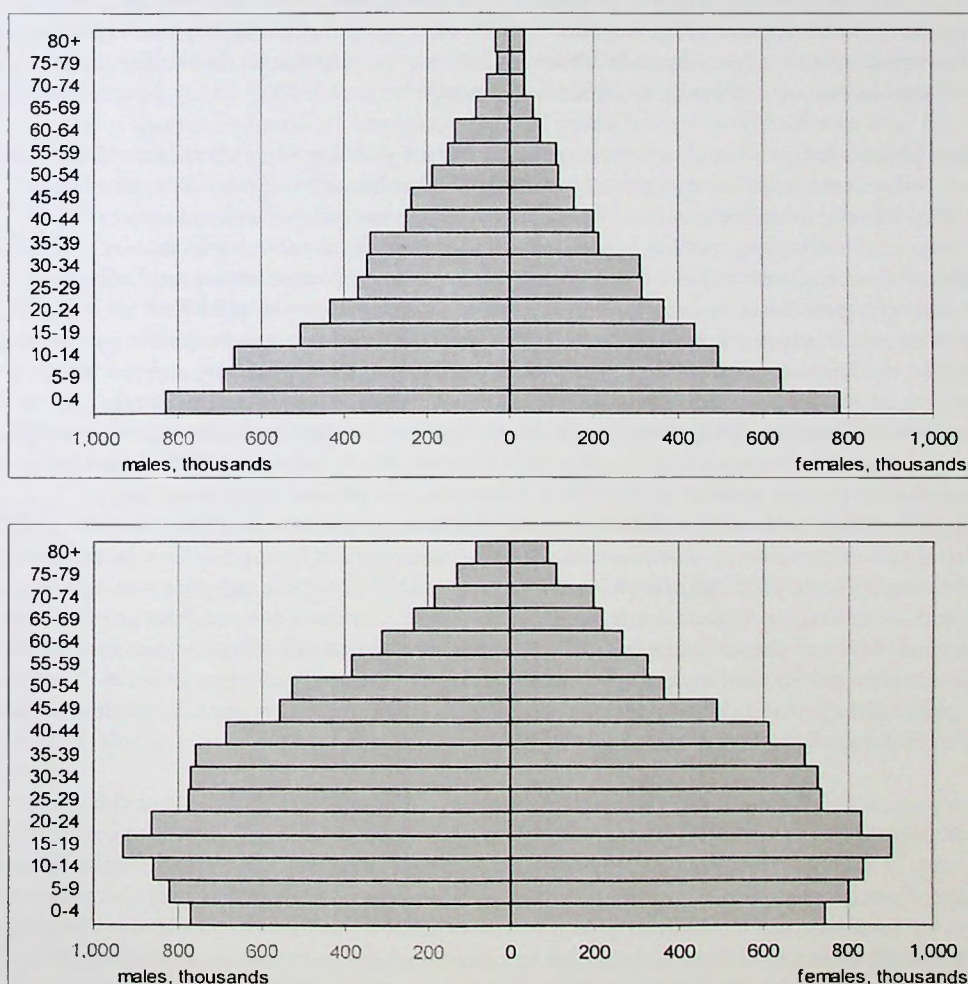
These aspects of complementarity between the public and private health systems in Sri Lanka indicate that a successful public system can indirectly bolster a high quality private system. The latter does not necessarily preclude the former, and should not only be advocated as an alternative to a failing public system (Rannan-Eliya, 2001a). A successful private health sector can then in turn contribute to the achievement of positive health outcomes. When a public health system works well, the two systems can be mutually reinforcing.

5. Current and future challenges facing Sri Lanka's public healthcare system

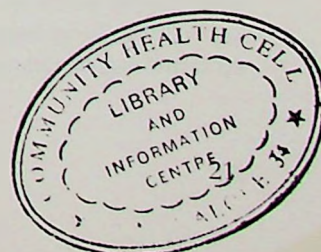
Sri Lanka's exceptional record in health achievements continues to hold true today. Nevertheless, the country now confronts various health and health policy challenges that will become increasingly testing in the near future. In this section, we briefly examine some of these challenges, and discuss their policy implications.

