4. Health in Punjab

In the context of human development, health is seen as a matter of individual "rights". Longevity is an important goal of human development, based not just on a narrow definition of health[1].

Health care must begin in childhood itself. The child not only has the right to receive immunisation but also the right to benefit from available technology. The girl child has the right to receive the same health and nutrition inputs as her brother, and not simply be treated as a reproductive device. The definition of health thus goes beyond medicine and cure of disease. Instead, it takes into consideration all that goes into ensuring a healthy and long life, a clean and safe environment and an existence where human dignity is ensured.

Therefore, health includes sanitation, a clean environment, access to basic amenities, access to adequate and safe drinking water, access to energy and safe non-polluting fuels, as well as access to proper and adequate nutrition. Along with these basic entitlements of all citizens, health is equally affected by social customs, discriminations and practices based on gender, caste and marriage. Health is affected by crime as well as physical and mental conditions in homes and workplaces. In India, good health is particularly crucial as a healthy body is perhaps the best asset for the poor.

This chapter will look at the condition of health in Punjab, the various providers of health, specific health problems of groups such as infants, women, the girl child and the poor, as well as the ability of various health providers to dispense health care.

The role of the State is enormous here. The State must recognise its responsibilities to protect citizens from premature mortality and illnesses. In many ways, the Indian government has risen to these responsibilities and has formulated a range of initiatives.

India is a signatory to the Alma Ata Declaration (1978). This Declaration aims at 'health for all' by the year 2001 and views the health care system as a distributive mechanism based on equality and justice. To a certain extent, this is a utopian aim because like other services, the health care service too is marred by class inequalities, denial of opportunities to disadvantaged groups and rampant corruption. Making health services universally accessible is thus a difficult challenge.

Overview of Health Indicators

Punjab has one of the highest per capita incomes in India, next only to Delhi, Pondicherry and Maharashtra. It has an income poverty rate of just six percent.[2] Given these impressive economic numbers, the health sector must be

[1] Health in its accepted international definition is not just the absence of disease, but also the physical, mental, and social well-being of a person.

[2] Planning Commission estimates of poverty for 1999-2000.

Table 4.1: Life Expectancy in the Indian States

State	1951-61	1961-71	1981-85	1988-92	1992-96	Increase by 1992-96 from the years (in percentage)	
						1961	1985
India	**41.2**	**47.7**	**55.5**	**58.7**	**60.7**	**47.3**	**9.4**
Andhra Pradesh	36.9	44.4	58.4	60.2	62.0	68.0	6.2
Assam	36.8	46.0	51.9	54.1	56.2	52.7	8.3
Bihar	37.6	41.0	52.9	57.5	59.4	58.0	12.3
Gujarat	40.0	53.7	57.6	59.5	61.4	53.5	6.6
Haryana	N.A.	50.6	60.3	62.5	63.8	N.A.	5.8
Himachal Pradesh	N.A.	N.A.	N.A.	63.3	64.5*	N.A.	N.A.
Karnataka	40.2	44.6	60.7	62.2	62.9	56.5	3.6
Kerala	48.3	48.8	68.4	71.3	73.1	51.3	6.9
Madhya Pradesh	40.6	54.4	51.6	53.4	55.2	36.0	7.0
Maharashtra	45.2	54.4	60.7	63.4	65.2	44.2	7.4
Orissa	40.9	44.7	53.0	55.4	56.9	39.1	7.4
Punjab	47.5	43.8	63.1	66.6	67.4	41.9	6.8
Rajasthan	46.8	49.4	53.5	56.3	59.5	27.1	11.2
Tamil Nadu	39.8	49.6	56.9	61.5	63.7	60.1	12.0
Uttar Pradesh	38.9	43.0	50.0	55.4	57.2	47.0	14.4
West Bengal	44.3	44.9	57.4	61.4	62.4	40.9	8.7

Notes: N.A. : not available, * - for period 1991-95

Source: columns 2, 3, 4: Government of India (1994), "Health Information of India", Ministry of Health and Family Welfare, New Delhi; column 6: Registrar General of India (1995), "SRS Abridged Life Tables 1988-92", Occasional paper no. 4, New Delhi; column 7: Registrar General of India (1998), "SRS Abridged Life Tables, 1990-94 and 1991-95", SRS Analytical Studies, Report No 1, New Delhi.

critically assessed. The Sample Registration Scheme of the Registrar General of India[3] estimated that for the year 2000 the infant mortality rate (IMR) of Punjab was 52, and the life expectancy at birth in 1996 was 67.4 years. In these crucial parameters, Punjab ranks far below Kerala, which recorded an IMR of just 14 per 1000 live births in 1999. Similarly, life expectancy of Kerala stood at 73.1 years, nearly six years more than that for Punjab.

Compared to international standards, the IMR and life expectancy rates of Punjab would fall in the range of medium human development nations, and far below those of Sri Lanka or even Vietnam. Additionally, the IMR in 1998 was much lower than the Alma Ata Declaration's aim of achieving 40 by the turn of the last century.

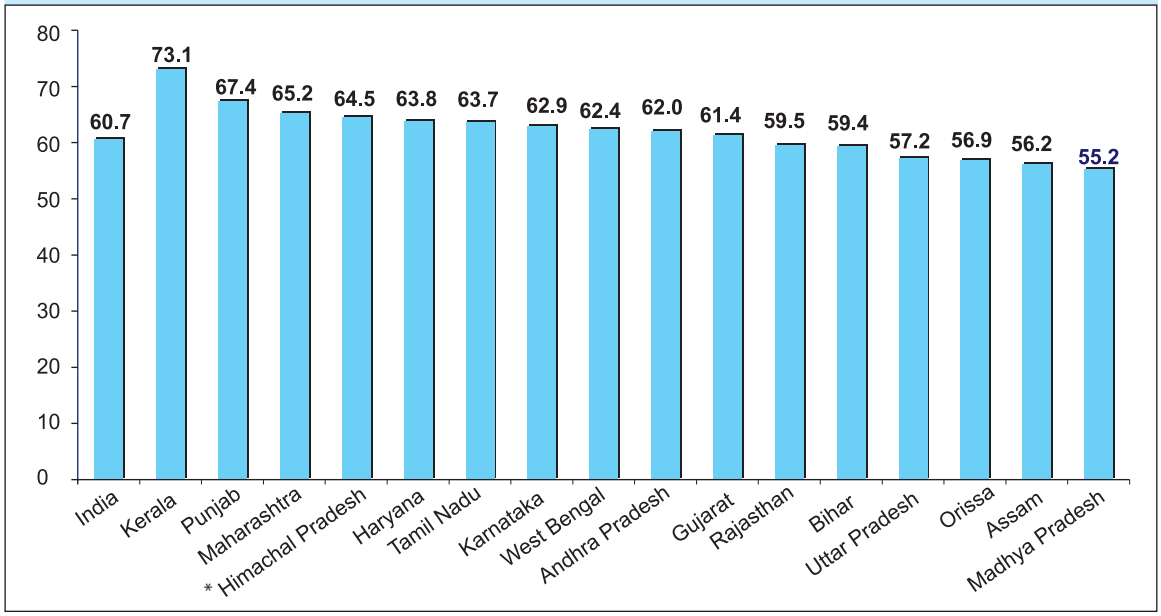
Life Expectancy

On an average a child in Punjab is born with a life expectancy of over 67 years (latest data for 1992-96 puts life expectancy at birth at 67.4 years). From Table 4.1, we find that life expectancy in Punjab has improved from 47.5 years in 1961 by over 40 percent, but in the last two decades this improvement has become far more gradual. In the 1990s, there was only a gradual increase in life expectancy.

Life expectancy at birth differs if we consider gender and spatial factors. In 1992-96, male life expectancy at birth was 66.4 years, while that of females was 68.6 years. While women on an average live 2.2 years more than men, this difference actually does not mean better quality of women's health, as

[3] SRS Bulletin, October 2001, Registrar General of India.

Figure 4.1: **Life Expectancy at Birth – Indian States, 1992-96**



* For period 1991-95

biologically healthier and sturdier females normally outlive men on an average by five years. The gap between urban and rural Punjab is however much sharper. The urban Punjabi has a life expectancy of 70.4 years (this compares well with Kerala's 73 years, as most of Kerala bears the character of an urban area), which is higher than the life expectancy of rural Punjabis, which stands at 66.7 years. The difference becomes even more acute when comparisons are drawn between regions and districts.

There are no direct estimates for life expectancy at the district level. Indirect estimates may be derived from census tables related with fertility that are available at an interval of ten years. The estimates for the years 1981 and 1991 are presented in Table 4.3.

Table 4.2: **Life Expectancy by Sex and Place of Residence (1992-96)**

	All	Male	Female
Total	**67.4**	**66.4**	**68.6**
Rural	66.7	65.9	67.5
Urban	70.4	67.6	71.5

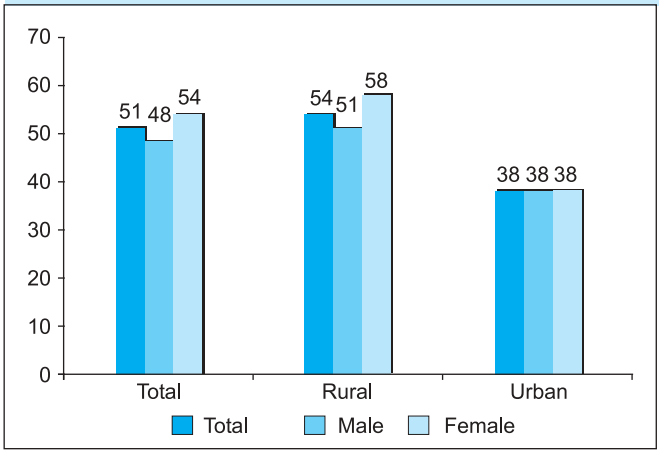
Source: Compendium of India's Fertility and Mortality Indicators 1971-1997, based on the SRS, Registrar, India, New Delhi 1999.

In 1991, Ludhiana had the highest life expectancy of 70 years. Gurdaspur came next, which interestingly had a life expectancy amongst the lowest in 1981. But a closer look at the rise in life expectancy in the inter-census period shows that life expectancy rose in most districts by three to four years, except Ludhiana and Gurdaspur (both above six years). The range between the highest and lowest life expectancy was only 3.8 years in 1981. But this rose to nearly eight years in 1991. Regionally, the state of health measured by life expectancy, showed that the southern districts were worse off than the northern, especially the north-eastern districts of Punjab.

Life expectancy in 1981 and the estimates for 1991 show some surprising changes. Gurdaspur performs well on the health scale, but two other changes are equally intriguing – Jalandhar and Nawanshehar, which were fourth and sixth in terms of life expectancy rank in 1981, fell to 16th and 15th place respectively. It is also a matter of concern

that two of the districts of the Doaba belt—Hoshiarpur and Kapurthala—were among the worst performing in 1981, and failed to improve their comparative position even in 1991. These districts of Doaba along with Jalandhar and Nawanshehar are among the highest in income and education. On the other hand, the districts of Muktsar, Moga and Firozpur in Malwa, to name three, in spite of high levels of poverty and backwardness, do relatively well compared to other districts of Punjab, especially those in the Doaba belt. As a regional phenomenon this is not very surprising, as in 1981 the neighbouring districts of Ganganagar and Bikaner in Rajasthan also showed a rise in life expectancy.

Figure 4.2: **Infant Mortality by Sex and Residence, 1998 (SRS estimates)**



Mortality Issues

The death of infants before they reach the age of one is termed infant mortality. The death of a child before she reaches the age of five years is termed child mortality. These are the most telling indicators on the health services, health awareness and satisfactory health practices.

