＜News from the Field＞

The Health Care System in Kerala
- Its Past Accomplishments and New Challenges -

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Abstract

Since the 1970s, the Indian state of Kerala has been internationally praised for its health achievements despite its economic backwardness. The 'Kerala Model for Development' is often referred to as an example for other countries to follow. These achievements are said to be based on the good performance of its health sector as well as its non-health sector.

However, the sluggish economy in the past decade has caused fiscal problems, and, mixed with the burden of an aging society and the expense of technology advancement, Kerala's health care system is facing new challenges. Increasingly, the public sector is unable to meet the demands for health care and the people of Kerala have responded to these inadequacies by increasing private sector use. This trend is not something to welcome. The burgeoning private sector raises household health care expenditures, making health a commodity purchased by 'ability to pay.' Many public facilities remain underutilized. Lack of regulations over the private sector does not guarantee the quality of care. Many medical graduates are enticed to work at the private sector, where no systematic training exists.

Three major suggestions may overcome these challenges. First, Kerala must invest in the public sector to revitalize the system. To achieve this, tax revenue must be increased. The government of Kerala is in the process of transforming its economic structure from cash crops to a more industrialized society by attracting new investments. Second, Kerala must streamline the system through decentralization. Kerala launched a radical decentralization policy in 1996, by which the health care system would be responsive to the local people. Third, Kerala must take a step to revamp the health care system in a way that the public and private sectors effectively cooperate and complement each other to meet the needs of the people.

Faced by these new challenges, the once-praised state is struggling to sustain the past achievements under the current economic climate, while concentrating on achieving the growth through development in the age of globalization.

(Accepted for publication, June 27 2003)

Key words: Kerala, India, health care system, private sector, decentralization

1. Introduction

Kerala, the southernmost state of India, has attracted international attention for its outstanding achievements in population health despite its economic backwardness. This paradox, often referred to as the 'Kerala Model of Development', has been studied since the 1970s, and has become an ideal model of development for many poor-income countries in the world.[1] Yet, since the 1990s, the stagnant economy and a wave of globalization has affected this once-praised state, and have forced Kerala to confront new challenges.

The author had an opportunity to visit Kerala for three weeks in January 2003 as part of a field trip organized by the Harvard School of Public Health and observe the health care system first hand, with the support of Government of Kerala and Achutha Menon Center for Health Science Studies (AMCHSS), a leading

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public health school located in Kerala. This field report, compiled through interviewing and literature reviewing there, will highlight the past achievements, describe its health care system, and underline the new challenges Kerala is currently facing.

Achievements in Health

Kerala is a state of about 38,000 square kilometers with 32 million people. Many of its health indicators surpass those of other Indian states; some are even on par with developed countries (Table 1). These incredible achievements have occurred despite its low economic status and low health expenditures (the total health expenditure in Kerala is estimated between US$12 to 45 per capita per year).[2] Key contributing factors to these outcomes are often attributed to its effective health care system, which has ensured high accessibility at low cost, and non-health sector contributions including wide-spread education, land reforms, public distribution of food, and housing.[3] In particular, the spread of education, which is exemplified by the high literacy rate of 90.9% (94.2% for male, 87.7% for female), compared to 65.4% in all of India,[4] and the health care system are believed to have contributed to the low infant mortality rate.[5] Dr. Thankappan of the AMCHSS illustrates this by saying, "The spread of education has obviously heightened people's health consciousness - which explains why 95% of pregnant women get antenatal care and 92% of deliveries are institutional (25% for the rest of India). Similarly the immunisation coverage of children between 12 and 24 months (diphtheria/pertussis/tetanus 89%, oral polio vaccine 89%, measles 77%, BCG 95%) is among the highest in the world."[6]

Although the present Kerala state was formed in 1956, the good health status of the population had existed prior to its foundation.[3] The cause behind this pre-existing high health status may be explained by the fact that traditional medicine, or ayurveda, was so prevalent that people were used to approaching caregivers instead of relying on self-treatment, and erstwhile maharajas took initiatives to provide education and health care.[7]

Kerala has also attracted attention for being the first state in the world to democratically elect the communist party for its government,[8] and some may consider that this unique fact has played a major role in achieving the excellent health outcomes. However, one must be cautious in evaluating this influence on health. First, apart from the formation period in the late 1950s, Kerala has had no single party governing the state. Instead, a number of parties, predominantly led by two major parties, radical left and center-right, were formed, merged, and split, and have alternately taken office as a coalition every five years.[4] Second, both parties' policies were focused on the need of the poor, including land reforms and the institution of social welfare measures.[9] Despite the fact that Kerala being known to be the first democratically elected communist government, other factors have played critical roles in achieving the high health status.

