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HEPVIC	<p>HEPVIC is a three-year research project (2005-08) being implemented under the European Community Sixth Framework Programme (FP6). The project aims to enhance the health policy making processes in developing countries through a comparative study of three Asian countries – Vietnam, India and China. It will do this through a case-study approach to policy-making in the field of maternal health.</p> <p>The overall goal of this research project is to enhance and promote the use of evidence and integrated approaches to health policy-making and implementation in low- income countries, using maternal health as a case study of wider policy processes.</p> <p>HEPVIC involves the following partners:</p> <ul style="list-style-type: none"> • Nuffield Centre for International Health and Development, Leeds Institute for Health Sciences, University of Leeds, UK • School of Public Health of the Fudan University, People's Republic of China • Dipartimento di Medicina e Sanità Pubblica of the University of Bologna, Italy • Centre for Management of Health Services, Indian Institute of Management, Ahmedabad, India • KIT Development, Policy and Practice of the Royal Tropical Institute, Netherlands • Public Health Department, Public Health Research and Training Unit of the Prince Leopold Institute of Tropical Medicine, Belgium • Department of Epidemiology, Hanoi School of Public Health, Viet Nam • International Health Research Group of the Liverpool School of Tropical Medicine, UK
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Note: As far as possible, we have relied on Government documents for secondary data, some of which are not validated, and may have inconsistencies. We have also estimated several indicators from secondary data.

Definitions/Meanings

Age Specific Fertility Rate: Number of live births to a woman in a specified age group in one year.

Age Specific Marital Fertility Rate: Number of live births to a married woman in a specified age group in one year.

Birth Order: Refers to the order of childbirth.

Couple Protection Rate: Percent of eligible couples protected against childbirth by any approved methods of family planning.

Crude Birth Rate: Number of live births registered during a year, per 1000 estimated resident population during a given period of time.

Early Neonatal Mortality Rate: Number of deaths under one week of birth per 1000 live births.

Full Immunisation: Percentage of children aged 12-23 months who have received the vaccination of BCG, measles and three doses each of DPT and Polio vaccine.

Infant Mortality Rate: Number of deaths among infants below 1 year of age per 1000 live births during a given period of time.

Late Neonatal Mortality Rate: Number of deaths between 7 to 28 days of birth per 1000 live births

Literacy Rate: Percentage of persons aged 7 and above, who can read and write with understanding in any language.

Life Expectancy at birth: Average number of years which a new born child is expected to live, according to the mortality pattern prevalent in that country.

Maternal Mortality Rate: Number of female deaths due to complications of pregnancy, childbirth or within 42 days of delivery from “puerperal causes” per 100,000 live birth during a given period of time.

Median Closed birth Interval: Median number of months between the most recent birth and the previous birth.

Neonatal Mortality Rate: Number of deaths in the first month (28 days) of life per 1000 live births

Peri Natal Mortality: Late foetal deaths (28 weeks or more) and deaths under 1 week of delivery per 1000 live births and still births

Post Neonatal Mortality Rate: Death of infant between 28 days to under 1 year per 1000 live births

Stillbirth: The expulsion or extraction from the mother of a dead foetus after the time at which it would normally be presumed capable of independent extra uterine existence. This is commonly taken to be after 28 weeks duration of pregnancy.

Total Fertility Rate: Average number of children that would be born to a woman over her lifetime if she were to experience the current age-specific fertility rates through her lifetime.

Total Marital Fertility Rate: Average number of children that would be born to a married woman over her lifetime if she were to experience the current age-specific fertility rates through her lifetime.

Under Five Mortality Rate: Number of deaths of children less than 5 years of age per 1000 live births during a given period of time.

Underweight children (weight for age): Percentage of children under age 3 years classified as undernourished below 2 standard deviation.

Acronyms

A

AIDS	Acquired Immuno Deficiency Syndrome
ANC	Antenatal Care
ASFR	Age Specific Fertility Rate

B

BDCS	Border District Cluster Strategy
BEmOC	Basic Emergency Obstetric Care
BHO	Block level Health Officer
BHV	Block Health Visitor
BIECO	Block Information, Education and Communication Officer
BJP	Bharatiya Janata Party
BMI	Body Mass Index
BSC	Blood Storage Centre

C

CDHO	Chief District Health Officer
CDMO	Chief District Medical Officer
CEmOC	Comprehensive Emergency Obstetric Care
CHC	Community Health Centre
CMSO	Central Medical Store Organization
COPD	Chronic Obstructive Pulmonary Disease
CSSM	Child Survival & Safe Motherhood

D

DH	District Health
DPIP	District Program Implementation Plan

E

EmOC	Emergency Obstetric Care
EmTF	Emergency Transport facility Network
ESIS	Employees State Insurance Scheme

F

FHW	Female Health Worker
FOGSI	The Federation of Obstetric and Gynaecological Societies of India
FRU	First Referral Unit
FW	Family Welfare

G

GDP	Gross Domestic Product
GIS	Geographical Information System
GO	Government
GOI	Government of India

GPC	Gujarat Population Commission
H	
HIV	Human Immunodeficiency Virus
Hb	Haemoglobin
I	
ICDS	Integrated Child Development Scheme
ICMR	Indian Council of Medical Research
IEC	Information Education Communication
IFA	Iron Folic Acid
IIHMR	Indian Institute Health Management and Research
IMR	Infant Mortality Rate
INC	Indian National Congress
IPD	Initiative for Policy Dialogue
IRCS	Indian Red Cross Society
ISM	Indigenous System of Medicine
ITPA	The Immoral Trafficking Prevention Act
IUD	Intra Uterine Device
K	
Kg	Kilogram
L	
LBW	Low Birth Weight
LHV	Lady Health Visitor
M	
MBB	Marginal Budgeting for Bottlenecks
MLA	Member of Legislative Assembly
MMR	Maternal Mortality Rate
MPW	Multi Purpose Worker
MTP	Medical Termination of Pregnancy
MIS	Management Information System
N	
NCMH	National Commission on Macroeconomics and Health
NFHS	National Family Health Survey
NGO	Non Government Organisation
NRHM	National Rural Health Mission
P	
PHC	Primary Health Centre
PIP	Programme Implementation Plan
PMU	Programme Management Unit
PNDT	Prenatal Diagnostic Test
PRI	Panchayati Raj Institutions