Table 4.3: **Ranking of Districts by Life Expectancy in Punjab, 1981 and 1991**

Districts	Life Expectancy in 1981	Rank in 1981	Life Expectancy in 1991	Rank in 1991	Increase in the decade
Amritsar	62.4	3	67.2	3	4.8
Bathinda	61.1	13	64.7	11	3.6
Faridkot	61.6	8	65.8	8	4.2
Fateh Garh Sahib	61.7	7	65.6	9	3.9
Firozpur	62.1	5	66.6	5	4.5
Gurdaspur	61.4	11	67.8	2	6.4
Hoshiarpur	60.9	15	64.5	13	3.6
Jalandhar	62.3	4	64.2	16	1.9
Kapurthala	60.4	16	64.5	13	4.1
Ludhiana	64.2	1	70.5	1	6.3
Mansa	61.1	13	64.7	11	3.6
Moga	61.6	8	65.9	6	4.3
Muktsar	61.6	8	65.9	6	4.3
Nawanshehar	61.8	6	64.3	15	2.5
Patiala	61.4	11	65.4	10	4.0
Rup Nagar	62.9	2	66.8	4	3.9
Sangrur	60.4	16	62.8	17	2.4
Punjab	**61.7**		**65.6**		**3.9**
Highest	64.2		70.5		
Lowest	60.4		62.8		

Source: Estimates for 1981 are provided by the Registrar General of India (1994), "Indirect Estimates of Fertility and Mortality at the District Level 1981", Occasional Paper No. 4. Estimates for life expectancy in 1991 are derived from the data on fertility provided by the Census of India, 1991. Office of the Registrar General of India has not yet published the official estimates of life expectancy for 1991.

Infant Mortality

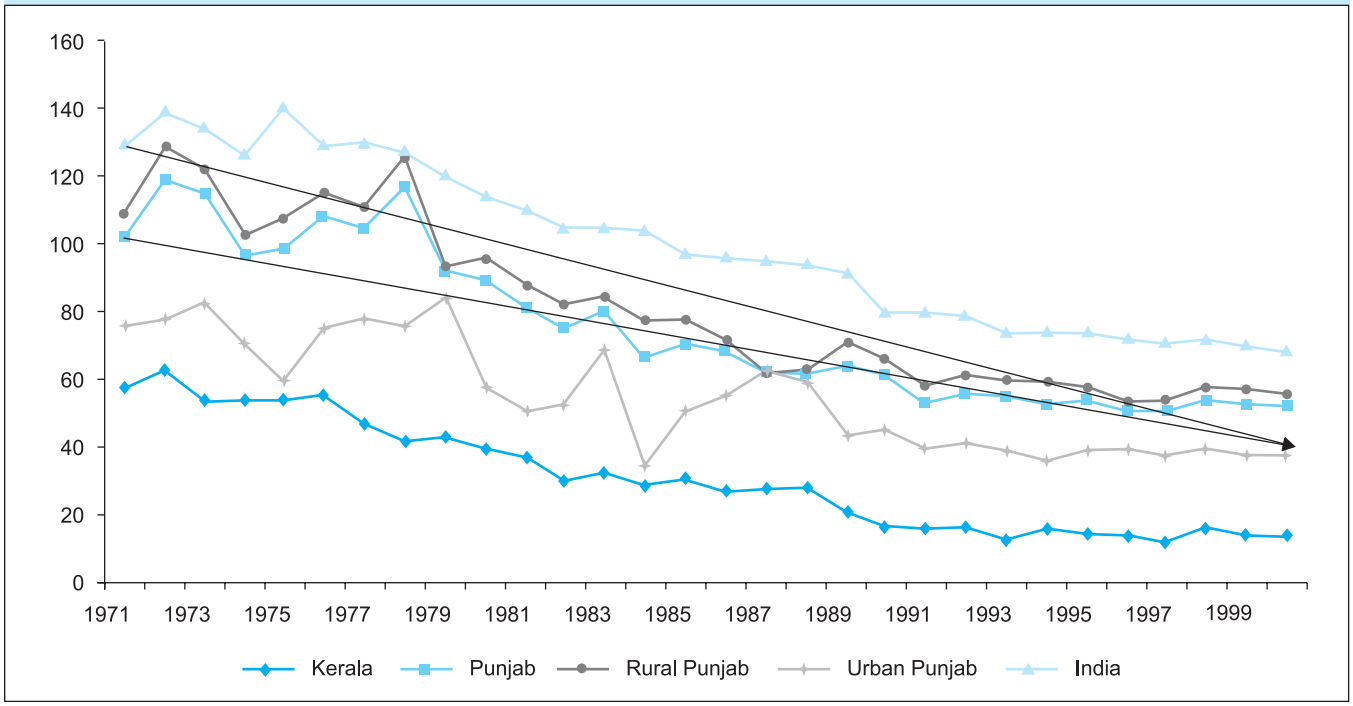
The IMR in Punjab was 51 in 1998. It was 54 for rural areas and 38 for urban areas.[4] A look at Figure 4.2 shows that in all rural areas of Punjab, female infant mortality is much higher than male infant mortality, whereas in urban areas it is equal. Biologically it is seen that the girl child is a much stronger child, and her ability to survive the first year after birth is much stronger than that of the male. A female IMR below or equal to the male IMR thus unequivocally reveals that there is discrimination against the girl child. The chapter 'Women in Punjab' provides greater focus on this subject.

Punjab's IMR of 51 in 1998 is much better than the national average of 71 but four times worse than the IMR of 12 achieved by Kerala. Figure 4.3 compares the IMR of Punjab with India and Kerala from 1971 till 2000. The two arrow lines points to the path of decline that Punjab and India should have followed to reach an IMR of 40 by the turn of the last century. It shows that while Punjab did follow the path till early 1990s, India was almost never on the required rate of decline. The difference between rural and urban areas seems to be narrowing over the last thirty years and the graph shows the two lines representing rural and urban IMRs moving towards convergence.

The 1990s, interestingly, is a period where the rate of decline in IMR in all the three regions presented in the Figure, seems to have reached a plateau. Punjab's IMR was erratic in the 1970s, but appears to be on a steady rate of decline from the late 1970s. These facts need to be kept in mind when health provisioning is examined later in this chapter, especially, levels of immunisation among children.

Most of the causes of infant mortality today are easily preventable through simple immunisation. This can prevent deaths from the main infant killer diseases like measles, diphtheria, tetanus, poliomyelitis and pertussis. In the years since the 1980s, and increasingly in the last decade, governments across

Figure 4.3: **Infant Mortality Rate from 1971 to 2000 – Kerala, India and Punjab**



Source : various volumes of SRS, Registrar General of India, New Delhi

[4] IMR for 2000 is available from SRS but disaggregated by residence only and not by sex of children.

Table 4.4: **Infant Mortality Indicators by Place of Residence**

Indicators	1971			1981			1991			1997		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
IMR	102	109	76	81	88	51	53	58	40	51	54	38
Change in IMR	-	-	-	20.6%	19.3%	32.9%	-	-	-	3.8%	6.9%	5.0%
Neo-natal mortality Rate	55.9	61.1	35.3	48.8	53.5	28.2	33.5	37.8	21.1	29.0	31.8	18.1
NNM as % of IMR	54.8	56.1	46.4	60.2	60.8	55.3	63.2	65.2	52.8	56.9	58.9	47.6
Post-natal Mortality	46.1	47.9	40.7	32.2	34.4	22.3	19.8	20.2	18.6	22.0	22.6	19.7
Peri-natal Mortality Rate	60.3	64.5	37.0	42.3	46.3	24.6	45.6	51.7	27.6	32.5	35.4	21.3
Still birth Rate	23.7	26.1	13.8	13.2	14.3	8.6	24.7	27.6	16.1	10.2	11.2	6.5

Source: Compendium of India's Fertility and Mortality Indicators 1971-1997, based on the SRS, Registrar, India, New Delhi 1999

the globe have focused attention on the prevention of infant and child deaths from easily preventable causes. National and state governments in India have given special attention to it. Every child is entitled by policy and provisioning to become fully immunised from such killer diseases. The failure to provide such cover to children is a serious lacuna in the health delivery system.

Infant mortality has been classified into two periods—death within the first 28 days of a live birth is termed as neo-natal mortality and death after the 28th day of a live birth until the child turns one year of age is termed as post-natal mortality. Fifty-seven percent of all infant deaths in Punjab take place within the first 28 days of birth, although this is still less than the national figure of 65 percent. The share of neo-natal deaths to total infant deaths is much higher in rural Punjab than in urban Punjab.

SRS estimated that in 1996, early neo-natal deaths in Punjab contributed half of all infant deaths (26 out of an IMR of 51).[5] Early neo-natal deaths, which are deaths occurring within the first seven days of childbirth, form a significant portion of infant mortality. Prevention of death within seven days of the birth of a child appears as an urgent necessity. The causes of early neo-natal mortality are related to natal care, type and quality of care during delivery and post-natal care for the mother and infant.

In order to estimate IMR, the state has been divided into two zones by SRS. The last regional estimates available are only till the year 1992, but this is a sufficient indicator of the broad trends in inter-regional IMRs. There is clear differential between urban and rural IMR. Urban infant mortality is two-thirds of the level in rural Punjab. There is also a large difference between the southern and northern rural areas. The northern region comprises of the areas under Doaba. The southern districts mostly fall in the relatively backward Malwa belt.

Child Mortality

The risk of death is high in children till they reach the age of five. The rate of child mortality in Punjab (death between the age one and five years) and its regions is estimated by SRS at 15 for Punjab, 17 for rural Punjab and 9 for urban Punjab. Child mortality rates disaggregated over sex and residence for the year 1996 are presented in Figure 4.4.

While child mortality in all regions of Punjab is lower than national rates, female child mortality is much

[5] Sample Registration Scheme – Statistical Report, 1996, Registrar General of India, New Delhi, 1998.

Table 4.5: **Regional Estimates of Infant Mortality Rate in Punjab, 1992**

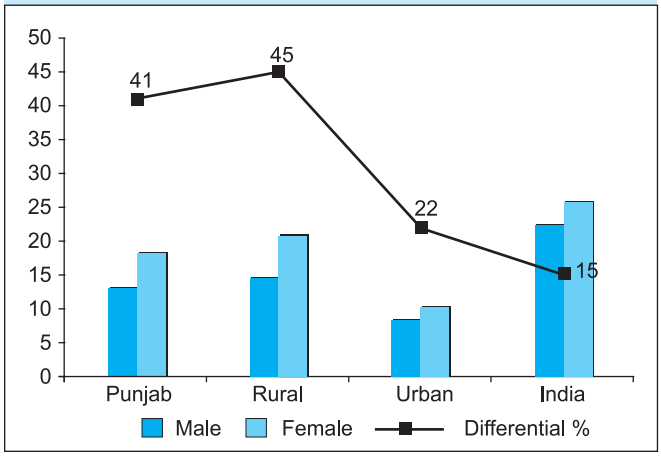
Region	IMR in 1992	Three-Years IMR Average (1990-92)	Inter-Regional Differential
Punjab	**56.00**	**56.67**	
			Urban IMR as percentage of Rural IMR
Rural Punjab	61.40	61.83	68%
Urban Punjab	40.60	41.80	
IMR in Regions of Punjab, 1992			Northern IMR as percentage of Southern IMR
Northern Region – Rural	53.70	56.30	83%
Southern Region – Rural	70.10	67.90	
Non-cities Urban	40.93	40.78	
City urban Areas	40.23	43.00	

Source: SRS Analytical Studies, Report No. 3 of 1996, Below State Level Estimates of Vital Rates - 1987-92, Registrar General of India, New Delhi

higher than male child mortality. This is also true of all India, but while the all India differential shows female child mortality as 15 percent higher than male child mortality, the differential is 41 percent higher for Punjab, and 45 percent higher for rural Punjab.

The reason why the biologically healthier female child dies more frequently than her brothers is without doubt an indicator of discrimination in nutrition, health care and medication. Such an alarming difference in mortality rates requires urgent legal, administrative, medical and political measures.