Sri Lanka's demographic success means that it now has a rapidly ageing population. The shift in the population age structure that reflects this ageing process is quite dramatic, and is illustrated in Figure 4.

Figure 4. Population pyramids, Sri Lanka 1960 and 2000



Source: United Nations 2002b accessed at <http://esa.un.org/unpp>



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According to United Nations data (United Nations, 2002b), in 1960 the population aged 60 and older already represented 5.7 per cent of Sri Lanka's total population. By 2000, this proportion had increased to ten per cent. In particular, the number of very elderly people, aged 80 years and older who are significantly more likely than the younger elderly to be chronically disabled or ill, is increasing rapidly in Sri Lanka. Hsiao (2000) comments that this ageing process will mean that, by 2010, Sri Lanka will be the third oldest country in Asia, after Japan and Singapore.

Epidemiological change is accompanying ageing, and chronic diseases associated with advanced demographic regimes, such as ischemic heart disease, cerebrovascular conditions, diabetes, and cancers are becoming more prevalent. For example, although data from individuals seeking treatment as in-patients in government hospitals shows that morbidity remains dominated by infectious conditions and injuries, it also shows a clear increasing trend in chronic disease cases (Department of Health, 2001).³⁸ At the same time, continued fertility decline will eventually mean that the ratio of the elderly to middle-aged women (the primary providers of informal, home-based care of the elderly in Sri Lanka) will decrease. Rannan-Eliya (1999) comments that Sri Lanka 'can expect to face a significant care issue from 2010 onwards (if not earlier) due to the decline in the relative numbers of women in the middle age groups'.

These processes have important repercussions for the public healthcare system. They raise issues about both the pattern of healthcare expenditure and the level of spending. Sri Lanka's system developed with an emphasis on the prevention and treatment of communicable diseases, but the epidemiological transition means that patterns of healthcare expenditure will have to become correspondingly more diverse and complex; for example, personnel and technology will have to be increasingly specialised and sophisticated. Such requirements are relatively expensive, and coupled with the increased demand for long-term care that accompanies the rise in chronic diseases, suggest the need for additional funding. The contraction of relative numbers of informal care providers will also probably result in an increasing need for government action to supply formal support services to help families care for their elderly relatives and to look after those elderly people without family (*ibid*). However, it is probably important not to exaggerate the impact that population ageing will have on increased healthcare costs (*ibid*). Limited available evidence to date for Organisation for Economic Co-operation and Development (OECD) countries (for example, OECD, 1998), suggests that the impacts of ageing on total national health expenditures are more limited than usually imagined. Nevertheless, Gunatilleke (2000) states that 'the low-cost health care system that was effective in dealing with the disease burden associated with communicable diseases will have to undergo a major reorientation and acquire new capacity to deal with these challenges'.

However, achieving such a reorientation is not easy. There is little political consensus on health sector reform and the shape it should take, and as yet little public pressure for reform. In addition, resource constraints persist. These constraints include financial ones. Relatively neglected sectors, particularly economic infrastructure, increasingly compete with the health sector for scarce public funds. Within the health sector itself, spending is increasingly required to maintain salaries at a high enough level to limit the mounting exodus of staff to the private sector, and to keep up with the sophistication of the growing private hospital sector (Hsiao, 2000). These issues raise questions about the capacity of the government to also provide sufficient funds to respond to epidemiological change. New financing options may have to be considered.

Constraints also relate to human capital, and Sri Lanka is increasingly confronting a shortage of specialist, nursing, and administrative and managerial staff at the same time as it is facing an over-supply of physicians (*ibid*). The latter is leading to concerns that increasing numbers of newly qualified, inexperienced doctors will be tempted to enter the private sector immediately, with dubious implications for quality of service. The mismatch in supply of different categories of staff also implies the need for a more coherent policy on the output of medical graduates, and the shortage of managerial personnel raises doubts as to the capacity of the system to plan, manage, and monitor necessary reform.³⁹ Lack of managerial capacity exists at both the central and provincial levels and this, together with the absence of coherent dialogue between the two levels about their respective responsibilities and commitments, makes for an environment that does not seem to be conducive to reform (*ibid*).