R	
RCH	Reproductive and Child Health
RDD	Regional deputy Director
RHS	Rapid Household survey
RKS	Rogi Kalyan Samiti
RTI	Reproductive Tract Infection
R/U	Rural/Urban
S	
SC	Sub Centre
SC	Scheduled Caste
SCOVA	State Committee on Voluntary Action
SEWA	Self Employed Women's Association
SLI	Standard of Living
SPIP	State Program Implementation Plan
SPMU	State Program Management Unit
STI	Sexually Transmitted Infection
ST	Scheduled tribes
T	
TB	Tuberculosis
TBA	Trained Birth Attendant
TFR	Total Fertility Rate
TT	Tetanus Toxoid
U	
UNFPA	United Nation Population Funds
UTI	Urinary Tract Infection
W	
WHO	World Health Organization

1. Country context

1.1 Indian Health System: A Macroeconomic Perspective

Health and socio-economic development are so closely intertwined that it is impossible to achieve one without the other. While economic development in India has been gaining momentum over the last decade, our health system is at a crossroads today. Even though government initiatives on public health have recorded some noteworthy successes over time, the Indian health system is ranked 118 among 191 WHO member countries on overall health performance (WHO, 2000). Building health systems that are responsive to community needs, particularly for the poor, requires politically difficult and administratively demanding choices. Health is a priority goal in its own right, as well as a central input into economic development and poverty reduction.

The Maternal Mortality Rate (MMR) in India declined from 580 per 100,000 live births in 1982-86 to 440 per 100,000 live births in 1992-96, but has not declined substantially in the last 10 years. Lack of government investment in health and ineffective delivery of health services are cited as the main reasons for India's poor performance in the health sector. The success achieved in MMR reduction by Sri Lanka (from 486 in 1950 to 120 in 1970 to 27 per 100,000 by 1990) and by Malaysia (from 534 in 1950 to 148 in 1970, and to 18 per 100,000 by 1990) are attributed to their government policies on improved access to health centres for the rural population, and developing a rural network of midwives, skilled birth attendants and back up of emergency obstetric care services (NCMH, 2005). The successful reduction in MMR achieved by the Indian states of Kerala (35 per 100,000) and Tamil Nadu (90 per 100,000) are due to improved delivery of health services throughout the state, as well as reliance on maternal death audits.

The National Health Accounts framework suggests that the total health expenditure in India (government and out-of-pocket) during 2003-04 was approximately Rs 110,000 Crores (Rs 1100 Billion, or equivalently USD 22 Billion), accounting for 4.8 % of GDP. However, public spending on health has averaged around 0.9 percent of GDP over recent years. Therefore per capita government expenditure amounted to only around Rs 200 (USD 4), which is far below the levels of spending by Asian countries such as Sri Lanka (USD 31), and Thailand (USD 71).

The gross under-funding by the government leads to a large out-of-pocket expenditure by individuals for health services at almost 70 % of total health care spending, while the share of central government is around 7 %, state government 14 %, local government 2 %, external funding 2 % and the remaining from public and private firms (NCMH, 2005).

Taking the case of Reproductive and Child Health (RCH) services, the central government's total Family Welfare Budget during the period 1997-98 to 2003-04, Rs 2531 crores, was spent on activities that have a direct impact on maternal health, accounting for a mere 9.7 % of the total budget and Rs 17 per capita per annum for women in the age group of 15-49 years (NCMH, 2005). A survey of households conducted by IIMR, Jaipur (IIMR, 2000) showed that married women in the age group of 15-49 spent an average of Rs 400 for RCH services (amounting to 10 days wage), with urban households spending Rs 604 and rural households about Rs. 292. The study also showed that the reluctance of women to have institutional deliveries and the persistently high proportion of

domiciliary deliveries is driven by cost factors: delivery in a public hospital costs Rs 601 on average, private hospital about Rs. 3593, while home delivery costs only Rs. 93. There is an urgent need to develop social health insurance schemes to address the financial barriers that hinder women from seeking good quality care. The Chiranjeevi scheme by the government of Gujarat to increase institutional delivery is an excellent example.

Health is a state government subject in India, and therefore the health sector is financed primarily by the state governments. The general fiscal situation of the state governments influences their resource allocation to this sector. As a result of fiscal pressure on the state governments from implementing the Fifth Pay commission recommendations during the late 1990's, share of health in the revenue budgets of states declined from 7.02 % in 1985-86 to 4.7 % in 2004-05 (Table 1).

Table 1: Share of health in the revenue budget of major states (%)

States	1985-86	1991-92	1995-96	1999-00	2003-04(RE)	2004-05
Andhra Pradesh	6.41	5.77	5.7	6.09	5.21	4.8
Assam	6.75	6.61	6.08	5.25	4.39	4.36
Bihar	5.68	5.65	7.8	6.3	4.84	6.47
Gujarat	7.45	5.42	5.34	5.21	3.68	3.76
Haryana	6.24	4.19	2.99	4.08	3.63	3.35
Karnataka	6.55	5.94	5.85	5.7	4.85	4.18
Kerala	7.69	6.92	6.81	5.95	5.42	5.2
Maharashtra	6.05	5.25	5.18	4.59	4.39	3.89
Madhya Pradesh	6.63	5.66	5.07	5.18	4.89	5.08
Orissa	7.38	5.94	5.42	5.13	4.47	4.58
Punjab	7.19	4.32	4.56	5.34	4.27	4.05
Rajasthan	8.1	6.85	6.18	6.39	5.75	5.73
Tamil Nadu	7.47	4.82	6.4	5.51	5.26	4.91
Uttar Pradesh	7.67	6	5.73	4.42	5.13	5.75
West Bengal	8.9	7.31	7.16	6.3	5.23	5.04
All States	7.02	5.72	5.7	5.48	4.97	4.71

Source: NCMH, 2005

Also, wide disparities exist across states in the manner of resource allocation and outcomes. Table 2 below shows the budget allocation by function across primary, secondary, and tertiary care, as well as the outcomes: IMR and percent safe delivery.