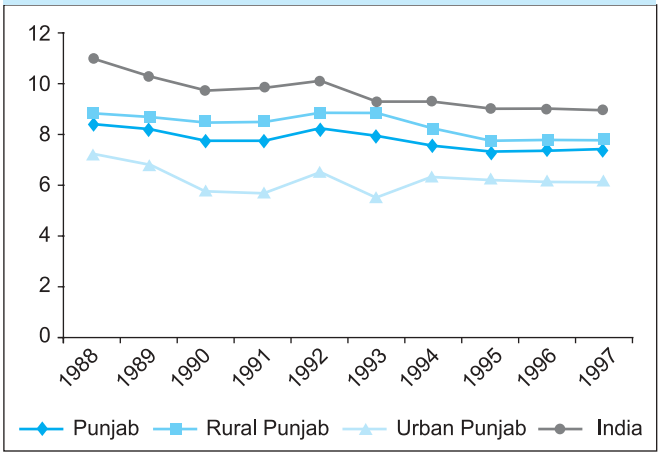
Figure 4.4: **Child Mortality in Punjab by Sex and Residence, 1996 (SRS estimates)**



Death Rates

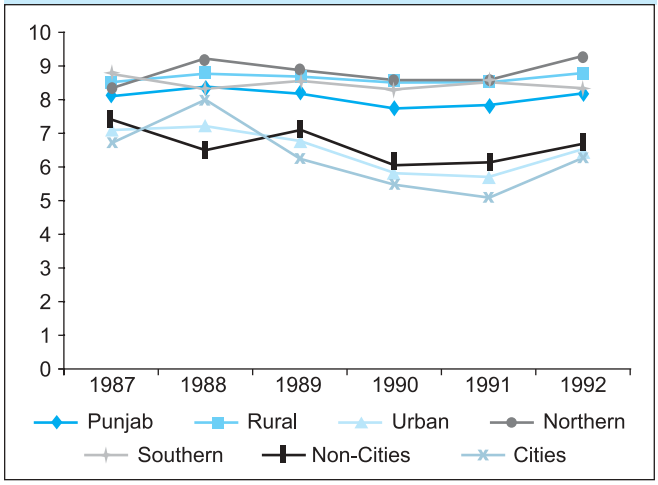
Death rate represents the number of people in 1000 persons from the entire population or an age group who are likely to die within a given year. It represents a very basic indicator of health, and in the absence of indicators of morbidity, affliction of deadly diseases and the impact of curative systems, death rate is an important indicator. The death rate of Punjab in 1996 was estimated by SRS at 7.4, 7.8 and 6.1 for all of Punjab, rural Punjab and urban Punjab respectively. Punjab's death rate is substantially lower than that of rest of India by

Figure 4.5: **Death Rates in Punjab and India, 1988 to 1997**



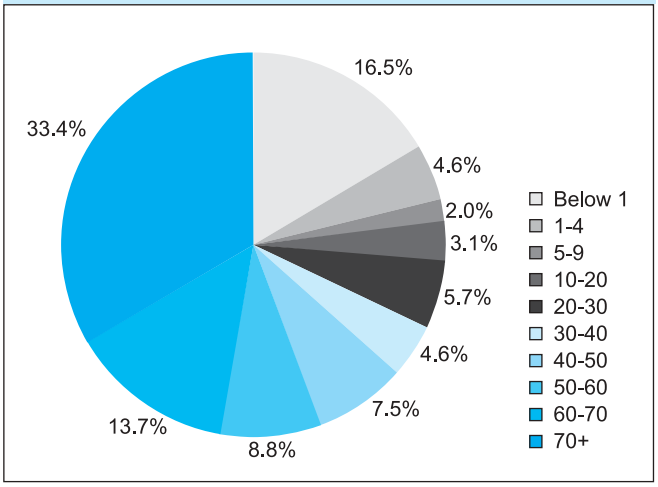
Source: Compendium of India's Fertility and Mortality Indicators 1971-1997, based on the SRS, Registrar general of India, New Delhi 1999

Figure 4.6: **Regional Death Rates in Punjab, 1987-1992**



Source: SRS Analytical Studies, Report No. 3 of 1996, Below State Level Estimates of Vital Rates - 1987-92.

Figure 4.7: **Share of Deaths in Different Age Groups to Total Estimated Deaths, 1996**



Source: Compendium of India's Fertility and Mortality Indicators 1971-1997, based on the SRS, Registrar General of India, New Delhi 1999.

1.5 deaths per thousand in a year, or 17 percentage points.

A comparison of death rates in Punjab and India is given in Figure 4.5, tracing these rates from 1988 till 1997. The death rates of Punjab and rural Punjab alike declined in late 1980s and early 1990s, and appear to be on a plateau for the last three to four years. Urban death rates fluctuate far more, but the last decade has not shown any decline in the death rate in spite of these fluctuations.

If we examine the trend in death rates in Punjab and India across the years, the gap appears to be closing. For the period 1971-80, the death rate of Punjab was less than the death rate of India on an average of 26.4%, and this average dropped to 24.3 % during 1981-90, and even further to 17.9% for the period 1991-97.

SRS also provides estimates of death rates by sex and residence for 1997. Presented in Figure 4.6, one clear indication of death rates in the early 1990s is that there is a growing difference between the regions. Regional death rates appear to move in similar directions but are becoming divergent.

Age-specific death rates (ASDR) enable us to estimate the age groups where larger number of deaths are occurring.

Death rate also shows which age groups record the maximum number of deaths. Figure 4.7 presents the share of deaths by age group in Punjab and Table 4.6 compares age-specific deaths to total deaths between males and females in Punjab.

Figure 4.7 shows the age group of below one year and above 70 years as recording the largest share of deaths in Punjab. Deaths above 70 years of age are influenced by ageing and can be assumed to be of lesser concern for the health system. Under-five child mortality accounts for one-third of deaths in the age group 0-70, and nearly half of all deaths below the age of 50. Clearly, infant and child mortality remain a basic challenge for Punjab's health system.

From Table 4.6 we see that the age-specific death rates amongst females in the reproductive age of 15 to 49 years do not appear to be inordinately high and in fact compare well with male age-specific deaths. If we compare the share of female

Table 4.6: **Age-Specific Share of Deaths to Total Estimated Deaths in 1996 (in percent)**

Age Group	Share of Age group in all estimated deaths	Cumulative Total	Share of Age group in all estimated male Deaths male	Cumulative Total	Share of Age group in all estimated female deaths	Cumulative Total	Female deaths rate over male death rate
Below 1	16.5	16.5	13.8	13.8	20.3	20.3	147%
1-4	4.6	21.1	2.7	16.5	7.4	27.7	274%
5-9	2.0	23.1	1.7	18.2	2.3	30.0	135%
10-14	1.2	24.3	1.4	19.6	0.9	30.9	64%
15-19	1.9	26.2	2.1	21.7	1.7	32.6	81%
20-24	2.7	28.9	2.8	24.5	2.5	35.1	89%
25-29	3.0	31.9	3.8	28.3	1.9	37.0	50%
30-34	2.3	34.2	2.5	30.8	2.1	39.1	84%
35-39	2.3	36.5	3.0	33.8	1.3	40.4	43%
40-44	2.8	39.3	3.5	37.3	1.7	42.1	49%
45-49	4.7	44.0	5.2	42.5	4.1	46.2	79%
50-54	4.9	48.9	4.7	47.2	5.2	51.4	111%
55-59	3.9	52.8	4.1	51.3	3.6	55.0	88%
60-64	6.6	59.4	5.9	57.2	7.7	62.7	131%
65-69	7.1	66.5	8.2	65.4	5.6	68.3	68%
70-74	8.8	75.3	10.0	75.4	7.2	75.5	72%
75-80	7.0	82.3	7.7	83.1	5.9	81.4	77%
80-84	8.2	90.5	7.8	90.9	8.8	90.2	113%
85+	9.4	99.9	9.1	100.0	9.7	99.9	107%
Deaths in reproductive age	19.7		22.9		15.3		

Source: SRS Statistical Report 1996, Registrar General of India, New Delhi, 1998.

deaths to total deaths from the reproductive ages, we see that this share is actually much lower than that for males.

Table 4.7 compares age-specific mortality rates of women in Punjab in the reproductive ages between 1971, 1981 and 1997. We see that there has been a drastic decline in mortality rates in these ages of females, especially between 1971 and today, except for the age group 15-19 years. The reduction in female mortality in the reproductive ages indicates increasing health cover during pregnancy and delivery, and better delivery practices. SRS estimates on maternal mortality for

Table 4.7: **Age-Specific Mortality Rates of Women in Punjab**

Age Group	ASDR in 1971	ASDR in 1981	Decline in ASDR between 1971 and 1981	ASDR in 1997	Decline in ASDR between 1971 and 1997
15-19	1.2	3.2	166.7%	1.5	25.0%
20-24	2.0	1.5	-25.0%	1.8	-10.0%
25-29	4.0	2.3	-42.5%	1.9	-52.5%
30-34	2.9	2.9	0.0%	1.3	-55.2%
35-39	4.7	3.3	-29.8%	1.7	-63.8%
40-44	4.5	1.1	-75.6%	3.8	-15.6%
45-49	2.7	2.9	7.4%	2.6	-3.7%

ASDR : Age Specific Death Rate

Source: Compendium of India's Fertility and Mortality Indicators, 1971-1997, based on the SRS, Registrar, India, New Delhi 1999.

Punjab were lower amongst Indian states in 1997, a rate of 196 deaths per 1,00,000 live births compared to 408 for rest of all India.

Fertility

The total fertility rates (TFR) reveals the total number of children an average woman is likely to have in her reproductive years of 15-45. A TFR of 2.1 is supposed to be the Net Replacement Rate (NRR), which ensures that a generation after this TFR is achieved by a population, it would stop increasing. The TFR of Punjab was 2.7 in 1997 according to SRS estimates, 2.9 for rural Punjab, and nearly reaching the NRR at 2.2 for urban Punjab. At the current rate of decline it should take Punjab another 10-15 years to reach a TFR of 2.1. National Family Health Surveys undertaken in 1993 and again in 1998-99 have also made estimates for fertility rates in Punjab. They show an impressive decline in fertility rates in this period. Table 4.8 below compares SRS and NFHS estimates for two years. The two surveys give the same estimate for 1993, but the NFHS survey estimates a much lower TFR for Punjab in 1998-99 than what SRS estimates for 1997. If the estimates by NFHS are more accurate, then it shows that Punjab could easily achieve the desired TFR within a few years. A concerted additional effort should accelerate such an achievement and then maintain it.

Closely associated with TFR is birth rate, which represents number of births per 1000 people in a given year. The birth rate of Punjab estimated by SRS for 1997 was 23.4, which compares very well with the national birth rate of 26.1. The birth rate was marginally higher at 22.5 for rural Punjab, but much lesser at 18.6 for towns and cities.

Table 4.8: **Estimate of TFR for Punjab**

Survey	1993	1997
SRS	3.00	2.70
	1993	**1998/99**
NFHS	2.91	2.21

Source: NFHS II Preliminary Report, and SRS Bulletin, RGI, New Delhi.

The Burden of Disease–Challenges for Curative Health

Numbers on births and deaths do not necessarily provide a complete picture of Punjab's health. An important component of health is how long an individual might be able to remain productive and free of disease, crucial for those toiling as daily wagers or casual labourers.

Economists have long argued on the economic and productive merit of a healthy population, and how prevention of disease is far less costly than curing disease. Thus investments in health are investments in the economy. A long disease-free life where the individual is able to make full use of his or her skills and potential is an asset to society.

There are no absolute estimates of morbidity. We take evidence from the National Sample Survey's 52nd round in 1995-96 to assess morbidity.

PAP figures (persons ailing per 1000 population) reveal the level of morbidity. From the NSS data, Punjab's rural PAP of 76 is the third highest, and its urban PAP is also the third highest among all states. These numbers applied to population figures of 2001, indicate that over 19 lakh people suffer from any ailment at any given point of time in a population of 242 lakh.

The following is a survey of the different types of diseases in Punjab and the severe problems faced by the physically and mentally challenged.

Diseases of Poverty

While Punjab is one of India's most prosperous states, mortality rates are high and many communities, particularly Scheduled Castes, landless and migrant labourers live in poverty and squalor.

Table 4.9: **Number of Persons Ailing per 1000 (Population) in Indian States**

State	Rural		Urban	
	PAP	PPC	PAP	PPC
Andhra Pradesh	64	35	61	31
Assam	80	52	86	57
Bihar	34	17	41	22
Gujarat	46	27	36	21
Haryana	61	34	63	24
Karnataka	45	24	40	22
Kerala	118	60	88	43
Madhya Pradesh	41	26	38	22
Maharashtra	52	29	48	26
Orissa	62	43	62	47
Punjab	76	33	85	37
Rajasthan	28	15	33	19
Tamil Nadu	52	31	58	37
Uttar Pradesh	61	33	72	41
West Bengal	65	38	65	42
India	**55**	**31**	**54**	**30**

Source: Report No 441, Morbidity and Treatment of Ailments, NSS 52nd Round, National Sample Survey Organisation, GoI, November 1998.