In addition to tackling the rise in chronic diseases associated with ageing and the epidemiological transition, Sri Lanka continues to face high levels of malnutrition. These high levels suggest that the country's health achievements have occurred among a population that remains frail. For example, despite Sri Lanka's impressive achievements in infant and child survival rates, and the benefits children experience from the provision of child-related public health services, it seems that children's health remains vulnerable in several respects. Sri Lanka's Demographic and Health Survey 2000 indicates that 17 per cent of children born in the five years preceding the Survey had low birth weight (Department of Census and Statistics, 2002a). This compares with 19 per cent in the 1993 Demographic and Health Survey (Department of Census and Statistics, 1995). In the 2000 Survey, 29 per cent of children aged 3-59 months were classified as underweight, compared with 38 per cent in the 1993 Survey (Department of Census and Statistics, 1995; 2002). Despite this improvement, Table 8 shows that Sri Lanka's percentage of underweight children is still much higher than that for any other country of comparable life expectancy for which data is available. Diarrhoeal diseases are still very common among children and have been recognised as one of the main factors adversely affecting growth and development in the early childhood years (Department of Census and Statistics, 2002a).

These indicators reflect continuing poverty in Sri Lanka, and point to the need for the government to foster participatory economic growth in addition to its long-standing emphasis on supplying pro-poor social services (Asian Development Bank, 1997).⁴⁰ They may also contribute to the rise in adult chronic and non-communicable diseases mentioned earlier: the Barker hypothesis, which has mounting evidence in its favour, argues that foetal undernutrition later predisposes healthy populations to higher rates of diabetes, heart disease, and many other chronic diseases. Sri Lanka may be particularly prone to this link between poor prenatal and childhood nutrition and adult chronic ill-health.

Finally, we note some of the issues that arise from the growth and increasing complexity of the private healthcare system in Sri Lanka. Given these trends, many writers recommend that the government moves away from its current levels of engagement with the private sector, to develop a coherent policy on the appropriate public-private mix of healthcare financing and provision that builds on the existing complementarity between the two sectors (Hsiao, 2000). Although, as we mentioned above, evidence suggests that the private sector generally provides reasonable quality services, and that the public system contributes to this feature, better regulation is also recommended because of its growing importance. However, as with other aspects of reform, writers question the

capacity of the government to undertake such initiatives (Russell and Attanayakae, 1997; Rannan-Eliya et al, 2003). Lack of routine data collection on, and regular consultation or co-ordination with, the private sector mean that policy-making is difficult. The legal basis for regulating the private sector is outdated and, even if renewed, the systems required for the effective registering of private practitioners as well as monitoring and enforcing their standards are not in place (Hsiao, 2000).⁴¹ Devolution from the centre to the provinces is again relevant, as it leads to confusion about which level is responsible for private sector regulation. Resource constraints also come into play, and the lack of financial and human capital necessary for effective policy implementation weakens the capacity for reform.

Table 8. Percentage of children aged less than five years who are underweight, various countries, 1995-2000

	Life expectancy	Underweight children as a % of all children aged less than 5 years
	2000	1995-2000*
Columbia	71.2	7
Oman	71.0	24
Mexico	72.6	8
Venezuela	72.9	5
Tunisia	70.2	4
China	70.5	10
Thailand	70.2	19
Mauritius	71.3	16
Sri Lanka	72.1	33
Paraguay	70.1	5
Ecuador	70.0	15
Malaysia	72.5	18

*Note: *data refers to the most recent year available during 1995-2000. Note also that although the figure on underweight children given in text for Sri Lanka from the 2000 Demographic and Health Survey is lower than the one in this table, it is still higher than any other country in the table.*

Source: United Nations 2002a.