Table 2: Sectoral Allocation of Health Expenditure by State, 2001-02

States	Primary (Lakhs)	Second ary (Lakhs)	Tertiary (Lakhs)	Soc. Health (Lakhs)	Admini- Strative (Lakhs)	Res. & Trg. (Lakhs)	IMR/1000 Live Births	% safe Delivery
Well Performing States								
Andhra Pradesh	63241 (47.53)	22844 (17.17)	27625 (20.76)	5419 (4.07)	11592 (8.71)	2326 (1.75)	62	68
Karnataka	51334 (47.28)	23883 (22)	23626 (21.76)	4719 (4.35)	4164 (3.83)	844 (0.78)	55	62
Kerala	19389 (25.88)	26460 (35.32)	21198 (28.3)	3502 (4.67)	1979 (2.64)	2385 (3.18)	10	97
Tamilnadu	52700 (43.92)	18120 (15.1)	34114 (28.43)	8011 (6.68)	5266 (4.39)	1772 (1.48)	44	80
Medium Performing States								
Punjab	26078 (42.17)	10078 (16.3)	9419 (15.23)	3131 (5.06)	12140 (19.63)	995	51	61
Gujarat	30336 (41.61)	4986 (6.84)	20430 (28.02)	6623 (9.09)	8968 (12.3)	1558 (2.14)	60	60
Haryana	16217 (50.38)	5060 (15.72)	5507 (17.11)	2436 (7.57)	2518 (7.82)	412 (1.28)	62	44
West Bengal	46184 (34.79)	35376 (26.65)	30153 (22.71)	6737 (5.07)	12457 (9.38)	1839 (1.39)	49	43
Maharashtra	102106 (55.7)	27722 (15.12)	36292 (19.8)	11120 (6.07)	4645 (2.53)	1380 (0.75)	45	61
Poor Performing States								
Assam	21002 (58.98)	6003 (16.86)	6109 (17.16)	0 0	2182 (6.13)	314 (0.88)	70	20
Bihar	46349 (64.96)	6047 (8.48)	11728 (16.44)	768 (1.08)	4765 (6.68)	1692 (2.37)	61	18
Chhatisgarh	17166 (74.02)	2348 (10.12)	1541 (6.64)	328 (1.41)	1157 (4.99)	394 (1.7)	Not available	Not available
Madhya Pradesh	41650 (54.14)	10791 (14.03)	14420 (18.74)	2049 (2.66)	4915 (6.39)	1771 (2.3)	85	32
Orissa	20370 (45.33)	11837 (26.34)	6590 (14.66)	1054 (2.34)	4407 (9.81)	645 (1.43)	87	37
Rajasthan	57831 (58.5)	7556 (7.64)	24598 (24.88)	2275 (2.3)	5159 (5.22)	1419 (1.44)	78	38
Uttar Pradesh	142193 (61.18)	50257 (21.62)	18138 (7.8)	6680 (2.87)	12034 (5.18)	621 (0.27)	80	26
Total	754143 (50.180)	269369 (17.92)	291486 (19.4)	64850 (4.32)	98346 (6.54)	20366 (1.36)	64	

Source: NCMH, 2005

Safe deliveries are those assisted by skilled birth attendants, either at home or institutions.

1.2 Gujarat State Context

Gujarat State was formed as a separate state on May 1, 1960. Gujarat is the seventh largest state in the country with a geographical area of 196,000 square kilometres. The state has an international border with Pakistan on the northwest. A comparison of social and demographic indicators of Gujarat state with India is given below in Table 3

Table 3: Social and demographic indicators in Gujarat state and India at a glance

Indicators	Gujarat	India
Population (in million) as of 2001	50.67	1027
Compound annual growth rate	2.05	1.95
Population density (persons per sq. km.)	258	324
Urban population (%)	37.7	26
Population of scheduled castes (in million) ¹	3.59	138
Population of scheduled tribe (in million)	7.49	67
Sex ratio (females/1000 males),	921	933
General literacy rate, 2001 (%)	70	65
Female literacy rate, 2001(%)	58.6	54.2
Adolescent population (10-19 yrs) (%)	22.0	21.5
Population below poverty line (%) 1997-98	24.21	35.97

Source: Government of Gujarat, March 2002.

1.2.1 Political and Administrative System:

The Bharatiya Janata Party (BJP) and the Indian national Congress (INC) are the two major political parties in the state. It has 182 elected Members of the Legislative Assembly. The Gujarat government has 35 departments handled by 9 ministers including the Chief Minister.

The department of Health and Family Welfare has two main divisions: Health, Family Welfare. The department functions under the Minister for Health. Administratively, the department has a Principal Secretary (Health and Family Welfare), Secretary (Family Welfare) and a Joint Secretary (Health). The department is divided into Directorates / Commissions, which include inter-alia, the State AIDS Society, the Commission of Health, the Directorate of Indian System of Medicine and the Directorate of the Central Medical Store Office (CMSO). The organisational chart of the Department of Health and Family Welfare is shown in Exhibit 1.

For administrative reasons the state is divided into 25 Districts grouped into 6 regions. The state has a total of 242 towns (urban agglomerations), 226 Talukas, and 18,618 villages. Rural local self government bodies (Panchayati Raj Institutions; PRIs) consist of 25 district panchayats, 226 taluka panchayats, and 13,825 village panchayats. Urban local governing bodies consist of 141 municipalities, and 7 municipal corporations.

¹ Historically disadvantaged Indian castes of low status mentioned on a list of “schedule” during the British Rule. SC/ST communities are accorded special privileges by the Constitution of India

1.2.2 Economic Indicators

Gujarat state is one of the most prosperous states in India. The state's GDP at Rs 1674 Billion accounts for 6.64 % to the national GDP at current prices. Per capita income at current prices is around Rs.27,000, which is 28 % higher than the national per capita income; monthly per capita consumer expenditure at Rs 850 is 25 % higher than the national average. The share of Primary (Agriculture and Allied sectors), Secondary (Manufacturing) and Tertiary sectors in the State GDP is around 22%, 37 %, and 41 % respectively.

1.2.3 Social and Demographic Indicators

Gujarat has a population of about 50 million (5 % of India's population), with a population density of 258 persons per square kilometre, compared to 324 persons per Sq. km for India. The decadal growth rate of the population has increased from 21.19 percent in 1981-91 to 22.66 percent in 1991-2001, compared to 21.53 percent for the country as a whole.

The state is relatively urbanised with 38% of the population in urban areas, compared to 28% for India. A comparison of sex ratio and literacy rates among the men and women in rural and urban areas is given in Table 4. It can be seen that rural areas have a lower literacy rate, but a higher sex ratio. Also, women have a lower literacy rate than men in both rural and urban areas.