Note: 1. PAP - Estimated number of ailing per 1000 persons
2. PPC - Persons reporting commencement of any ailment

Classified among diseases of poverty are those which are generally associated with poor sanitation, low levels of nutrition and resistance, communicable diseases found in unsanitary living conditions and water-borne diseases.

As elsewhere in the country, tuberculosis is a major disease in Punjab. The annual administrative report of 1999-2000 of the Department of Health and Family Welfare, Government of Punjab, acknowledges TB to be the major public health problem of the state. The report estimated that currently there were around 3 lakh persons suffering from tuberculosis in Punjab, of which 75,000 cases were "highly infectious". The report also analyses that "one of the major reasons of the spread of infections is migratory labour who come into the state."

Malaria is the other important public health issue. Waterlogging in fields (especially accumulated irrigation water in agricultural fields), poor sanitation in towns and slums lead to malaria. However, malaria seems to be declining in Punjab. According to the Department of Health and Family Welfare, the number of detected cases of malaria was 5,316 and 1,113 in 1998-99 and 1999-2000 respectively.

NFHS 1998-99[6] assessed that the prevalence of malaria three months prior to their survey was 1,082 cases per 100,000 persons. This rate was much higher in rural Punjab at 1,140 than for urban Punjab at 949.

NFHS data from their first survey on other diseases of poverty is presented in Table 4.10.

These estimates do not calculate actual numbers, but assess the quantum of the problem. The major challenges, as it appears, are in prevention and cure, and in rehabilitation and support services to

Table 4.10: **Rate of Prevalence of Diseases of Poverty by Place of Residence and Estimated Number of Patients, 1993**

Indicator	Blindness		Leprosy	Physical Impairment of Limbs
	Partial	Complete		
Urban Prevalence Rate	5.9	1.6		6.1
Estimated Patients in '000s	49	13	0	50
Rural Prevalence Rate	6.9	2.2	0.4	9.3
Estimated Patients in '000s	111	35	6	149

Source: National Family Health Survey, Punjab Report 1993, Institute of Population Studies, Mumbai.

[6] Indian Institute of Population Sciences, National Family Health Survey 1998-99 (Punjab), Mumbai, India (page 127-128).

patients of TB, partial and complete blindness and the physically challenged.

Data from surveys is not available to give an idea of the prevalence of other diseases. Here we will look at data from government hospitals and the types of diseases treated amongst out-patients, and in-patients and the causes of death in Punjab.

The main diseases amongst outdoor patients in 1999 were diseases of the respiratory system, infectious and parasitic diseases, diseases of the nervous system and sense organs and diseases of the digestive system. In indoor patients, the main disease for which patients were admitted were injury and poisoning, complication of pregnancy, childbirth and the puerperium, infectious and parasitic diseases, diseases of genito-urinary system, respiratory system, digestive system, circulatory system, and nervous system and sense organs. Amongst the main killer diseases were diseases of the circulatory system, injury and poisoning, infectious and parasitic diseases, and diseases of the respiratory system.

Other Diseases

With only six percent income poverty and the second highest per capita income in India among Indian states, a high urbanisation rate (a third of the population), increasing 'white collarisation' of the workforce, '2 million plus' inhabitants in cities (Ludhiana and Amritsar), 14 'lakh plus' inhabitants in towns[7], in Punjab the disease burden includes

Table 4.11: **Broad Category-wise Outdoor Patients, Indoor Patients treated and Number of Deaths among Indoor Patients in Punjab, 1999**

S. No	Name of Diseases	Outdoor-patient		Indoor-patient		Deaths	
		Number	%	Number	%	Number	%
1	Infectious and parasitic diseases	1884230	16.3	64556	13.9	2420	16.8
2	Neoplasms	56381	0.5	10512	2.3	1030	7.1
3	Endocrine, nutritional and metabolic diseases and immunity disorders	245176	2.1	16614	3.6	671	4.7
4	Diseases of blood and blood forming organs	987343	8.5	10619	2.3	193	1.3
5	Mental disorders	118984	1.0	4619	1	111	0.8
6	Diseases of the nervous system and sense organs	1197388	10.4	26160	5.6	244	1.7
7	Diseases of the circulatory system	405321	3.5	30451	6.6	3134	21.7
8	Diseases of the respiratory system	2191490	19.0	33051	7.1	1175	8.2
9	Diseases of the digestive system	1201150	10.4	32588	7.0	918	6.4
10	Diseases of genito-urinary system	305001	2.6	34903	7.5	173	1.2
11	Complication of pregnancy, childbirth and the puerperium	216342	1.9	71143	15.3	92	0.6
12	Diseases of the skin and subcutaneous tissue	997213	8.6	3501	0.8	17	0.1
13	Diseases of the musculoskelctal system and connective tissue	475839	4.1	5215	1.1	117	0.8
14	Congenital anomalies	12038	0.1	2053	0.5	60	0.4
15	Certain condition, originating in the period	17378	0.2	5136	1.1	525	3.6
16	Symptoms, signs and ill-defined conditions	605218	5.2	25047	5.4	649	4.5
17	Injury and poisoning	647672	5.6	87511	18.9	2897	20.1
	Total	**11564164**		**463679**		**14426**	

Source: Director, Health and Family Welfare, Punjab

[7] According to the census of 1991.

those diseases created by urbanisation and prosperity.

There is already a very high rate of cardiac problems, diabetes and cancer. There is little information available on prevalence of such diseases, but based on anecdotal evidence, discussions with doctors and others associated with medicine in Punjab, it is possible to say that these diseases have a high rate of affliction in urban and even rural Punjab.

Mental Health

The issue of mental health has received comparatively little attention in health discourse. This may be partially due to ignorance and partially due to the presence of far more potentially fatal diseases. On mental health, there is an absence of data and supportive programmes. Investment rates are quite low, mirroring the national trend, where only .01 % of the health budget is allocated to mental health care services. Further, according to WHO estimates, the doctor (psychiatrist) to patient ratio is an alarming 1: 25,00,000 in India. This syndrome also persists in Punjab.

In Punjab, as in the rest of India, the incidence of mental health disorders is rising. However, little is being done to bring mental illness into the domain of public health. Prevalent attitudes are an obstacle. Mental health is not seen as a problem requiring serious intervention by a health professional. As in other parts of India, it is generally believed that mental illnesses are just an extension of a poor physical state so that once the latter is treated the former will automatically disappear. There is a reliance on traditional practitioners, soothsayers, preachers, priests and fortune tellers, a tendency which seriously affects attempts to correctly estimate the extent and magnitude of mental health problems.

Affordability and accessibility of mental health care services are of primary importance. Most government hospitals do not have qualified psychiatrists, on their boards and so patients usually go to general physicians, who often provide only symptomatic relief. Since private doctors are expensive, it is very important to set up mental health services under the primary health care systems that are accessible.

In state-run institutions, there is often a lack of sanitary facilities for inmates, no proper diet or medical assistance. The staff is untrained and therefore insensitive. Thus mental institutions are similar to homes for the destitute rather than a centre designed specifically to cope with severe mental disorders.

There are few initiatives for children. Problems such as hyperactivity or bedwetting are not covered by mental health professionals. In fact, most parents are ignorant that their child may require professional help. Also, in cases where they do decide to seek help, there is an absence of services.

Voluntary sector efforts are also absent in Punjab. Matters would be helped if the state could find a partner in the non-government sector which could deliver mental health services.

There is enough evidence, strengthened through discussions with members of the medical fraternity in Punjab, that there is an increase in the incidence of neurosis, especially amongst women. However, we have no national statistics or statistics from Punjab to make a firm assessment. Many women do not think anxiety-based disorders and depression require professional medical help nor can they access professional psychiatrists. Above all, doctors themselves (especially at government PHCs) are unaware of these problems and are able to provide only symptomatic relief.

Physically Challenged

The problems of the physically challenged (both physical and visual), are serious challenges. While

there is far greater awareness than in the case of mental health, and there are many state-run and voluntary managed institutions looking after physically and visually challenged persons, there is an urgent need to create support structures within society that will help the disabled live the lives of normal citizens.

Some steps have been taken towards granting of equal rights to the physically and visually challenged, especially in terms of employment and facilities in public places. But these are still highly restricted and far more is required both by the state and by the legal and labour administration to ensure that prejudices are removed. Attitudinal changes are crucial. Society must no longer ask what a disabled individual can do, but instead ask what they cannot do.

Alcoholism and Drug Abuse

The incidence of drug abuse and alcoholism has risen in recent times leading to a range of social and economic problems. From illicit manufacture of drugs and alcohol, to trafficking and consumption of drugs, the menace of drugs has become widespread. Systematic information on drug abuse is still absent precisely because of the highly secretive nature of drug-related activities. Little effort has been made to collate the numerous smaller studies in this field into a comprehensive whole.

Drug Risk Groups

Women

There are few studies on women and drug abuse. Most concentrate on men, and so the male experience has been passed off as the 'general' one. Services in drug abuse need to become gender sensitive.

There have been some changes, however. Women's groups have been witnessing increasing drug abuse among women and are demanding more legislative measures, policies and programmes. The HIV epidemic, coupled with transmission of diseases like hepatitis and tuberculosis introduces new dimensions of risk.

Street Children

Another category of potential drug-abusers are street children. It is difficult to enumerate this group because this is a 'floating' population and not covered by census figures. This is a sector open to sexual as well as drug abuse. The most common drugs taken are tobacco, crude alcohol, brown sugar, heroin, paint thinner, kerosene, cough syrups, etc. The government has yet to formulate a national policy for street children and this is a sector that is mostly being tackled by NGOs whose efforts are scattered and not united under a single canopy. Some of the key issues that need to be addressed are vulnerability of children as easy targets for drug-pushing, easy availability and affordability of drugs, poor access to health facilities, lack of sensitive organisations and absence of preventive services that can protect children from drugs.

Child rights have been emphasised in the Convention on the Rights of the Child and street children need extra care as they come from the most vulnerable and marginalised sections. However, there is a certain lack of political will in making child rights a reality.

The Narcotics Drugs and Psychotropic Substances Act (NDPS) of 1985 was the first legislative measure enacted to deal with the menace of drugs. A number of committees and sub committees have been set up under this Act.

There is little data on the extent and form of drug abuse in Punjab. The absence of data should not be mistaken for absence of the drug menace. Rather, it is a pointer towards the need to have a body of knowledge so that the state can intervene urgently.

Unemployed Youth

Punjab has always had a large number of youth studying and training in institutes of higher

education. This section is particularly vulnerable to alcoholism.

A significant section of the younger generation of Punjab has been brought up in an era of prosperity and many have experienced high levels of income and a luxurious and fairly carefree lifestyle. For this group of youth, employment has become a serious issue as their aspirations go beyond the jobs on offer. Agriculture is no longer a youth option and given the paucity of well-paid 'white collar' jobs, youth groups face long periods of unemployment. Yet, as a result of family incomes from agriculture or other activities, these young people are still able to afford high consumption levels, and alcohol becomes an easy recourse for them.

Workers and Labourers

For workers and agricultural labourers, many of them migrants living away from home and families, in a hostile and alien culture, alcohol becomes a refuge.

Extent of Drug Abuse in Punjab

Drug addiction is rising in Punjab, particularly in the areas adjacent to Pakistan. Many young people have been trapped by drugs with severe consequences for the family. An attempt was made to gauge the magnitude of this problem through a comprehensive random survey of 12,300 male adults during the years 1995-97 in rural Rup Nagar district.[8] It was found that 8 percent of the male adult population was involved in drug abuse, other than tobacco and alcohol. Seventy-three percent male adults indulged in tobacco. If one were to project the above figures for the state of Punjab, there would be not less than one million cases of narcotic addiction and alcoholics, who are in need of intervention. The problem is compounded by the fact that many tobacco users are hardly aware of its affects on health.

According to a report by the United Nations Office on Drugs and Crime (UNODC) on the problem of drug abuse in South Asia, there were 2.5 million drug addicts in India at the end of 1996-97. The survey reports that there are likely to be more than a million cases in Punjab alone. It could be that this is an inflated figure which has emerged due to the differences in the areas chosen for the study, as well as methodology and tools used for the survey. But the fact is that drug use is certainly rising, especially in the case of heroin and narcotic injectables. This is due to the easy availability of these drugs. In the absence of proper policing and implementation measures, vigorous anti-drug strategies must be deployed both by government and NGOs.