Many of the health activists in Sri Lanka are fearful of the increasing privatisation of services and the reductions in social spending following the recent poverty reduction strategy discussions (Peiris, 2003). Recent research on the impact of reductions in education spending has shown a drop in literacy rates and attendance levels of girls especially in the north and east of the country (Save the Children UK, 2003). These changes may well be reflected in the near future in health outcomes if social investment continues to fall, as may occur with the drafting of the new poverty reduction strategies. Sri Lanka needs to be supported to implement its multisectoral approach to health so that it maintains good health outcomes and continues to lead the world in providing good health at a low cost. Interest will no doubt remain as to the progress and success of the reform process.

6. Conclusion

Sri Lanka is well known for its exceptional health achievements, and the role of government intervention in attaining these has been, and continues to be, a topic of great interest, both for Sri Lanka itself and for the policy lessons it offers to other countries, particularly in their efforts to lower infant and maternal mortality. All studies concur that the public healthcare system plays a crucial role in Sri Lanka's positive health outcomes, including those of children. However, the importance of both government intervention in other sectors and the beneficial synergies that result from such a multisectoral approach to service provision must also be acknowledged. Cultural and political factors that enhance the demand for government-provided services have proved essential, demonstrating the importance of an informed civil society in creating the demand for accessible and affordable services. The proportion of GDP spent on health provision and Sri Lanka's low income status demonstrate that a comprehensive health system can be achieved with comparatively modest resources.

We have argued that several characteristics of Sri Lanka's public healthcare system contribute to its success. Particularly notable has been its ability to provide universal access to health services, as well as its equitable and efficient funding. These features create a pro-poor redistributive effect in the provision of government health facilities, and help maintain high utilisation of them. Equity of access has remained a political priority despite resource constraints and periodic international pressure to adopt different models. It has been maintained over time by the lowering of unit costs. The large proportion of government health expenditure on in-patient hospital facilities works to further protect the poor by providing them with an insurance mechanism against the costs of illness.

The government health sector exists in tandem with a growing private healthcare sector, predominantly providing out-patient care. It seems that this complementarity of service provision, coupled with the maintenance of similar levels of technical quality across both sectors, means that even relatively wealthy patients still largely use the public sector for in-patient care, and therefore continue to support public provision of such care. The public health sector has also probably indirectly contributed to the quality of services offered by the private sector, which in turn increasingly play a role in Sri Lanka's health achievements. The Sri Lankan experience therefore demonstrates that public healthcare systems can work well, and that when this is the case, there can be a mutually reinforcing relationship between this sector and private health providers.

However, Sri Lanka also indicates that as demographic progress occurs, and the diversity of healthcare providers increases, health system reform becomes increasingly necessary. It is now perhaps within this context that the Sri Lankan case will continue to provide invaluable insights into health systems and how they can be made to work well.

6.1. Implications for policy

Sri Lanka's success in health provision must be seen in the context of the island's changing demographic structure, itself partly a result of the success of the healthcare system. However, notwithstanding the challenges posed by demographic change and other processes specific to Sri Lanka, the undoubted success of the Sri Lankan 'social model' begs the question of whether there are lessons to be learned that can be

applied to other countries, and that can be seen as alternatives to the standard Bretton Woods and WHO approaches.

The first point to note is that the system developed over a long period, and must be seen as endogenously developed – the government has not been so aid-dependent as to be obliged to follow the changing prescriptions of creditors and donors. In relation to this, the government and the public sector have been subject to popular and political pressures to provide services, and have responded. Many of these conditions do not apply to countries that have not yet achieved reasonable health indicators.

Nevertheless, the question arises as to whether the ‘social model’ may not in any case be a necessary condition for developing a working health service. The Sri Lankan model has developed at far lower costs (as a percentage of national output and in terms of costs per capita) than that proposed by the World Bank in its minimum health package, because it has emphasised efficiency and retention of good staff within a credible and responsive institutional structure – people of all incomes *want* to use public hospital facilities, while those who can pay, can use out-patient facilities provided by the private sector.

The impact of failed cost recovery policies are well documented in other countries. Failure in terms of reduced facility utilisation, inappropriate prescription practices and financial inefficiency, partly as a result of lack of facilities and reduced demand. Similarly, the divisions created by the combination of private sector, high quality provision for the rich and low quality provisions for the poor are apparent in many countries.