Table 4: Comparison of population, sex ratio, and literacy, Rural and Urban areas

Statistics	Rural	Urban	Total
Population	31.74 million	18.93 million	50.67 million
Men	16.32 million	10.07 million	26.39 million
Women	15.42 million	8.86 million	24.28 million
Population			
0-9 yrs: Boys	3.86 million	1.94 million	5.80 million
Girls	3.50 million	1.64 million	5.14 million
10-14 Yrs: Boys	1.93 million	1.10 million	3.03 million
Girls	1.70 million	0.95 million	2.65 million
15- 44 Yrs: Men	7.67 million	5.33 million	13.00 million
: Women	7.24 million	4.65 million	11.89 million
44 + yrs : Men	2.87 million	1.71 million	4.58 million
: Women	2.97 million	1.62 million	4.59 million
Sex Ratio			
No. Women /1000 men			
0-9 yrs	906	845	886
10-14 yrs	880	863	874
15-44 yrs	944	872	915
44+ yrs	1034	947	1002
All Ages	945	880	920
Literacy Rate			
Men	61.29	81.84	69.14
Women	74.11	83.34	79.66
	47.84	74.50	57.80

Data Source: Gujarat 2006

A comparison of the sex ratio and literacy rates for populations belonging to various religions is given in Table 5 below.

Table 5: Religion, sex ratio and literacy rates

Religion	Population (%)		Sex Ratio		Literacy Rate	
	India	Gujarat	India	Gujarat	India	Gujarat
Hindu	80.5	89.10	931	918	65.1	68.3
Muslims	13.4	9.10	936	937	59.1	73.5
Christians	2.3	0.56	1009	988	80.3	77.7
Sikhs	1.9	0.04	893	824	69.4	85.1
Buddhists	0.7	0.04	953	889	72.7	66.9
Jains	0.4	1.02	940	969	94.1	96.0
Others	0.8	0.14	992	986	47.0	69.9
Total	100%	100 %	933	920	64.84	69.14

Source: Gujarat 2006

The socially backward communities, namely Scheduled Casts (SC) and Scheduled tribes (ST) constitute 7.09 percent and 14.76 percent of the state population. A comparison of sex ratio and literacy rates among SC, ST and the General Population is given in Table 6 below. It can be seen that the literacy rate for the SC population compares very favourably with that of the State population. It is worthwhile to mention here that the state literacy rates of SC men and women at 82.56 and 57.58 percent respectively are considerably higher than the corresponding national averages of 66.64 and 41.90 percent.

Table 6: Indicators for socially backward communities

Statistics	Caste	Rural	Urban	Total	
Population	SC	2.18 million	1.41 million	3.59 million	
	ST	6.87 million	0.62 million	7.49 million	
	General	22.69 million	16.90 million	39.59 million	
	Total	31.74 million	18.93 million	50.67 million	
Sex Ratio	SC	934	911	925	
	ST	978	925	974	
	General	936	875	909	
	Total	945	880	920	
Literacy	SC	Male	79.16	87.62	82.56
		Female	51.17	67.33	57.58
		Total	65.59	77.90	70.50
	ST	Male	58.06	71.01	59.18
		Female	34.60	51.78	36.02
		Total	46.45	61.76	47.74
	Total	Male	74.11	83.34	79.66
		Female	47.84	74.50	57.80
		Total	61.29	81.84	69.14

Source: Gujarat 2006

1.2.4 Health Indicators

We begin this section by displaying health indicators for Gujarat State and India, see Table 7 below.

Table 7: Health Indicators at a glance

Health Indicators	Gujarat	India
Mean Age at marriage of girls	20.3	19.4
Mean Age at marriage of girls (rural areas)	19.9	19.0
Mean Age at marriage of girls (urban areas)	21.1	20.7
Population below poverty line (%) 1997-98	24.21	35.97
Life expectancy of females, 1996-2000	62.77	63.39
Life expectancy of males, 1996-2000	61.53	62.36
Total fertility rate 1998	3.0	3.2
Crude birth rate, 1999	25.4	26.1
Crude death rate, 1999	7.9	8.7
Infant mortality rate, 1999	63	70
Maternal mortality rate, 1992-93	3.89	4.53
Contraceptive prevalence rate, 2001 (%)	54.2	44
Contraceptive knowledge (%)	96	95
Rural population covered by sub-centre, 2000	3932	5109
Rural population covered by PHC, 2000	29006	30200
Rural population covered by CHC, 2000	123276	240302

Source: Government of Gujarat, 2002.

1.2.5 Critical Indicators of the maternal mortality rate

Interventions to reduce the maternal mortality rate include the presence of skilled attendants at the time of birth, a combination of personnel, drugs, and back-up emergency care, better nutrition, ANC and Family Planning activities. Several non-health interventions can also help reduce the maternal mortality rate: literacy, age at marriage, and enhancement of women's status in the society. Unfortunately, changes in these cultural characteristics occur slowly over time and cost effective interventions to influence these characteristics are not easily identifiable. However, they must form part of a broad multi sector strategy to address the maternal mortality rate. We investigate each of these critical indicators below in some detail.

a) Literacy levels

Male, female and total literacy rates for Gujarat at 80.5 %, 58.6 %, and 70 % are considerably higher than the national averages of 75.9 %, 54.2 %, and 65.4 % respectively.

It can be seen from Table 8 below that female literacy has a significant impact on maternal health.

Table 8: Literacy Rates: Gujarat State 2005

Indicators	India		Gujarat	
	Illiterate	Literate	Illiterate	Literate
Anaemia among women (15-49 years)		46.5		43.0
Any Anaemia	55.8	32.6	50.9	29.0
Mild	36.7	12.1	31.1	12.0
Moderate	16.8	1.4	16.6	1.9
Severe	2.3		3.2	
Median Age at First Marriage:		18.0		19.0
Female	15.0		16.9	
Median Age at First Birth	18.5	20.8	18.9	21.2
Median Age at last birth	29.7	28.3	28.8	27.5
Average no. of children	3.38	2.29	3.5	2.3
Coverage of Anti Natal Services				
3 ANC visits	54.7	84.7	60.3	85.6
2 TT Injections	27.3	68.1	45.4	76.2
100 IFA tablets	77.4	86.6	82.0	88.0
Place of Delivery				
Institutional	17.4	56.8	29.0	64.4
Domiciliary	81.5	42.5	70.0	35.0
Child Immunisation	27.8	62.5	40.3	67.1
Couple Protection Rate	39.2	47.7	53.7	53.0
% women making decisions on own health care	48.6	55.7	66.8	70.0

Source: NFHS 1998-99

b) Age at Marriage

Statistics shown in the following table show that early marriages (before the age of 18) are more likely to lead to early pregnancies and a larger number of children. Care should be taken in interpreting these indicators, as there is confounding of several variables.