The Health Care System in Kerala

The health care system is considered to be the principal factor for attaining the high level of health status in Kerala.[3] From the formation of the state, health care provision was one of the governments' top priorities, and the system was developed in a way that incorporated both western and traditional medicine that was accessible to the people.

The health care facilities can be divided into three categories in view of service of care: allopathy (western medicine), ayurveda, and homeopathy, and three categories in view of the ownership: public, private and cooperative sectors (Table 2).[10] With respect to the allopathy, which comprises 36.9% of total facilities and 94.2% of total beds, the public sector owns 23.3% of the facilities and 39.5% of the beds, while the private sector owns 75.8% of the facilities and 58.3% of the beds.

Allopathic facilities of the public sector are systematically organized in rural areas, where 74% of the population resides, so that each facility with different

Table 1 Major health indicators for Kerala and India (1998)

Indicator	Kerala	India
Infant Mortality Rate (Per 1,000 live births)	15.6	71.6
Crude Birth Rate (Per 1,000 pop.)	18.2	26.4
Crude Death Rate (Per 1,000 pop.)	6.4	9.0
Life Expectancy at Birth: Male #	68.2	62.3
Life Expectancy at Birth: Female #	73.6	64.2

Refers to the period of 1996-2000
Source: Economic Review 2000, Government of Kerala

Table 2 Health Care Facilities in Kerala (2000)#

Sector	Number	%	Per 100,000 pop.	Beds	%	Per 100,000 pop.
Allopathy	5,654	36.9	17.8	115,792	94.2	363.7
Public Sector	1,317	23.3	4.1	45,684	39.5	143.5
PHCs	944	71.7	3.0	5,009	11.0	15.7
CHCs	105	8.0	0.3	4,202	9.2	13.2
Hospitals	143	10.8	0.5	31,819	69.7	99.9
Others	125	9.5	0.4	4,654	10.2	14.6
Private Sector	4,288	75.8	13.5	67,517	58.3	212.1
Cooperateive Sector	49	0.9	0.2	2,591	2.2	8.1
Ayurveda	5,719	37.3	18.0	5,233	4.3	16.4
Public Sector	792	13.9	2.5	2,604	49.8	8.2
Private Sector	4,922	85.0	15.5	2,595	49.6	8.2
Cooperateive Sector	5	0.1	0.02	34	0.6	0.1
Homeopathy	3,676	24.0	11.6	1,479	1.2	4.7
Public Sector	555	15.1	1.7	970	65.6	3.1
Private Sector	3,118	84.8	9.8	394	26.6	1.2
Cooperateive Sector	3	0.1	0.01	115	7.8	0.3
Others	290	1.8	0.9	418	0.3	1.3
Private Sector	290	100	0.9	418	100	1.3
State Total	15,339	100	48.2	122,922	100	386.1

# Figures concerning the private sector correspond to the year 1995
PHCs = Primary Health Centers, CHCs = Community Health Centers
Source: Varathrajan D, et al. *Idle Capacity in Resource Strapped Government Hospitals In Kerala*, Achutha Menon Center for Health Science Studies, 2002

Table 3 Urban-Rural Disparity in Health (1992)

Indicator	Kerala	India
Infant Mortality Rate (Per 1,000 live births)		
Urban	13	53
Rural	17	85
Crude Birth Rate (Per 1,000 pop.)		
Urban	18.3	23.1
Rural	17.6	30.9
Crude Death Rate (Per 1,000 pop.)		
Urban	6.5	7.0
Rural	6.3	10.9

Source: Health Monitor 1994, Foundation for Reserch in Health Systems, Ahmedabad, India

functional capacities can meet the needs of the people. Each Community Health Center (CHC) serves roughly 230,000 people, and each Primary Health Center (PHC) serves a population of approximately 26,000.[11] In addition, there are 5,094 sub-centers of PHCs as grass root institutions with no beds, each of which serves about 4,700 people. Although conclusive evidence does not exist, this ample network that extends to the grass root level must have contributed to less of an urban-rural disparity, which has been a salient feature of Kerala (Table 3).