Areas Requiring Intervention

First and foremost there is a need to build up a collateral body of data that can effectively point out the extent of abuse. Secondly, it has been found that NGOs have been very effective in drug reduction activities and the state must not overlook such an important channel. A fruitful partnership between NGOs and government can provide good results in curbing drug use.

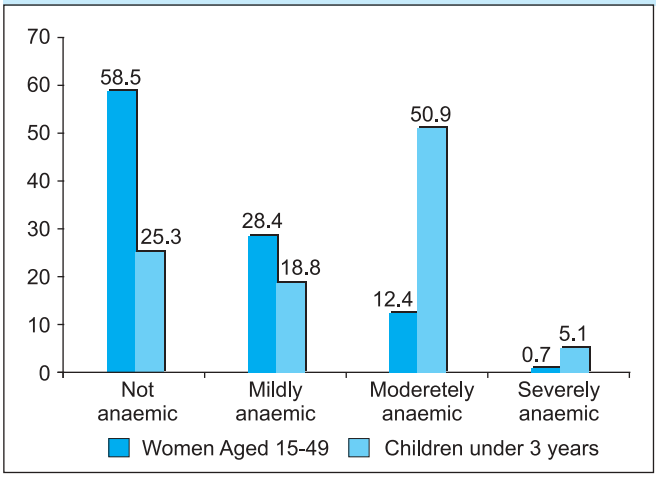
There is also a need to raise the level of public awareness. There is not only a great stigma attached to the problem of drugs, but also ignorance about their physiological basis. Public messages to control the drug menace simply say "Say No to Drugs". This sort of preaching will not yield results unless the correlation between drugs and their specific negative effects on individual lives can be focused upon. Most teenagers become victims of drugs because of peer pressure, curiosity and the belief that they can leave it at any time they want to. There is a need to emphasise the effect that drugs have on the physiology of the body, and the fact that a single dose can trigger

[8] This survey was conducted under the guidance of Project Director, Dr. J. S. Lamba, and Psychiatrist Dr. Rajender Singh from the Drug De-addiction Centre, Mohali.

off an addiction. The role of the media becomes crucial here and so their support must be solicited. Society's attitudes towards addicts need to be changed. Most rehabilitation measures fail because the family and the community are not supportive enough. This leads to a high rate of relapse.

The government must recognise the need to intervene in this area and back it with political will. There is a need for lobbying, pressure groups and advocacy forums, which can place drug abuse higher on the agenda. Sensitisation of key individuals in the policy-making process is of great importance. As yet, there is little evidence of any organised effort in this direction.

Figure 4.8: **Anaemia amongst women**



Source : NFHS II 1998-99, Punjab – Preliminary Report.

Nutrition Status

Very little information is usually available on nutrition. Under the government's ICDS scheme, children are normally weighed and measured, and checked for proper growth (a direct measure of proper nutrition or lack of it). However, this data is not reliable for use to estimate the level of underweight children at large, since their coverage is not universal and there is a definite programme user bias in the sample. The NFHS checked the level of anaemia amongst mothers and children, and this survey is our best source of information on nutrition related data.

Based on the 1998-99 survey data the Figure 4.8 compares the percentage of anaemic women and children under different levels of anaemia.[9]

The number of children who were moderately anaemic was very high, and 74.8 percent of the children were found to suffer from some form of anaemia. Even amongst women, 42 percent were detected as anaemic. Availability of food, vegetables and milk is certainly not a problem in Punjab, and even in terms of purchasing power, just 6 percent income poverty makes us believe that this too could not be an adequate reason. Such a high level of anaemia could be a combination of a lack of a proper diet to children and that some sections are unable to provide a balanced diet.

Table 4.12: **Cases Treated at the De-addiction Centre, Mohali (Nov. 1991-Dec. 1998)**

Addictive Drug	No. of cases
Opium Husk (Bhuki)	3172
Alcohol	1150
Other Drugs*	546
Narcotic Injectables	525
Smack (Brown Sugar)	462
Total	**5855****

* Other drugs include Cap Dextropropoxyphene (Proxyvon) Syrup, Tab Diphenoxylate (Lomotil)

Source: Drug De-addiction Centre, Mohali

** Out of these, 655 cases were addicted to two or more drugs. The actual number of patients treated was 5200

Provision of Health

Health services are provided by public health centres and hospitals as well as private doctors, clinics, nursing homes. The role of the state and

[9] Anaemia results from "nutritional deficiency of iron, folate, vitamin B12, and some other nutrients". It adversely affects maternal and child health, and can cause direct problems in development of the child, especially her "cognitive performance, motor development, co-ordination, language development, scholastic achievement and body resistance." (NFHS II Preliminary Report, page 33).

its agencies is focused almost entirely on various government health centres and hospitals. However, in recent years, in fact for the last twenty years at least, in Punjab the private sector has become the major provider of medical treatment, be it out-patient treatment or hospitalised treatment. There are figures available for analysis on the role of the state in providing care.

NSS reports that only seven percent outdoor patients visited a government facility, whereas 93 percent visited a private facility for outdoor treatment in 1995 in rural Punjab, and just six percent visited a government facility in urban Punjab. For treatment that requires hospitalisation, government facilities are more popular. Of all cases of hospitalisation, 39 percent in rural and 28 percent in urban areas went to a government facility, the remaining 61 percent in rural and 72 percent in urban preferred private facilities.

There is an increasing trend towards the privatisation of medical care. A comparison between NSS estimates of the 42nd round conducted in 1985-86 and the 52nd round conducted in 1995-96, shows that the percentage of ailments treated in a government facility has fallen in the ten-year-period between the two surveys, from 12 to 7 percent in rural and 11 to 6 percent in urban areas.

This decline in using government facilities for non-hospitalised treatment, and the abysmally low levels of usage of government facilities poses a question on the efficiency and utility of massive government primary care facilities. There is a large number of sub-health and primary health centres dedicated to primary care, and non-hospitalised treatment would be a major service for such centres. The fact that this vast system caters to only one out of every twenty patients that seek non-hospitalised care in Punjab calls for a review of this system, its management and funding patterns.

Government Health Services and Infrastructure

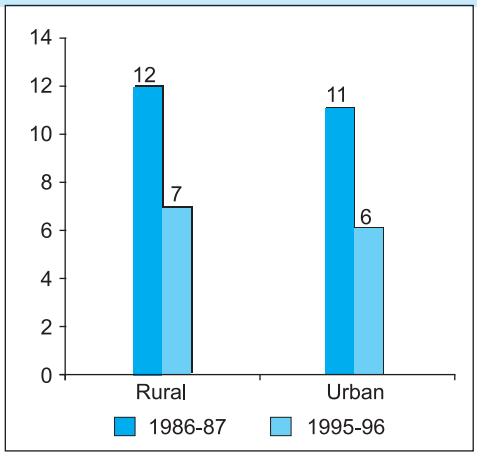
The government has put in place an elaborate and extensive network of health facilities. Rural health facilities are based on nationally accepted norms based on the recommendations of the Bhore Committee Report, and modified from time to time. Health facilities are based on a four-tier system with Sub-Health Centres (SHCs) at the base providing basic health services. Above every six SHCs there is a Primary Health Centre (PHC)

Table 4.13: **Hospitalised and Non-Hospitalised Treatment Received in Punjab and India**

	Non-Hospitalised Treatment in Rural Area (%)			Non-Hospitalised Treatment in Urban Areas (%)		
	From Govt.	**Others**	**All**	**From Govt.**	**Others**	**All**
Punjab	7	93	100	6	91	97
India	19	64	83	20	72	92
Share of Hospitalised Treatment per 1000 Public Providers						
	Hospitalised Treatment in Rural Areas			**Hospitalised Treatment in Urban Areas**		
	Govt. facility	**Others**	**All**	**Govt. facility**	**Others**	**All**
Punjab	394	606	1000	276	724	1000
India	453	537	990	431	569	1000

Source: Report No 441, Morbidity and Treatment of Ailments, NSS 52nd Round, National Sample Survey Organisation, GoI, November 1998.

Figure 4.9: **Percentage of Ailments Receiving Non-Hospitalised Treatment from a Government Facility, 1985-86 and 1995-96**



Source: Report No 441, Morbidity and Treatment of Ailments, NSS 52nd Round, National Sample Survey Organisation, GoI, November 1998

that should cover a population of 20,000–40,000 people. Over the PHCs come the Community Health Centres, usually covering a population of a lakh or so. At the district or city level are the Civil Hospitals or the District Hospitals. Crowning this system are the larger hospitals, the medical colleges and speciality hospitals.

The current spread and reach of the health infrastructure is given in Table 4.14. The reach of health institutions is very good in Punjab. The average population covered by any medical institution is around 10,000–11,000, and the population served per bed just under one bed per 1000 population. In terms of access, the average radius served per institution is 2.68 km. There has been a four-fold increase in the number of Primary Health Centres servicing rural Punjab since 1980, covering the entire state.

Considering the number of outdoor and indoor patients coming to government facilities, we get an average of 5,188 outdoor patients per medical institution in a year, or an average of 17 patients per day (assuming 300 working days in a year); and an average of 18 patients per installed bed per year in government facilities. Though the average comes to 17 patients per day in a medical institution, the district, city or civil hospitals and the large speciality hospitals must be taking in many more than just 17 patients a day. Looking at this picture, it shows that the number of patients actually using a rural primary care institutions must be even lower than 17.

The personnel involved in health services and their population coverage are given in Table 4.16. There is, on an average, one doctor per 1,500 people and one midwife per 1,000 persons. There are substantial district-wise variations. Nawanshehar has a doctor covering a population of 38,000, and in both Muktsar and Fateh Garh Sahib a doctor

Table 4.14: **Public Medical Institutions in Punjab by Location and Ownership, 2000**

(in numbers)

Year	Total	Located in		Owned by		
		Rural Area	Urban Area	State Govt.	Local Govt.	Voluntary Org.
1980	1656	1310	346	1561	51	44
1990	2204	1799	405	2128	25	51
1998	2229	1776	453	2153	25	51
1999	2229	1776	453	2153	25	51
2000	2229	1776	453	2153	25	51
2001	2229	1777	452	2153	25	51
2002	2246	1776	470	2172	24	50

Source: Statistical Abstract of Punjab, 2002.

Table 4.15: **Public Medical Institutions in Punjab by Type of Institution, 2000**

(in numbers)

Year	Rural Area				Urban Area			
	Hospitals	PHCs	Dispensaries	Hospitals/ CHC/ PHC	Hospitals	PHCs	Dispensaries	Hospitals/ CHC/ PHC
1980	111	103	1,096	-	142	26	178	-
1990	88	419	1,249	43	131	23	224	27
1998	73	421	1,220	62	135	24	249	45
1999	72	418	1217	69	135	22	248	48
2000	72	418	1217	69	135	22	248	48
2001	73	418	1217	69	134	22	248	48
2002	73	416	1223	64	147	25	259	39

Source: Statistical Abstract of Punjab, 2002.

covers over 26,000 people. Similarly, Muktsar has one midwife over 17,000 people and a nurse per 36,000 people. We will take a closer look at this distribution and what it indicates a little later. Before that, let us take a look at ailments and births that the medical personnel handle.

If the birth rate of Punjab was 23.4 in 1997, and we assume the same in 2000-2001, then one midwife handles approximately 20-24 live births in a year. Applying the same numbers and including *dais* in the figure, we find that on an average a midwife or *dai* handles 8-9 live births in a year. With a doctor covering 1500 people on an average, there is a doctor for every 120 ailments in a year.

If we go back once again to district-wise provisioning of health infrastructure and medical personnel presented in Table 4.16, there is evidence of inter-district variations.

While Jalandhar has a doctor for every 946 people and Hoshiarpur has a doctor for every 1845 people, in Nawanshehar, (which was carved out of Jalandhar and Hoshiarpur) which has the lowest urbanisation rate in the three districts, one doctor serves nearly 38635 people.

Without going into such detail for the other newly created districts, we see (Table 4.16) that for each group of districts from which new districts have been carved, the population served per doctor is highest in the new districts. They also have the highest rural population percentage within their group of districts. Thus if the affect of urban and district headquarter centred institutions are removed and rural zones within the districts are carved out then it would be clear that the availability of medical doctors is not as high as the average numbers indicate. Of course, the mere division of a district does not prevent people from continuing

Box 4.1: **Ailments and Births in a Year**

NSS estimates of PAP of 76 and 85 in rural and urban Punjab are applied to population in '000 as per 2001 Census and we arrive at 19,20,197 ailments per year or a PAP of 79 for Punjab. With a doctor for 1500 people it would therefore mean 79 x 1.5 or 120 ailments per doctor.