Table 9: Age at Marriage and Childbirth, 1998-99

Statistics	India			Gujarat		
	Total	Rural	Urban	Total	Rural	Urban
Median age at first marriage (females)	16.7	16.0	18.7	17.9	16.8	19.1
Median age at first birth	19.4	19.0	20.6	20.1	19.4	21.1
Median age at last birth	29.3	29.8	28.4	28.2	27.7	28.4
Average no. of children						
married before age 20 Years	3.19	3.22	3.08	3.11	3.18	3.00
married after age of 20 years	2.05	2.19	1.87	2.14	2.51	1.89

Data Source: NFHS 1998-99

c) Standard of Living

The standard of living index (SLI) is estimated from a number of factors such as the type of residence, owned/rented, civic amenities available, durable goods, vehicles etc. and is classified into three categories: Low (index score 0-14), Medium (15-24), and High (25-67). Data from NFHS shows that (Table 10) SLI does influence maternal health.

Table 10: Standard of Living Index: 1998-99

Indicators	India			Gujarat		
	Low	Medium	High	Low	Medium	High
Anaemia among women (15-49 years)						
Any Anaemia	60.2	50.3	41.9	57.2	46.8	38.5
Mild	38.9	34.5	30.1	32.2	29.7	27.4
Moderate	18.6	14.1	10.7	20.5	14.4	10.3
Severe	2.7	1.7	1.1	4.6	2.7	0.8
Median Age at First Marriage: Female	15.0	16.0	18.0	16.3	17.5	19.0
Median Age at First Birth	18.5	19.3	21.2	18.7	19.8	21.7
Median Age at last birth	30.1	29.4	28.1	29.6	28.2	27.1
Average no. of children	3.12	2.96	2.45	3.3	3.0	2.3
Coverage of Ante Natal Services						
3 ANC visits	55.4	68.7	87.5	54.9	72.8	92.7
2 TT Injections	30.6	45.5	71.6	44.0	57.6	85.2
100 IFA tablets	79.1	81.8	88.4	77.5	84.4	93.5
Place of Delivery						
Institutional	18.5	34.9	74.3	21.8	45.3	76.6
Domiciliary	80.3	64.1	34.6	75.9	53.7	21.8
Child Immunisation	30.4	43.2	64.7	36.7	50.1	76.2

Median Closed Birth Intervals	31.0	30.4	31.7	28.3	28.4	34.0
Couple Protection Rate	35.5	43.3	53.1	50.5	52.5	56.3
% women making decisions on own health care	48.5	50.8	58.4	63.5	70.6	78.3

Data Source: NFHS 1998-99

d) Malnutrition

Most people in developing countries live under the burden of malnutrition. Pregnant women, nursing mothers and children are particularly vulnerable to the effects of malnutrition. The adverse effects of maternal malnutrition have been well documented – *maternal depletion, low birth weight, anaemia, toxemias of pregnancy, post partum haemorrhage*, all leading to high mortality and morbidity.

Anaemia, which is a major malnutrition concern, is associated with *high incidence of premature births, postpartum haemorrhage, puerperal sepsis and thromboembolic phenomena* in mothers. Anaemia does contribute significantly to maternal mortality and morbidity. Anaemic women are classified under three categories: mild (Hb10.0-10.9 g/dl -pregnant women and Hb10.0-11.9 g/dl -non pregnant women), moderate (Hb 7.0-9.9 g/dl, and severe (Hb < 7.0 g/dl). Studies among rural women have uncovered severe anaemia (haemoglobin content less than 7.0 g/dl) in 33% of pregnant women in Gujarat, 47 % in Maharashtra, and 58 % in Punjab (Rush 2000).

Table 11: Anaemia among women and children, 1998-99

Indicators	India			Gujarat		
	Total	Rural	Urban	Total	Rural	Urban
Anaemic women (15-49 Yrs)	51.8	53.9	45.7	46.3	51.3	39.5
Mild	35.0	36.1	32.0	29.5	31.4	26.9
Moderate	14.8	15.8	12.2	14.4	16.8	11.0
Severe	1.9	2.0	1.5	2.5	3.1	1.7
Anaemia among children	74.3	75.3	70.8	74.5	78.5	67.9
% children underweight (0-3 years)	47.0	49.6	38.4	45.1	49.3	38.1

Data Source: NFHS 1998-99

Anaemia and malnutrition among young children (which can be a proxy indicator of mothers' nutritional status), is also very high. If maternal stores of iron are poor (as may happen after repeated pregnancies) and if enough iron is not available to mothers during pregnancy, it is possible that the foetus may have insufficient iron stores.

The Body Mass Index (BMI) can also be used as an indicator of the nutritional status of women. 37% of Women in Gujarat have a BMI below the standard measurement of 18.5 (UNIFEM, 2005)

e) Complete Antenatal Care

The coverage of various components of Antenatal services are quite low individually and the complete coverage (all three components) is still lower.

Table 12: Ante Natal Care, 1998-99

Indicators (%)	India	Gujarat
Tetanus Toxoid Injection (2 or more)	66.8	72.7
Completed 3 ANC visits	43.8	60.2
Received IFA tablets for 3+ months	47.5	66.6

Data Source: NFHS1998-99; gives estimates only on individual component
 Estimate for complete antenatal care 27.2 % (Government of Gujarat, SPIP 2005-2010)

f) Infection

Maternal infections may cause a variety of adverse effects such as *foetal growth retardation, low birth weight, embryopathy, spontaneous abortion and puerperal sepsis*. During pregnancy, as much as 25% of the women in the rural areas suffer at least one bout of urinary infection. Pregnancies in women with primary and secondary syphilis often end in spontaneous abortion, still birth, perinatal death or the birth of child with congenital syphilis.

Table 13: Reported symptoms of RTI/STI Infections, 1998-99

Percentage RTI/STI in Currently Married (Last 3 month)	India	Gujarat
Any abnormal vaginal discharge	30.0	23.0
Urinary Tract Infection (UTI)	17.8	10.3
Abnormal vaginal discharge or symptoms of UTI	35.9	26.3
Any reproductive health problem	39.2	28.6

Data Source: NFHS 1998-99

Such a high percentage of reproductive health problems among currently married women highlights the need for strengthening the RTI/STI management component of RCH.

g) Low birth weight and perinatal mortality

Maternal malnutrition and infections could result in low birth weight and perinatal mortality. Any newborn baby weighing less than 2.5 Kg within the first hour of life (before significant postnatal weight loss has occurred) will be classified under “Low Birth Weight”. In India, around 26% of all newborns have a low birth weight (Park date). Perinatal deaths consist of stillbirths and early neonatal deaths.