Burgeoning Private Sector

In addition to the facilities run by the public sector, the private sector plays a major role in health care provision in Kerala, providing the majority of allopathic facilities and beds. Although the number of allopathic facilities run by the private sector was 704 in 1978, it increased to 4,288 in 1995, accounting for 75.8% of the allopathic facilities in the state.[12, 13] Between 1986 and

1996, the number of beds in the public sector grew from 36,000 to 38,000, a 5.6% increase, while beds in the private sector grew from 49,000 to 67,500, a 37.8% increase.[13] As for human resources, although Kerala has a relatively high number of allopathic doctors (30,318 in 2000, or approximately one doctor per 1,000 population), 86.4% of them work in the private sector.[11]

Historically, services were provided privately even before the foundation of the state, in institutions such as mission hospitals.[14] However, the recent trend of the burgeoning private sector is predominantly driven by for-profit enterprises. Major factors for this trend may be described as the gap between the needs of the people and the quality of service the public sector can provide. Technology development and the aging society have raised the cost for health care, whereas the economic growth in Kerala has lagged behind other states in India, causing a fiscal deficit in the state budget.[15]

Until the late 1970s, the share of health expenditure in the total state budget had been consistently higher than those in the rest of India. For example, yearly average health expenditure accounted for 10.45% of total revenue in Kerala and 8.3% in all India in 1960-65. However, it became 9.07% and 9.54% respectively in 1985-90.[12] Furthermore, although health expenditure on salaries for health personnel increased in the 1990s, capital spending for infrastructure of facilities decreased.[7]

Needless to say, the fiscal crisis of the state has affected the quality of care provided in the public sector. A number of people the author interviewed mentioned that they preferred to utilize the private sector because the care provided at the public sector did not satisfy them. They cited such reasons as shortage of medicine, less-availability of technology, and the curt attitudes of doctors, even though services are provided for free or at a minimum charge. For example, 22 out of 26 CT scans in Kerala were owned by the private sector in 1995, and only 23% of households (8% of the affluent and as low as 33% of the poor households) regularly utilize the public sector.[13, 16] With respect to financing, it is estimated that 77% of the total health expenditure in the state comes from direct spending of households.[2] To make the situation worse, many of the facilities of the public sector remain under-utilized because of financial or managerial reasons, such as inappropriate bed-doctor ratio, and untapped potential for utilization are estimated to be 12.3% for doctors, 25.7% for nurses, 25.7% for beds, 53.2% for building spaces, and 59.3% for land.[10]

Effect of the Burgeoning Private Sector

The idea that consumers have more choices may sound good. However, considering health care is an "undesirable spending", it is inappropriate that people have to spend a large share of their income for health care, while health care in the public sector, funded by tax, remains under-utilized. Growth of the private sector, especially when paid by fee-for-service, will inevitably raise household health care expenditure. It is estimated that the poor spend 40% of their income on health,[17] meaning health is gradually becoming a commodity purchased by "ability to pay."

Furthermore, as of early 2003, the government has no rules, regulations or even registrations of private sector players. In such circumstances, given that the health sector is a market where market failure occurs, quality assurance is hard to achieve, and the private sector may not provide better, or even adequate quality of care. Deficiencies in the system also adversely affect the private sector; they must pay water and power at an industrial rate, and they cannot enjoy the scale merit of biomedical waste management.

Moreover, many medical graduates have been attracted to work in the private sector because it pays two to three times higher than the public sector. But this phenomenon may negatively affect the health care in the future, since most private institutes do not have sufficient teaching facilities for proper training.

Transforming the Structure and System

To overcome these challenges, three major measures may be suggested. The first is to invest in the public sector to revitalize the idly used facilities. The second is to use scarce resources more efficiently. And the third is to revamp the health care system in a way that the public and private sectors effectively cooperate and complement each other to meet the needs of the people.

To promote the first measure, Kerala must raise tax revenue. However, the economic status of Kerala remains poor. Although the Human Development Index# is the highest in India, 0.64 against the national average of 0.47 in 2001, its state domestic product and per capita income ranks among the lowest in the country, and the

According to the Human Development Report 2002 published by the United Nations Development Programme, "The Human Development Index measures a country's achievements in three aspects of human development: longevity, knowledge, and a decent standard of living. Longevity is measured by life expectancy at birth; knowledge is measured by a combination of the adult literacy rate and the combined gross primary, secondary, and tertiary enrolment ratio; and standard of living, as measured by GDP per capita (PPP US$)." One is the highest attainable index, and zero is the lowest.

unemployment rate is at the highest.[2, 15] A number of hypotheses have been put forward including such as the economic structure, deep-rooted trade unionism, and high wages.[15]