The present move in Sri Lanka towards reduced social spending (from three per cent GNP for education in 1990 to two per cent in 2001) is already having negative consequences in the education sector, including falling literacy rates and reduced attendance levels at school. If this trend continues, health outcomes will also be compromised.

The Sri Lankan case at the very least shows that countries would be well advised to consider the standardised policies proposed by the World Bank and the WHO with some scepticism before adopting them.

6.2. Recommendations

- The Government of Sri Lanka should continue to support public sector spending through the interim Poverty Reduction Strategy Paper and explore equitable measures to improve economic growth and reduce levels of malnutrition.
- The Government of Sri Lanka should begin to increase engagement with the private sector and increase government capacity for enhanced regulation and policy coherency.
- The World Bank should support further qualitative and quantitative research into the reasons why user fees combined with mechanisms to target the poor are not reaching the poor and why universal access results in pro-poor health outcomes.
- International donors should support (both financially and in terms of policy) the abolition of user fees while exploring pro-poor (equitable) alternative mechanisms to ensure universal healthcare provision.

- The World Bank should evaluate the impact of the investment policy outlined in 'Investing in Health' on access to healthcare for the poorest, and consider supporting the implementation of pro-poor policies as expressed in the OECD poverty and health guidelines.
- DFID and WHO should carry out a child-focused analysis of the impact of World Bank policies on health resource allocation for children, disabled and elderly people and use the findings to influence World Bank/International Monetary Fund policies and conditionalities.
- WHO and the World Bank should analyse the institutional and organisational factors which have enabled the centrally administered system of Sri Lanka to be capable of continuous productivity improvements, thus maintaining universal access to healthcare, in order to inform public health providers in other developing countries.
- WHO should apply lessons learned in Sri Lanka to the development of the WHO primary healthcare lens.⁴² International donors should explore the possibility of fully supporting five resource-poor governments to pilot Sri Lanka's approach for at least ten years, specifically looking at what the critical threshold for recurrent investment is, regarding the amounts of support, the time taken for gains to be made on statistical trends and the cost per person of these gains.

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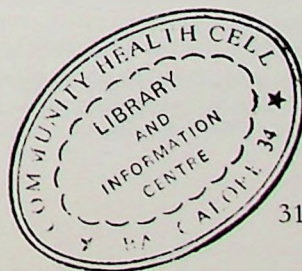
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Notes

¹ This means that the poorest 20 per cent of the population benefit more from public services than the wealthiest 20 per cent, who may choose to use private services but who still have to pay taxes.

² Although the United Nations Convention on the Rights of the Child (UNCRC) was not ratified until 1989, Save the Children UK's founder (Eglantine Jebb) established a set of rights for children which was eventually incorporated into the UNCRC.

³ Drèze and Sen (1989) also distinguish 'growth-mediated security' as a development option in which the state plays a major role in promoting social security by using the fruits of economic growth, either to directly provide services or to ensure participatory growth. They mention South Korea, Hong Kong, Singapore, Kuwait, and United Arab Emirates as following this route. They contrast both 'support-led security' and 'growth-mediated security' with 'unaided opulence', where wealth increases but is not used to secure widespread social progress. Brazil and Oman are examples of the latter.

⁴ Millennium Development Goal 4 is to reduce child mortality by two-thirds between 1990 and 2015. Millennium Development Goal 5 is to reduce maternal mortality by three quarters between 1990 and 2015. See www.developmentgoals.org

⁵ Calculated from data in 3.6 in Department of Census and Statistics, 2002b.

⁶ The demographic transition is the process of sustained decline in mortality and subsequently fertility, such that high and approximately equal death and birth rates eventually give way to low and approximately equal rates.

⁷ Sri Lanka is well known for having relatively reliable official vital statistics data, although Hsiao (2000) notes that there is likely to be some underreporting of the infant mortality rate. Maternal mortality statistics are probably more accurate than those in many other developing countries because of the close involvement of health providers in pregnancy, delivery, and the postpartum period.