Punjab's birth rate of 23.4 is assumed for 2001 and applied to the 2001 population to estimate that 5.74 lakh total births take place in a year. This is divided by the number of midwives and *dais* to find births per medical personnel.

Table 4.16: **Population Served per Medical Institution, per Bed, per Medical and Paramedical Personnel in Punjab**

District	Population served per Medical Institution	Population serviced per Bed in Medical Institutions	Doctor	Midwife	Nurse	Rural Population %
	1	2	3	4	5	6
Punjab	**10786**	**947**	**1485**	**1015**	**1696**	
Amritsar	10494	617	873	840	1454	40
Bathinda	10006	1172	1421	1253	8351	30
Faridkot	13228	709	1219	817	1529	34
Fatehgarh Sahib	10404	1343	26530	6471	10011	28
Firozpur	11899	1068	3511	1324	1640	26
Gurdaspur	10235	1273	2382	579	973	25
Hoshiarpur	8842	998	1845	669	2057	20
Jalandhar	11172	878	946	1084	1559	47
Kapurthala	9044	971	1867	1463	3910	32
Ludhiana	14827	934	1174	674	892	56
Mansa	10895	1393	27691	7467	16209	21
Moga (R)	10712	1331	21687	2137	2887	20
Muktsar	10541	1257	26534	17488	36062	26
Nawanshehar	8133	1266	38635	4683	5569	14
Patiala	11102	743	724	1532	1696	35
Rup Nagar	9455	1141	2468	1198	2983	32
Sangrur	10822	1275	2518	1794	4469	29

Source: Statistical Abstract of Punjab, 2000.

Note: Information given in column 1 and 2 is for the year 2000, and the information given in column 3, 4 and 5 is for the year 1999.

to use the medical institutions situated in the erstwhile parent district.

Therefore, an analysis of availability, reach and spread of medical institutions and medical personnel based on averages across large geographical entities, in a sector like health, where travel and time are both critical for care, has to be carried out with greater care, greater dis-aggregation of data and the type of disease burden.

The availability of doctors in rural medical institutions needs to be considered, since as far as area and population covered per medical institution is concerned, almost all districts provide the same average coverage numbers. In fact, it is interesting to see that in each of the groups displayed below, districts with the highest urbanisation rate also have the largest number of people dependent on a medical institution. Quite clearly, urban areas have fewer medical institutions (primarily institutions like the SHCs, PHCs and CHCs), but adequately make up with large hospitals with more doctors.

Private Health Services and Infrastructure

Private medical care is the chief health service provider in Punjab. Covering over 90 percent cases of non-hospital care and over two-thirds of the cases of hospitalised care, private health services dominate and direct curative health.

There is very little information available on private medical services and thus it is not possible to make any definitive comments on the private medical system in the state. However, certain features may be highlighted.

In many instances the private sector operates without adhering to regulations and is often a hindrance to making health care accessible to all.

Further, patients' rights are often not adequately served in the private health sector.

The anecdotal evidence on female foeticide, discussions with doctors running small nursing homes where such facilities are available show that in spite of regulations, private doctors do not hesitate to carry out sex determination tests on pregnant mothers. These hospital administrations may often be willing to terminate pregnancies in case the foetus is found to be female. In such cases, the profit motive drives out any adherence to ethics.

There are many arguments that private medical aid should be expensive because one, it will then guarantee quality medical care, and two, take the pressure of richer clientele off government facilities. Although there is some merit in these arguments, yet completely unregulated medical care can cause all sorts of problems.

The greater demand for private medical services would certainly be welcome if it grows to accommodate sections that can pay for private care. However, the large numbers accessing private care shows that even the poor are turning to private health service providers.

The blame cannot rest entirely with the private sector. The fact that the poor have to pay large sums for treatment (leading to further impoverishment) reveals the breakdown of the public health care system. "The hospitalised Indian spends more than half his total annual expenditure on buying health care; more than 40 percent of hospitalised people borrow money or sell assets to cover expenses and 35 percent fall below the poverty line".[10] The same study also suggests that out-of-pocket medical costs may alone push 2.2 percent of the population below the poverty line.

Courtesy: UNICEF

Health care services have become more accessible

Accountability is an important issue here. This is not just applicable to the private sector but for the entire spectrum of health service providers. The techno-centric nature of treatment traps patients in a web of technology-centred medical care and a system that is confusing, intimidating and expensive. Whatever be the legislation in medical care, both in place and being contemplated, including issues such as consumer rights in health, there is an urgent need to change attitudes. Health providers, including doctors and specialists, have to become more accountable to their patients. In turn, patients and the public have to demand and play the role of guardians of their own health care. Institutionally, this can only occur when health administration provides for public representatives and people's groups to play an active role in the management of health institutions.

Health Services for Women and Children

Reproductive and Maternal Health

A birth rate of 21.5 indicates that in the year 1999, 5.5 lakh women gave birth to a child. The state's TFR indicates that in her lifetime a woman on an average will give birth to 2.8 children.[11] If we take age-specific fertility rates from SRS tables for Punjab presented in Table 4.17, and apply them to the female population in different age categories, we get approximate numbers of children born in a

[10] "India–Raising the Sights: Better Health Systems for India's Poor", World Bank, May 2001.

[11] The figure of 2.8 children appears odd, but must be seen as an average, and actually shows that of every ten women in Punjab there will be about 28 children born.

Table 4.17: **Number of Children Expected to be Born in 2001 per 1000 Females in the Reproductive Ages**

Age group	ASFR - Total	ASFR - Rural	ASFR – urban	Children Born Total	Children Born Rural	Children Born Urban
15-19	14.9	16.8	8.6	14492	11532	2960
20-24	213.8	225.0	181.9	240915	171417	69498
25-29	197.2	213.0	152.9	198842	146208	52634
30-34	86.8	95.8	64.5	86996	65036	21959
35-39	27.3	31.2	17.5	21410	16709	4700
40-44	8.9	11.1	3.6	6035	5191	844
45-49	4.0	3.6	5.0	2027	1195	832
All ages	2.8	3.0	2.2	570717	417288	153429

ASFR : Age-Specific Fertility Rate

Source: Census of India 2001 for population estimates, SRS Statistical report 1996, Registrar General of India, New Delhi.

year to different age group of women. These numbers show the scale of births and the scale of issues related to reproductive health.

There are three time periods and three types of care for the pregnant and the young mother, pre-natal care from the onset of pregnancy, the delivery itself, and care after childbirth.

For pre-natal care, the 52nd round of NSS held in 1995-96 found out that amongst pregnant mothers, 60 percent in rural and 55 percent in urban Punjab registered for pre-natal care, and the average visits to the medical service provider was 4.1 and 4.6 times respectively. Public medical facilities are the main source of pre-natal care for women. In rural Punjab, maximum pregnant women went to a public dispensary (36 percent of those seeking pre-natal care), followed by public hospital (30 percent of those registered). Among urban pregnant women seeking pre-natal care, 45 percent went to a public hospital, and 20 percent to a private hospital. During the NFHS II survey in 1998-99, 74 percent of pregnant women who had received antenatal check-ups.

The medical care required by pregnant women includes pre-natal check-ups and at the very minimum, doses of anti-tetanus and iron folic acid (IFA) tablets. Both these services are provided from government primary health facilities and hospitals, and are also part of the standard prescription and treatment that private doctors must also prescribe and administer to pregnant women. The NSS survey of 1995-96 found that nearly three out of five pregnant women had received two doses of anti-tetanus, whereas 20 percent had not received any dosage. Among pregnant women (aged 15-49 years) 45 percent women in Punjab did not receive any IFA tablets, 12 percent received around 50 or less tablets, and 32 percent received 50-100 tablets. Only six percent got the required number of 100 tablets. NFHS II estimates of 42 percent women being anaemic in 1998-99 should be read with this information about women having received IFA tablets.

Care during childbirth is crucial for the health of mother and infant. In case complications arise during delivery, proper medical attention, use of clean instruments in delivery and basic hygiene at place of childbirth are essential. These are provided in an institution (institutional delivery), i.e. delivery in a medical facility with a trained doctor, proper instruments and facilities at least for common complications during delivery. In case institutional delivery is not possible, recourse to a Trained Birth Attendant (TBA) is also a safe option. Normally in rural and often even in urban deliveries, traditional *dais,* or midwives, are used, but they are not

capable of handling complications. The government has been involved in providing trained midwives, along with institutions that can handle such deliveries.

We have two estimates of the type of delivery by way of attention at childbirth. NSS 52nd round of 1995-96 showed that only 1.9 percent rural and 1.5 percent urban deliveries took place without any attendance. This is in sharp contrast to 35.8 percent rural and 15.9 percent urban deliveries for all India that take place without any attendance. It is revealing to note the type of attendant in child-births in Punjab from this survey. It showed that "government-appointed doctors" attended only six percent births, "government-appointed nurses or midwives" attended 9.5 percent of all childbirths, and "other doctors", who we can assume are private doctors, attended 15.6 percent. The remaining 62.9 percent childbirths were attended by "other nurse/ midwife". This figure is very high for Punjab compared to all India average of 18.9 percent child-births attended by such midwives or nurses. This high percentage of midwife-attended childbirths is a characteristic of Punjab and no other state has such a high dependence. The survey does not give an idea of the level of skills or training that these nurses or midwives may have and we can only assume that such attendants are perhaps not all trained. This estimate corresponds with NFHS II, which tells us that in 1998-99 institutional deliveries in Punjab were 37.5 percent, an increase from an estimated 25 percent institutional deliveries found by NFHS I in 1993. NFHS II further tells us that 63 percent of all deliveries were "safe deliveries".

Box 4.2: Immunisation of Children

- BCG
- DPT
- Polio drops
- Tetanus
- Measles

Immunisation of Pregnant Women

- Tetanus

Immunisation of children

Table 4.18: **Targets and Achievements of the Immunisation Programme in Punjab, 1999-2000**

Vaccine	Target	Achievement	Achievement rate
TT (pregnant women)	603006	581734	96.5%
DPT (infants)	520038	592625	114.0%
Polio (infants)	520038	592326	113.9%
BCG (infants)	520038	606275	116.6%
Measles (infants)	520038	560552	107.8%
DT (5 years)	538087	581207	108.0%
TT (10 years)	538087	501441	93.2%
TT (16 years)	492001	454259	92.3%

Source: Annual Report 1999-2000 Department of Health, Government of Punjab.

From both these estimates, it appears that there is a very large number of childbirths that are not safe and do not get the quality of trained attendance required to ensure proper care.

Immunisation

Following the Alma Ata Declaration, immunisation was taken up on a near war footing across the globe. The 1990s saw a massive programme launched by the Government of India, with many international aid agencies and the state governments, to universalise immunisation of children and pregnant mothers.

The basic immunisation programme covers children against the major killer and debilitating diseases. The entire process that takes a little over a year leaves a child fully immunised against these diseases. It needs to be kept in mind that unless the child receives all doses, he or she is not fully safe from these diseases, and therefore for the purpose of our analysis we will ignore data on partially immunised children.

We have information on levels of immunisation from two sources, the preliminary report of the National Family Health Survey 1998-99 and the NSS 52nd round survey on maternity and child care conducted in 1995-96. Both are recent and we will use and compare figures from both sources as and where found relevant.

Government programmes for immunisation of children have met their targets quite successfully

Table 4.19: **Vaccination coverage in Punjab as per NFHS I and II, and, NSS 52nd Round, 1995-96**

Vaccine	Coverage		Vaccination Coverage from NSS 52nd Round, 1995-96				
	NFHS I	NFHS II		BCG (0-4 age group)	DPT (3 doses in 1st year and booster within 3 years)	OPV (3 doses in 1st year and booster within 3 years)	Measles
% of children fully vaccinated	61.9	72.1					
B.C.G.	77.4	88.7	Punjab	840	462	462	600
Polio 0	1.7	11.2	India	679	373	392	442
DPT 1	81.9	88.4					
DPT 2	78.5	87.3					
DPT 3	73.6	82.0					
Polio 1	82.2	90.5					
Polio 2	78.2	88.5					
Polio 3	73.4	83.6					
Measles	64.8	76.5					
None	17.5	8.7					

Source : Sarvekshana, 82nd Issue, NSSO, Government of India.

over some years now. Data published in the annual report of the Department of Health and Family Welfare, Government of Punjab, for the year 1999-2000 shows that the targets of immunisation have been met and even exceeded. Targets are exceeded because often the number of children is higher than estimated through population growth assumptions, and also because of the children of migrants to the state. The achievement rates are given in Table 4.18.