Table 14: Low Birth Weight, Perinatal Mortality and Stillbirths: 1998-99

Indicators	India	Gujarat
Low Birth Weight (%)	5.7	8.1
Perinatal Mortality per 1000 live births	33	35
Still Birth per 1000 live births	9	11

Data Source: NFHS 1998-99: only 30 % of all newborns are weighed

Both low birth weight and stillbirths are low, perhaps due to underreporting.

h) Institutional Deliveries and Skilled Birth Attendants

Table 15: Institutional Deliveries and Skilled birth attendant, 1998-99

Indicators	India	Gujarat
Place of Delivery		
Institutional Deliveries	32.9	46.3
• Public	16.2	4.5
• NGO/Trust	0.7	6.7
• Private	16.7	35
Domiciliary Deliveries	65.4	53.7
Assistance during delivery	42.3	53.5
Doctor	30.3	37.4
ANM/Nurse/ LHV	11.4	16.1

Data Source: NFHS 1998-99

Assistance by a skilled person during delivery is very low (53.5% in Gujarat and only 42.3% in India). Presence of a skilled attendant during birth would go a long way in averting maternal morbidity and mortality.

i) Fertility Rates (Total fertility Vs Marital fertility)

Total Fertility Rates: To achieve the desired replacement level, the total fertility rate (TFR) needs to be brought down to 2.1.

Table 16: Fertility Rates, 2003

Vital statistics	India			Gujarat		
	Total	Rural	Urban	Total	Rural	Urban
Age Specific Fertility Rate						
15-19	0.046	0.053	0.025	0.029	0.034	0.018
20-24	0.214	0.235	0.158	0.216	0.239	0.173
25-29	0.171	0.180	0.147	0.189	0.210	0.150
30-34	0.090	0.099	0.067	0.084	0.093	0.065
35-39	0.044	0.051	0.026	0.030	0.037	0.017
40-44	0.019	0.022	0.009	0.009	0.012	0.002
45-49	0.007	0.008	0.004	0.004	0.004	0.003
Total Fertility Rate	3.0	3.2	2.2	2.8	3.1	2.1
Total Wanted fertility Rate	2.13	2.28	1.73	2.08	2.29	1.81

Data Source: SRS 2003

The high TFR (3 for India, and 2.8 for Gujarat) and low desired fertility rate (2.13 for India and 2.08 for Gujarat) imply the need to strengthen family planning activities.

Marital Fertility Rates: Married women account for the majority of childbirths in India. Therefore, Age Specific Marital fertility rates could identify the appropriate age group for added focus for our efforts on family planning activities, as can be seen from the following table.

Table 17: Marital Fertility Rates, 2003

Vital statistics	India			Gujarat		
	Total	Rural	Urban	Total	Rural	Urban
Age Specific Marital Fertility Rate						
15-19	0.247	0.249	0.234	0.154	0.158	0.140
20-24	0.326	0.332	0.306	0.333	0.357	0.283
25-29	0.196	0.201	0.180	0.211	0.231	0.173
30-34	0.097	0.105	0.073	0.090	0.099	0.071
35-39	0.048	0.054	0.028	0.032	0.040	0.018
40-44	0.021	0.025	0.010	0.009	0.013	0.003
45-49	0.008	0.009	0.005	0.004	0.004	0.004
Total Marital Fertility Rate	4.7	4.9	4.2	4.2	4.5	3.5

Data Source: SRS, 2003

As can be seen from the above table, family planning efforts should focus more on women in the age group 15-29 years. Studies have shown that when all births were postponed by one year in each age group, there was a decline in the total fertility. By postponing all births by one year, a large proportion of women would shift from the relatively lower age group with high fertility to a relatively higher age group with lower fertility.

j) Unwanted Pregnancies: Spacing and Parity:

Repeated pregnancies increase the risk of maternal mortality and morbidity. These risks rise with each pregnancy beyond the third, and increase significantly with each pregnancy beyond the fifth. The health hazards for the mother and the child resulting from unregulated fertility are: *increased prevalence of low birth weight babies, severe anaemia, abortion, ante partum haemorrhage and high maternal and perinatal mortality*, which show a sharp rise after the 4th pregnancy.

The median age at marriage is low (16.7 in India, 17.9 in Gujarat), and 10-25% of all births occur within 1-5 years of married life. This suggests that family planning efforts should be concentrated in the first few years of married life in order to achieve tangible results.

Table 18: Use of Family Planning and Parity, 1998-99

	India			Gujarat		
	Total	Rural	Urban	Total	Rural	Urban
Birth Order						
1	29.0	27.1	35.4	31.2	27.7	37.3
2	25.8	24.7	29.6	27.9	27.0	29.5
3	17.7	18.2	15.8	20.1	21.2	18.1
4+	27.5	29.9	19.2	20.8	24.4	15.0
Median Closed birth Interval (months)	30.8	30.8	30.9	29.0	28.2	31.2
Couple Protection rate	42.8	39.9	51.2	53.3	53.3	53.3
Different types of contraceptives						
Pills	2.1	1.9	2.7	1.5	1.0	2.2
IUD	1.6	1.0	3.5	3.1	1.6	5.1
Condom	3.1	1.6	7.2	3.5	1.3	6.4
Female Sterilisation	34.2	33.5	36.0	43.0	47.0	37.6
Male Sterilisation	1.9	1.9	1.8	2.3	2.4	2.0
Age at sterilisation: Less than 25	43.6	--	--	37.0	--	--
25-39	55.6	--	--	62.1	--	--
40 and above	0.8	--	--	0.9	--	--
Median age at sterilisation	25.7	--	--	26.5	--	--

Data Source: NFHS 1998-99

If the “two family norm” is followed, then 41% of births in Gujarat and 45% of births in India could have been avoided.

The median Closed Birth Interval, at 29 months (Gujarat), is below the desired spacing interval of 36 months.

Over emphasis on sterilisation is obvious from the above table, both in Gujarat and India.

The median age at sterilisation, at 26.5 years (Gujarat), means that half of mothers complete their child bearing at a very early age. There is thus a need to delay the age at first birth and to promote spacing methods of family planning.

2. Health systems and information

2.1 Panchayati Raj Institutions

Gujarat was the first state to introduce the three tier Panchayati Raj System in 1963, a step towards decentralisation and devolution of power, providing autonomy to local administration. Panchayati Raj Institutions (PRIs) consist of District Panchayat, Block Panchayat, and Village Panchayat systems. Each PRI has a president (elected representative), an administrative head (government officer), and several committees to focus on development as per local needs and devolution of powers to utilise resources as per local needs. Through the 73rd Constitutional Amendment, PRIs are strengthened with clear areas of jurisdiction, authority and funds.