⁸ Life expectancy is the average years of life expected by a hypothetical cohort of individuals who would be subject all their lives to the mortality conditions of a given period. It is expressed in years. The total fertility rate is the average number of children a hypothetical cohort of women would have at the end of their reproductive period if they were subject during their whole lives to the fertility rates of a given period and they were not subject to mortality. It is expressed as children per woman. A total fertility rate of 2.1 is known as the replacement level of fertility, required for a population to replace itself.

⁹ These calculations are based on official data available at www.statistics.gov.lk

¹⁰ This statistic is for the five years preceding the 2000 Demographic and Health Survey.

¹¹ For details on the country classification groups, see World Bank (2002).

¹² Rannan-Eliya (2001a) notes that the unfavourable mortality conditions of the estate population followed their disenfranchisement in 1947-48 and the related fact that they did not benefit from the expanding provision of government health services. The subsequent narrowing of the gap between the mortality conditions of the estate workers and the rest of the population followed the estate workers' increasing inclusion and re-enfranchisement in the political system in the mid-1980s. Following this, estate sector health facilities, historically provided separately by British-owned plantation firms, were brought under the supervision of the Ministry of Health in the 1990s. Rannan-Eliya comments that 'since increasing involvement of the government health system in estate areas has led to this improvement in health indicators, this should be interpreted as a positive indicator of the ability of the health system to reduce inequity in health outcomes. It also underlines the importance of a political system which gives voice to the socially marginalized'. We say more about both these points more generally later.

¹³ According to Rannan-Eliya (2001a), it was during the 1934-35 malaria outbreak that officials began to recognise that severe illness frequently bankrupted poor families, and that this eventuality could be avoided by providing free hospital care. We say more about this public health sector role later.

¹⁴ See the references to this debate in Caldwell (1986), Drèze and Sen (1989), and Gunatilleke (2000). See also Langford (1996). For the 1990s, Hsiao (2000) reports that more than half the case load of malaria mortality is in the North-Eastern province where the Ministry of Health faces difficulties in operating effectively. For evidence on the adverse impact of the conflict on maternal health indicators, see Simerka et al (2002). Although these studies indicate the unfavourable health impact of Sri Lanka's internal conflict, Hsiao (2000) also points out that such adverse effects are partly mitigated by the fact that the Ministry of

Health is able to enforce junior medical graduate postings there (as anywhere else) for a minimum time period.

¹⁵ As in most developing countries, there is a dearth of reliable data on the private healthcare system. The Private Clinic Survey carried out by the Institute of Policy Studies in 2000 helps fill this gap (Rannan-Eliya et al, 2003).

¹⁶ The exception to this latter statement is the financing of urban private hospitals (Rannan-Eliya et al, 2003).

¹⁷ Hsiao (2000) notes that the continued presence of the public sector in the provision of out-patient services contrasts with the much lower levels in other South and South-East Asian countries such as India, Bangladesh, Malaysia, Thailand and Indonesia.

¹⁸ Useful reviews of these relationships are Hobcraft (1993) and Basu (2002).

¹⁹ In this context, Caldwell (1986) cites the work of the anthropologist Edmund Leach (1971). Leach reports that despite the traditional role washerwomen had as midwives and authorities on pregnancy in the Sri Lankan village he studied, pregnant women quickly responded to the establishment of a modern health facility seven miles away, making the journey to the prenatal clinic and giving birth there. Caldwell concludes 'it is unlikely that such a complete break with the past would have happened in South Asian societies with lower female educational levels'.

²⁰ Britain granted internal self-rule to Sri Lanka in 1931 on the basis of representative government elected through universal franchise.

²¹ Unfortunately, the latter does not include Sri Lanka in its cross-section of countries. Nevertheless, regression analysis of the maternal mortality ratio illustrates that the strongest correlate is female enrolment in secondary school. Attendance at delivery by trained medical personnel is also important, as is the percentage of GDP spent on health services. In the multivariate model, variation in countries' income level is insignificant. The study finds that the relationship between female education and trained delivery attendance is strong (correlation coefficient is 0.709), suggesting that female education is an important driver in the use of healthcare. Moreover, the correlation between female education and income is only moderate, and that between trained delivery attendance and income even lower, confirming that it is education rather than income that is more important. These results are consistent with writers' arguments about the significance of the Sri Lankan Government's multisectoral approach to intervention.