The level of immunisation on the other hand, is a slightly different story. The estimates from the two NFHS surveys undertaken in 1993 and now in 1998-99 are compared in Table 4.19.

In NFHS II, we find that 72 percent children were fully immunised. This is much higher than the level in other states of India, but it still leave 28 percent children vulnerable to one or more of the deadly infant diseases. There are 9 percent children who did not receive any dose at all, and would be the most vulnerable section of children. In terms of coverage by type of vaccine, measles has the lowest coverage. However, it is encouraging that in nearly all types of vaccines, there has been an improvement in the level of achievement reached in 1993, and the percentage of children who did not receive any vaccination at all has been reduced by half.

NSS estimates from 1995-96 are more conservative in the achievement attained by Punjab, and while there is 84 percent coverage of BCG, the coverage of DPT and OPV is less than half of the targeted children, and 60 percent in the case of measles. In DPT and OPV, Punjab comes eighth amongst the states.

The level of awareness amongst mothers on immunisation, both for themselves and for their children is fairly high in Punjab. NSS 52nd round survey found over 95 and 94 percent rural women, respectively, aware of these needs.

The number of children, who are either left out completely from the safety cover of immunisation or receive selective protection, is still quite large. We also need to urgently know who are the children who are being left out of immunisation, where do they live and why they are not receiving vaccination.

Child Care

Newborns are at a high risk of mortality within the first seven days after birth and then for the next 21 days. The risk of mortality in this period is considerably reduced by proper and clean delivery practices, proper care of the newborn and ante-natal check-ups.

Estimates from NSS 52nd round survey states that in rural Punjab in the late 1990s, 64 percent boys

Table 4.20: **Villages Covered under Rural Drinking Water Supply Schemes in Punjab (Year 2000)**

(in numbers)

Years	Inhabited villages	Identified Water Scarcity Villages	Scarcity Villages where water Supply Schemes Commissioned	Balance of Scarcity villages where water supply schemes still to be initiated	%age Col.3/2	Villages with adequate water supply %
0	1	2	3	4	5	6
1980	12188	3712	1945	1767	52.4	85.5
1990	12342	6287	3898	2389	62.0	80.6
1998	12428	8527	6891	1636	80.8	86.8
1999	12428	8517	6957	1560	81.7	87.4
2000	12428	8518	7092	1426	83.3	88.5

Source: Statistical Abstract of Punjab, 2000.

and 62 percent girls were registered for paediatric care in rural areas and 52 percent boys and 55 percent girls were registered for paediatric care in urban areas. Amongst the rural consumers of paediatric care, nearly four out of five went to a hospital, whereas among urban consumers 85 percent went to a hospital.

Public Health: Issues Beyond Medicine and Cure

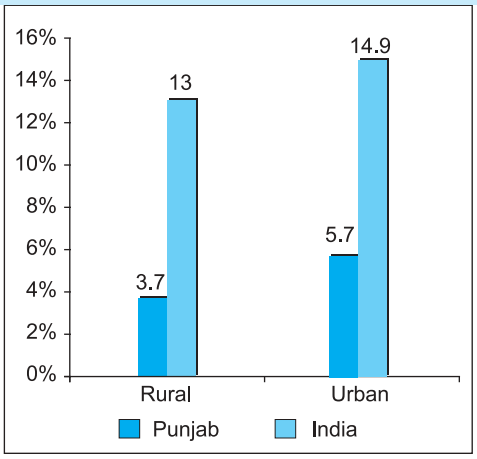
Health is increasingly seen as not just the mere absence of disease. Availability of adequate and safe drinking water, clean living environment, adequate and nutritious food from the time of birth, proper drainage and garbage disposal services are all components of health. Along with these, there are the equally important issues of sources of energy (use of polluting fuels, for example, adversely affects the health of women) and social attitudes that govern pre-natal care and practices.

Drinking Water

Unclean drinking water has a devastating impact on health. The Census of 1991 estimated that 93 percent of all households in Punjab and 92 percent households of rural Punjab had access to safe drinking water. Table 4.20 on provisioning of water supply in Punjab's villages, tells us that in 1990, eighty-one percent villages were adequately covered with rural drinking water supply schemes. This number has risen to 89 percent in 2000, and correspondingly, the population with access to safe drinking water would also have risen considerably.

There are district-wise variations in rural drinking water schemes in Punjab. Mansa, Moga, Muktsar, and Faridkot had 100 percent coverage, but in Gurdaspur, 60.9 percent villages were covered. Kapurthala had coverage of 88 percent, and in Ludhiana 75.6 percent villages were covered. The 1991 Census did not provide data showing high variation among districts in households with access to safe drinking water. The highest access was in Amritsar, Ludhiana and Kapurthala (95 percent households), and least access was in Rup Nagar (86 percent) and Hoshiarpur (84 percent).

Figure 4.10: **Households Reporting Insufficient Drinking Water for Some Part of the Year, 1998**



Source : NSS 54th Round, Sarvekshana 82nd Issue, January-March 2000, NSSO, Government of India.

The National Sample Survey 54th round (1998)[12] provides data on households with access to adequate drinking water. According to this survey, Punjab has the best level of access to adequate drinking water amongst all the states in India. This survey also provides information on the sources of drinking water and the distance people have to travel to access drinking water.

In 1998, 60 percent of the households in urban Punjab, possessed sources of water within their dwelling units, and the most popular source of drinking water was the tap, catering to 64 percent households, followed by tube well or hand pump, catering to 36 percent urban households. In urban Punjab, 33.6 percent households accessed their principal source of drinking water outside their dwelling but within the household premises. Urban

[12] Sarvekshana 82nd Issue, January-March 2000, NSSO, Government of India

Table 4.21: **Number of Households per 1000 Using Different Processes to Clean Drinking Water**

Region	Filtering		Chemical treatment	Boiling
	With plain cloth	By other process		
Rural Punjab	1	11	4	3
Rural India	152	29	12	43
Highest in Rural India	745	200	67	216
Lowest in Rural India	1	8	1	2
Urban Punjab	3	28	5	16
Urban India	227	129	12	489
Highest in Urban India	796	441	120	653
Lowest in Urban India	3	28	4	12

Source: Sarvekshana 82nd Issue, January-March 2000, NSSO, Government of India.

water supply systems provided 47 percent urban households with tap water within their dwellings.

In rural Punjab, 45 percent households possessed drinking water sources within their dwellings, whereas 37 percent had access to drinking water outside their dwelling but within their premises, and 17 percent households accessed drinking water within a distance of 0.2 km from their dwelling. The main source of drinking water in rural areas was the tube well or hand pump (83 percent households) followed by tap water (15 percent households). Four percent rural households possessed a tap connection within their dwelling.

The challenge before Punjab is no longer the provisioning of safe drinking water, but to ensure that the few villages and people who have not been able to get the benefit of assured supply of safe drinking water, do so.

The quality of water is equally crucial. The NSS survey gives an adequate indication of the quality of water available for drinking in Punjab. In rural Punjab, 85.2 percent households had water "of satisfactory quality", and this number equals the national average. In urban pockets, 93 percent households report water "of satisfactory quality", which is much lower than that of states like Karnataka, Haryana, Kerala, Madhya Pradesh, Maharashtra, Uttar Pradesh and even Rajasthan. It appears that while Punjab tops the list of states in terms of quantity of water supply, there are problems as far as quality of water is concerned. The treatment of water is an important element in clean and safe drinking water. Table 4.21 presents the various measures adopted in treating drinking water and in the kinds of water storage practices in use.

The table shows that most Punjabis do not use any form of water filtering or cleaning facilities in their homes, and the tendency is to use tap or hand pump or well water straight as it comes from the outlet. At the moment, there are reports of contamination of surface and ground water from sources such as fertilizers used in agriculture filtering into the soil, as well as industrial and vehicular pollution. It is, therefore, important that households adopt home-based practices of cleaning or filtering water in some form or the other.

Sanitation

Sanitation is closely linked to safe drinking water. Essential features of sanitation include basic hygiene of the individual and community, drainage of water, proper garbage disposal, facilities used for defecation and its disposal.

NSS survey in 1995-96 gives us indications on sanitation. The percentage of rural households in

Table 4.22: **Types of Latrines and Types of Drainage Used per 1000 Households in Punjab**

Type of latrine	Rural Punjab	Urban Punjab	Punjab
No latrine	655	175	479
Service latrine	54	36	47
Septic tank	199	208	202
Flush system	30	560	224
Other	62	19	47
Type of Drainage			
No Drainage	222	114	183
Open Kuccha	313	57	219
Open Pucca	426	522	461
Covered Pucca	7	98	40
Underground	32	209	97

Source: NSS 1995-96 Survey, Sarvekshana, NSSO, Government of India.

Punjab that did not use any type of latrine was 65.5, while the percentage of urban households without a latrine was 17.5. The types of latrine detected by NSS in use are shown in Table 4.22.

About one household in every five does not have any drainage facility in Punjab. Covered drainage—the most effective drainage as it reduces contact of drainage with air to minimum—covered only 4 percent households. It is encouraging, however, that half of the households have access to pucca drainage. The proper and timely maintenance of drainage systems is always key to effective drainage. There is little data to show the maintenance of drainage facilities. However anecdotal and visual evidence puts a question mark on the effective maintenance of drainage systems in Punjab, especially in small towns and high-density habitats.

Habitat and Shelter

Generally speaking, the availability of shelter is fairly satisfactory in Punjab. During the Census of India in 1991, 77 percent households lived in "permanent" structures, and only 12 percent lived in *kuccha* houses. In Firozpur half of the households occupied permanent or *pucca* houses. In Faridkot, Hoshiarpur, Bathinda, and Amritsar there were approximately 70 percent permanent households. In the other districts, housing had already reached fairly high levels of residence in permanent structures. The Census of 2001 in its recently released data takes a somewhat different classification and shows that 57 percent houses were in good condition, 39 percent in livable, while only 4.4 percent houses were in a dilapidated state.[13]

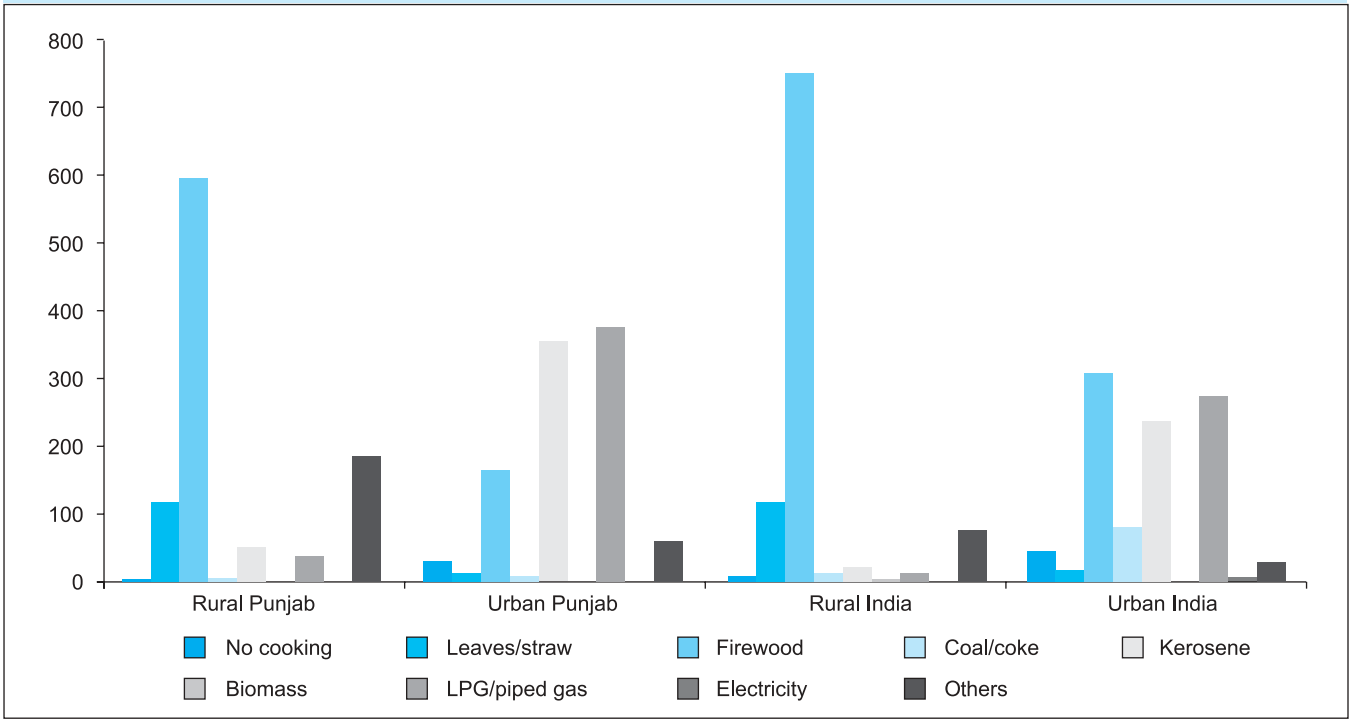
Census 1991 found that 82 percent households had electricity, with 95 percent access to electricity in urban areas and 82 percent in rural areas. The number of houses with access to electricity had gone up to 93 percent by 2001.