Kerala's primary economic base is agriculture, depending on cash crops such as coconut, pepper and rubber, and accounts for 28% of the net domestic product and 47% of the workforce. Unfortunately, under globalization, this cash crop oriented economic structure has suffered due to declining prices, leading to an unprecedented recession. Moreover, as characterized by electing the communist government, people in Kerala are politically sensitized, and militant trade unions still hold strong political influence, which inevitably raises labor cost. Average wage per day in Kerala stands at Rs43, compared to Rs24 at all India in 1993-94 (US$1=Rs31 as of January 1994).[18] This is particularly important in Kerala where neighboring states do not have such strong trade unions, and labor can be hired at a fraction of the cost; average wage per day was Rs27 in Tamil Nadu and Rs19 in Karnataka during the same period. As Dr. Surendran of the Government Brennen College states, "The strengths and opportunities of the Kerala model to lead to a higher level of material prosperity are already questioned on the ground of its weakness and threats."[15] For this reason, Kerala is focusing on transforming the economy through attracting investment and promoting new industries such as tourism and information technology.

Another potential solution is being more efficient through decentralization. Kerala launched a radical decentralization policy in 1996, by which most of the development functions were transferred to the local government with an aim of transforming the society by promoting people's participation and injecting a degree of efficiency.[15] With respect to the health sector, all institutions other than medical colleges and major regional hospitals have been placed under the control of local governments. Also, more than a third of the State's planned budget has been allotted to local bodies without restrictions to allocation of funds, the highest earmarked budget for local bodies by state in India.[19] The government of Kerala recognizes that "the process of decentralization has moved from the experimental phase through a corrective phase and has now entered the critical institutionalization phase."[19] Studies which examined the effect of decentralization so far have shown that initiatives taken by each local body determine the performance of PHCs such as an increase in patient load and cost reduction, and that lack of technical expertise in local bodies lead to less investment in health.[20, 21] While the effect of decentralization policy on improvements in health has yet to be carefully evaluated, it has strengthened the capacity of local bodies to manage scarce resources, and necessitated a dialogue with the local people.

With respect to the third measure, the government, eminent scholars, and institutions have seriously debated the way to revamp the health care system, and several steps have already been taken. An initial meeting on public and private cooperation in health was held in January 2003 with the aim of creating a better health care system in a reciprocally beneficial manner. Until then, the private sector was very reluctant in negotiating with the public sector because they were afraid of being unfairly regulated. Under these circumstances, the government must carefully craft a system with minimal, but necessary, regulations over the private sector. Such acceptable regulations would include registrations of health care facilities and the number of health personnel, and accreditation of hospitals with a certain level of standard.

In addition, the government of Kerala has formed a task group to create radical health policy changes and the result, The Health Vision Kerala 2025, will be published in 2004. By creating a new health care system incorporating the private sector, the government may be able to choose an option to gradually reduce its role as a health care provider, and concentrate on providing preventive care and being financially responsible for those in need. One strategy for this is to restructure the health insurance system in a way that provides financial risk protection for all or a large proportion of the population. Although several social or private insurance schemes currently exist in India, they merely cover 3% of the population, a majority of which is in high- or middle-income brackets.[22, 23] Given this fact and the peculiar situation of Kerala, where people live longer, presumably with costly chronic diseases along with relatively small financial resources, an innovative process, including trials of community-based health insurance programs in collaboration with NGOs, will be necessary to achieve its goal.

Conclusion

Because of its high health indices under economic backwardness, Kerala has generated tremendous focus worldwide. However, new challenges face the state of Kerala, namely sustaining the achievements that they have made given the current economic climate. Kerala is eagerly struggling to pave a new way without resting on the past laurels. The World Health Organization

published a report, Macroeconomics and Health, in 2001, stressing that health was not merely consuming goods, but an investment for economic growth.[24] Kerala, a state once praised as an ideal model for development, must now concentrate on growth through development in the age of globalization.

Acknowledgements

This field trip was conducted as a part of the Master of Public Health Program at Harvard School of Pubic Health, and funded by the Japan International Cooperation Agency as a part of the Overseas Training Program. The author wishes to give special thanks to Dr. Richard A. Cash at the Harvard School of Public Health for providing the opportunity to conduct this work, and Harvard colleagues for rendering support and valuable comments. The author also acknowledges the generous guidance and help provided by the Achutha Menon Center for Health Science Studies and the Government of Kerala.

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