²² The four other countries are Malaysia, Hong Kong, Mauritius, and Jamaica.

²³ For other references to the literature linking Sri Lankan Government intervention with health achievements see Drèze and Sen (1989).

²⁴ Facing serious fiscal constraints in 1971, the government reintroduced user fees having abolished them in 1951. However, as their reintroduction was not matched by commensurate increases in funds, they were abolished in 1977 (World Bank, 1998; Hsiao, 2000). Another funding option, the public financing of private providers, has never been seriously considered by the government (Hsiao, 2000).

²⁵ We discuss the complementarity between Sri Lanka's public and private health systems in more detail below.

²⁶ The Survey shows that 17 per cent of such births occurred in private institutions.

²⁷ Infants are excluded because they do not qualify for complete immunisation coverage before they reach their ninth month, at which age the measles vaccination is prescribed. Complete immunisation coverage refers to coverage by BCG, DPT, polio, and measles immunisations.

²⁸ However, Hsiao (2000) also remarks that evidence suggests that the degree of redistribution appears to have declined during the 1990s, although the reasons for this are unclear.

²⁹ Table 6 illustrates that the performances of Jamaica, Malaysia, Hong Kong, and Ireland are similar to that of Sri Lanka. Rannan-Eliya (2001a) attributes this to the fact that these countries' health structures are comparable to that of Sri Lanka, as just described in the main text. For more on the redistributive impact of Sri Lanka's health care system, see Rannan-Eliya et al (2001).

³⁰ The former characteristic is emphasised in the OECD country framework (Hurst and Jee-Hughes, 2001).

³¹ In this study, reproductive health services include pre- and postnatal care, care in childbirth, infant care, obstetric and gynaecological services, and family planning. It excludes services intended to treat STDs,

including HIV/AIDS. However, Sri Lanka has been shown to be relatively free of HIV/AIDS (Hsiao, 2000).

³² This figure for Egypt is taken from the 2000 Demographic and Health Survey, accessed at www.measuredhs.com. It measures the percentage of births in the five years preceding the Survey that took place in all types of health facility, so those that occurred in government institutions only are a smaller proportion.

³³ This relates to those illnesses which lead to high healthcare costs or hospitalisation. These costs often lead to the selling of capital assets thus increasing the poverty of the poorest.

³⁴ Health insurance contributes less than two per cent of total health sector financing in the in-patient sector and issues of affordability and adverse selection limit access among high-risk groups such as the poor and the ill (Hsiao, 2000).

³⁵ As Rannan-Eliya (2001a) points out, the costs of illness include not only the costs of treatment, but also costs incurred in caring for the patient as well as any loss of income experienced by both the patient and the carer.

³⁶ The opportunity to practise privately was revoked in the early 1970s, but restored later in the decade (World Bank, 1998). Government supports the private health sector in other ways as well; for example, the 1998 Budget contained incentives in the form of duty exemptions to private health investors for import of medical and dental equipment (ibid).

³⁷ Hsiao (2000) explains that although private sector incomes are substantially higher than public sector ones, most Ministry of Health staff remain in the public sector in order to receive necessary specialist training in the large government hospitals and to build up their reputations by rising through the ranks of the public sector.

³⁸ Government hospital records are the principal source of morbidity data in Sri Lanka.

³⁹ The former is complicated by the fact that it is the Ministry of Higher Education that, without reference to the Ministry of Health, determines the annual intake of medical students (Hsiao, 2000).

⁴⁰ Government interventions aimed at addressing the problem of malnutrition have included nutritional supplements to mothers and children and midday meals for school children (Gunatilleke, 2000).

⁴¹ The Nursing Homes Act of 1949 relates to the regulation of the private sector, but is outdated because it only applies to nursing homes and does not cover private GPs or government doctors practising privately.

⁴² WHO agreed to develop a primary healthcare lens, during the 57th World Health Assembly, through which economic and health policies could be viewed to determine their possible impact on health.

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