The 49th National Sample Survey confirms a very high number of permanent dwellings and high access to electricity in households in 1993. Eighty percent rural houses and 92 percent urban houses were *pucca*, the highest proportion of such dwellings among all the major states in India. This survey also found that rural households using electricity for lighting were 85 percent, and urban households were 94 percent. Only Jammu and Kashmir and Himachal Pradesh have similar levels of access to electricity. Permanent home construction and presence of electricity provides for a relatively "better" quality of living in households. This also reduces the additional burden on women who handle minor house repairs and usage of kerosene and biomass for lighting purposes, both of which are polluting fuels and add to the work burden of women.

The kind of energy used for cooking affects the health of women. Smoke-emitting fuelwood, bio-mass, kerosene, and coal affect the respiratory system. The types of cooking fuels used in Punjab households in

[13] Data pertaining to households at district level from the Census of 2001 was not available at the time of publishing of this report.

Figure 4.11: **Type of Cooking Fuel used per 1000 Households, Punjab 1993**



Source : NSS 49th round, Sarvekshana, 78th issue, 1999, NSSO, Government of India.

1993 are presented in Figure 4.11. The number of households using fuelwood in rural Punjab is among the lowest among all states (59 percent). This, combined with the 12 percent households which use leaves and straw, raises the percentage of households using smoke-emitting fuel to 71 percent. In urban houses, however, the use of fuelwood, straw and leaves, is much less, and a large number use kerosene and even LPG gas.

Health Care: Public Provisioning, Finances and Costs

The expenditure by the state government on medicine and public health has shown an increase in the allocations over time, in the Five Year Plans. From a share of 7.5 percent in the 7th and the 8th Plans, this share went up to 13 percent in the 9th Plan. The allocations to health in fact, went up by three and half times between the 8th and 9th Plans. In the increase in Plan size between the 8th and 9th Plan, the raise in allocation in health has been much more than the general raises in the Plan size.

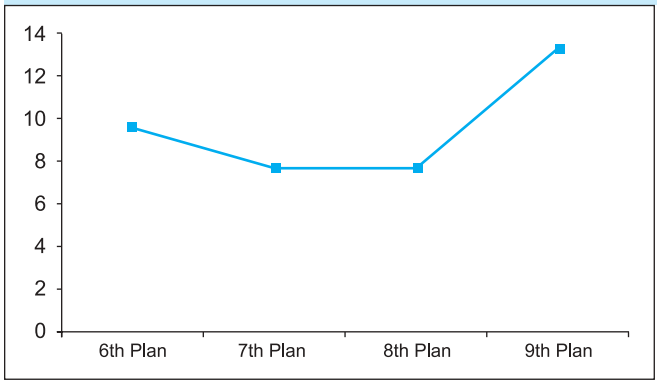
In the state budget, the allocation to health for the year 1998-99, for which accounts are available, shows a per capita expenditure of Rs. 204 for the year. In the budgeted allocations for the years 1999-2000 and 2000-2001, allocations in health have

Table 4.23: **Budget Allocation for Health in Five Year Plans**

	6th Plan	7th Plan	8th Plan	9th Plan
Health	18774	25050	50423	189788.5
Growth in Allocation		33.4%	101.3%	276.4%
Share of Health in Plan	9.6%	7.6%	7.7%	13.3%
Total Plan Allocation	195700	328500	657000.00	1430000
Growth in Plan Size		67.9%	100.0%	117.7%

Source: Various Five-Year Plans of Government of Punjab.

Figure 4.12: **Allocation to Medical and Public Health in Five Year Plans**



Source: Various Five-Year Plans of Government of Punjab.

gone up to Rs. 271 per capita for 1999-2000 and to Rs. 292 per capita in 2000-2001.

The actual expenditure made on health is just 0.99 percent of the state NSDP for the year 1998-99.

Strengthening Health in Punjab

Investments

Public investments in health are very low and need to be substantially increased. Primary health care suffers from poor levels of investment, and this in turn, is pushing people towards expensive and unregulated private service providers.

Within the state budgets for health, there is little financial allocation for primary and secondary health care, sectors that are crucial for the poor. Simply increasing financial allocations in health will not solve the problem. Instead, there must be sensitive health investment planning which is biased towards greater distribution of resources to under-privileged areas, places and groups.

Further, greater investments will have to be made in increasing immunisation coverage, encouraging better maternal and childcare including natal care, strong measures to stop female foeticide and related practices, and regulate the type of medical care being provided by private practitioners.

Apart from investments, increased cost recovery may generate funds in the health system. User charges in government hospitals, along with better and improved health services can ensure that a fair amount of costs are recovered. The experience of Rogi Kalyan Samitis in Madhya Pradesh has shown that people are not averse to paying user charges, provided there are clear mechanisms to ensure that this money is utilised for patient welfare and patients feel they are participating in hospital management.

Focus on the Child

Full immunisation coverage, proper delivery services, and proper paediatric care for children must be ensured. There must be a two-pronged strategy: one, the use of immunisation services, proper medical care during delivery and taking

Table 4.24: **Expenditure on Medicine and Public Health by Government of Punjab, State Budget 1998-99**

Expenditure on Health in State Budget 1998/99	In Rupees
Expenditure on Medicine and Public Health- Revenue Expenditure	4,74,51,00,000
Expenditure on Medicine and Public Health- Capital Expenditure	2,22,00,000
Total	**4,76,73,00,000**
Per Capita Expenditure – revenue	203
Per Capita Expenditure – Total	204
Net State Domestic Product (at current prices) in 1998/99	4,79,00,15,00,000
Per Capita Income	20,463
Expenditure on Health as a percentage of NSDP	0.991 %

Source: State Budget for 1999/2000, Department of Finance, Government of Punjab, Chandigarh.

children for regular and proper paediatric check ups must be promoted, and two, primary care centres and hospitals must be equipped with adequate facilities for such services.

The draft of the National Health Policy of India has declared that its target is to reduce infant mortality rate to 30 within the next four years. Punjab simultaneously must target an IMR of at least 25 or even 20 in the same time period. There must be a focus on marginalised and vulnerable sections such as migrants, slum dwellers and children in backward areas like Kandi, as well as in border districts.

Kerala and Tamil Nadu can be a source of new ideas. The impressive health achievements of Kerala can certainly be a model for Punjab.

Regulation

The private health care sector must be regulated. There are adequate norms and rules governing government medical care, but almost none governing private care. A framework of norms that promotes ethical medical practices is needed.

Inter-Sectorality

Health is highly compartmentalised. There are different departments responsible for the child, women, Scheduled Castes, etc. Non-medicine related issues in health fall under different departments and there is often a lack of co-ordinated focus. Provision of safe drinking water, sanitation, keeping cities and slums clean, ensuring proper nutrition and food security for families and children of poor households, all have a direct bearing on health. But there is little evidence that these departments work in a co-ordinated manner and aim at targets other than departmental ones.

This excessive compartmentalisation means that the health sector often cannot work as an integrated whole. Within compartments, there is an over-emphasis on selected subjects. In fact, a separate integrated public health cadre might be very useful in implementing programmes.

Institutional Care

Rural health services have been a neglected area, both in prices and infrastructure. Although, a great deal of financial support was extended in the Sixth

Box 4.3: Following the Example of Kerala

Kerala has achieved the net replacement rate for TFR in 1988, Goa a little before that and Tamil Nadu, in 1993. Why did these states achieve this level of fertility control when others did not? Was there anything special about these states? Yes, there was.

These states consciously or unconsciously emphasised social development and invested heavily in it. Provision of adequate health care and education facilities, reduction in infant mortality and promotion of family planning were some of their priorities. The Information, Education and Communication (IEC) package was also an integral part of their social development strategy. The results speak for themselves.

For instance, according to the 1991 Census, the literacy level was 90 percent in Kerala, 76 percent in Goa and 63 percent in Tamil Nadu. In contrast, the literacy level in Rajasthan in 1991 was 38.6 percent, 41.6 percent in Uttar Pradesh, and 58.5 percent in Punjab. These have risen to 91, 82 and 73 percent for Kerala, Goa and Tamil Nadu, and 61, 57 and 70 percent for Rajasthan, Uttar Pradesh and Punjab, respectively. In 1991, female literacy in Kerala was 86 percent, Goa had 67 percent, Tamil Nadu had 51.3 percent. But in Rajasthan, female literacy was only 20 percent, while it was 25 percent in Uttar Pradesh and 50 percent in Punjab.

There are some who argue that it is poverty that is largely responsible for high fertility in India. By that reasoning Punjab, which is one of the most prosperous states, should have registered low fertility. But the fact remains that Punjab's fertility is much higher than Kerala's, despite Kerala's lower per capita income.

and the Seventh Five Year Plans, the situation failed to improve, as there was often no one to run these institutes. There are few doctors in rural and remote areas, mainly as a result of poor working conditions and lack of transparency. The private sector should be encouraged to work in remote areas and local practitioners such as *hakims*, *vaids*, etc., who often have a loyal clientele, must be integrated into government PHCs in remote districts to ensure maximum community participation.

Finally, ineffective monitoring of PHCs leads to their under-utilisation. There is a lack of accountability at all levels, especially when it comes to the quality and quantity of drugs available in the market.

A good referral system should be developed whereby a patient moves from one level of health care to another level of health care according to their medical needs rather than going to a higher level directly. This means that the role of primary, secondary and tertiary levels of health care should be properly defined.

The health of the average Punjabi is good: the image of a robust, healthy well-built, human being, capable of hard physical labour is more or less accurate. However, in Punjab, there is also the presence of the weak and unhealthy, the dying child and the weakened mother.

The new National Health Policy on the anvil has called for reducing IMR to 30 in another nine years, eliminating diseases such as polio and leprosy in five years and reducing mortality by half from diseases like TB and malaria by 2010. These should not be the targets for Punjab.

For Punjab the efforts must be to rival Kerala and do better—place IMR to around 15 in another five to eight years; reduce mortality and incidence of occurrence of TB and malaria to one-fifth of its current levels by 2010; take maternal mortality to below 50 by 2010; reduce low birth babies to less than 5 percent; ensure 100 per cent immunisation of infants and mothers and ensure near hundred percent paediatric and post-natal care. Also, push life expectancy at birth to at least 75 years for all, and nearing 80 for women. There is also a need to ensure that by the next census in 2011, Punjab should be quoted as an example of an increase in both overall and juvenile sex ratio. This figure is possibly more revelatory of the state of Punjab's health than figures for life expectancy.

This means ensuring that primary health care reaches the most remote and deprived. Punjab needs to ensure that it begins to spend at least eight percent of its state budget on health within the next three to four years.

Punjab has a well laid out road and power network, numerous private and public health facilities and large sections of the population have very high purchasing power. The state also possesses high awareness levels and personnel and thus, with far-sighted policies, can become India's most healthy state.