2.2 Municipalities and Municipal corporations:

While PRIs are local bodies at the rural level, municipal corporations/municipalities are the local government bodies in the urban cities/towns.

2.3 National Rural Health Mission:

“Recognizing the importance of Health in the process of economic and social development and improving the quality of life of our citizens, the Government of India has launched on 12th April, 2005 the National Rural Health Mission to carry out necessary architectural correction in the basic health care delivery system. The National Rural Health Mission seeks to provide effective healthcare to rural population throughout the country with special focus on 18 poor performing states. The Mission adopts a synergistic approach by relating health to determinants of good health viz. segments of nutrition, sanitation, hygiene and safe drinking water. It also aims at mainstreaming the Indian systems of medicine to facilitate health care. The Plan of Action includes increasing public expenditure on health, reducing regional imbalance in health infrastructure, pooling resources, integration of organizational structures, optimization of health manpower, decentralization and district management of health programs, community participation and ownership of assets, induction of management and financial personnel into district health system, and operationalising community health centres into functional hospitals meeting Indian Public Health Standards in each Block of the Country. The Goal of the Mission is to improve the availability of and access to quality health care by people, especially for those residing in rural areas, the poor, women and children” (NRHM 2005).

2.4 State and District Health Societies

Gujarat has constituted the State Health Society. Its Governing Body is headed by the Chief Secretary and the Commissioner (Health & Family Welfare) is its Mission Director. The Executive Committee is headed by the Principal Secretary (Health & Family Welfare), while the Joint Secretary (Health and Family Welfare Department) is the convener. The Executive Committee would ensure execution of the integrated NRHM State Action Plan. The State Program Management Unit (SPMU) is functioning as the secretariat to the State Health Mission as well as the State Health Society. The unit provides necessary technical support through its pool of skilled professionals from the field of health policy, planning and management, development communication, chartered accountancy, public health, management information

systems, social work and information technology. District Health Societies have also been formed on the same lines as State Health Societies. The district health society is assisted by the Panchayati Raj Institutions (PRIs) in implementing the development programs.

2.5 Public Private Partnerships

2.5.1 GO-NGO:

NGOs play an important role in implementing the development programs/projects in the local communities. Under RCH, each district has one Mother NGO, one Service NGO, and 3-4 Field NGOs. A State NGO Coordinator has been appointed by the Indian government for Gujarat to facilitate the working of NGOs. Some examples of GO-NGO partnerships are given below.

Table 19: GO-NGO Partnership

Partnership for	Partnership example
PHC	SEWA-Rural: Jhagadiya
CHC	CHC- Chansad : “Bochasanvasi Akshar Purushottam Public Charitable Trust”
FRU	CHC of Mota Fofalya : Shakti Krupa Charitable Trust
Emergency Obs Care and Transport Facilities	Deepak Foundation and Charitable Trust in four tribal taluka blocks of Vadodara District, namely Chhota udepur, Kawant, Naswadi and Pavi Jetpur
ICDS	Bhansali trust in Patan and SEWA-Rural in Jhagadiya taluka
Quality Safe Motherhood Services	SEWA in 150 villages of Ahmedabad, Anand and Mehsana Districts
Health Insurance	SEWA
Association of Trained Birth Attendants	SEWA-Rural, Jhagadiya and SEWA

2.5.2 GO-Professional Bodies:

The Vande Mataram Scheme with participation from the Federation of Obstetric and Gynachological Society of India (FOGSI) and Private Clinics, provides free antenatal and postnatal checks, counselling on nutrition, breastfeeding, and spacing of birth in the private clinics on the 9th day of every month. This is an example of Corporate Social Responsibility.

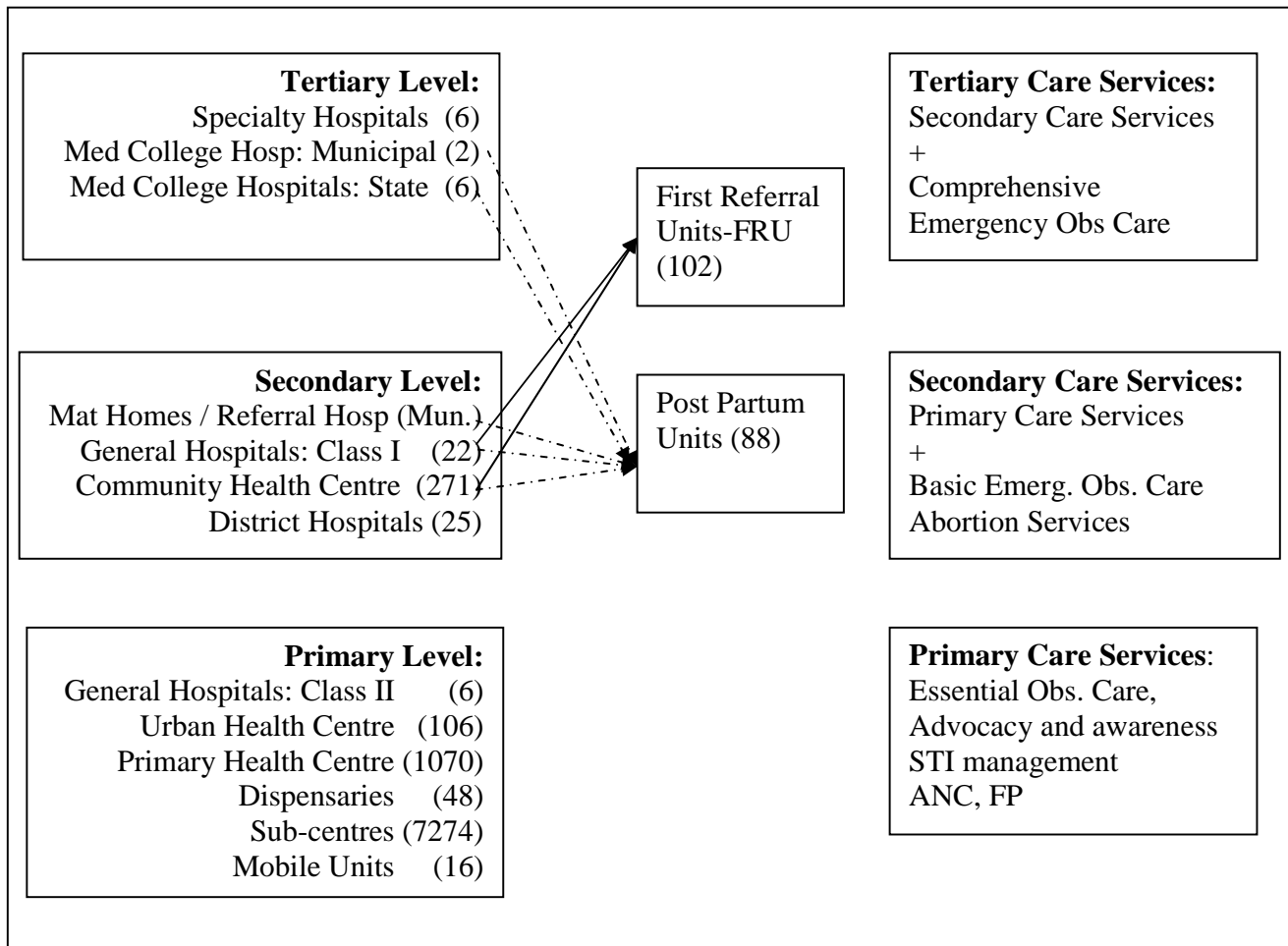
2.5.3 Patient Welfare Society / Rogi Kalyan Samiti:

Rogi Kalyan Samiti (RKS) is another local body consisting of government officials, public representatives, donors, professionals and community leaders. The funds generated by RKS are at the discretion of the RKS for improving the delivery of healthcare services.

2.6 Healthcare Delivery System:

Healthcare delivery in India follows the three-tier system as shown in Figure 1 below.

Figure 1: Three Tier Healthcare Delivery Model



Besides these state government facilities, there are health facilities under municipalities/municipal corporations as well as under the Employee State Insurance Corporation of the Department of Labour, Government of India, and a large number of private facilities.

2.7 Utilisation of health facilities

Table 20: Maternal service statistics

District	Maternal Care					
	Institutional Deliveries (a)	ANC registered / Expected Pregnancy (b)	3 ANC Visit / Expected Pregnancy (c)	High risk identified /Expected High Risk (d)	Govt. Hospital Delivery /Total Institutional Deliveries (e)	Early registration / Expected Pregnancy (f)
Districts Valsad	73.36	98.35	51.16	68.36	15.84	40.99
Gandhinagar	77.36	90.59	54.88	0.97	29.03	47.67
Bharuch	53.91	100.47	77.15	107.83	43.12	56.00
Sabarkantha	64.64	106.30	66.73	0.60	20.54	60.86
Mahsana	90.47	88.16	59.79	0.55	11.70	53.28
Vadodara	53.22	98.37	74.37	38.16	43.90	46.55
Ahmedabad	60.26	103.15	66.58	0.74	18.02	51.71
Rajkot	60.74	91.61	82.80	50.24	60.30	54.39
Junagadh	50.27	84.02	67.03	60.32	67.86	53.97
Jamnagar	59.90	85.20	61.65	72.99	77.98	45.69
Kheda	57.51	102.34	79.13	1.05	52.29	57.88
Surat	59.35	80.09	61.06	63.68	32.35	51.64
Panchmahal	38.14	98.17	53.07	63.30	19.26	47.30
Katch	46.02	86.77	68.72	72.93	54.34	37.92
Surendranagar	47.09	93.92	72.24	0.74	68.29	44.75
Amreli	43.37	98.30	60.14	46.40	77.02	44.32
Dangs	13.14	98.51	65.43	55.77	69.43	59.20
Bhavnagar	24.82	89.37	57.80	111.79	69.92	32.93
Banaskantha	56.20	92.63	76.13	0.60	16.71	39.04
Patan	66.86	88.34	64.34	0.77	11.58	49.79
Anand	71.49	93.50	64.58	0.74	39.85	54.88
Dahod	49.88	96.14	67.57	61.03	75.61	49.67
Narmada	25.26	92.95	59.51	79.58	99.87	51.02
Navsari	86.41	86.93	83.82	110.50	50.42	57.83
Porbandar	65.04	115.79	61.28	20.75	83.07	45.18
Corporations Ahmedabad	90.32	95.92	88.63	0.00	100.00	49.64
Vadodara	95.53	88.93	46.20	55.61	81.04	38.64
Surat	93.80	96.86	77.62	2.59	36.17	40.31
Bhavnagar	81.38	112.33	101.26	7.12	79.01	35.51
Rajkot	93.01	95.20	54.79	102.55	27.43	42.70
Jamnagar	94.00	67.86	46.62	0.00	81.92	8.53
Regions Gandhinagar	68.79	94.08	66.11	0.67	17.70	49.54
Ahmedabad	68.35	97.98	75.97	0.58	63.04	51.78
Vadodara	44.95	97.76	66.39	64.82	45.28	49.36
Surat	75.72	90.38	67.93	47.43	33.89	46.95
Bhavnagar	47.33	93.29	65.35	62.57	74.27	43.67
Rajkot	65.78	87.76	67.30	67.25	57.62	43.04
Gujarat	63.24	93.98	68.15	60.52	48.71	47.77

Source: Government of Gujarat, 2006, these statistics need validation.

In Table 20, we show the utilisation of maternal services with the following indicators:

- a) Institutional delivery for assessing internal impact,
- b) (ANC Registered)/(Expected Pregnancies) for beneficiary coverage,
- c) (3 ANC visits)/(Exp. Pregnancy) for service reach
- d) (High Risk Identified)/(Exp High Risk) for service efficacy
- e) (Govt. Hospital Deliveries)/(Total Inst. Deliveries) for service demand
- f) (Early Registered)/(Exp. Pregnancy) for client's compliance

These are service statistics provided by the Government of Gujarat. The performance of districts is dependent on many factors such as monitoring systems, availability of staff etc. Therefore percentage figures like 103 appear because these are achievements against targets. Some services targets are given uniformly to all districts, which explain such variations in service levels.

2.8 Central Medical Stores Organization

The Directorate of Central Medical Stores Organization (CMSO), Gujarat is vested with the responsibility of procuring drugs and medicines for all the medical institutions in the state (approximately 9,000 institutions) through a rate contract, which is valid for a period of one year. The annual budget of the Directorate of Central Medical Stores Organization for procurement of drugs and medicines is approximately Rs. 380 million. The CMSO maintains a list of 477 items, consisting of 417 drugs, 29 surgical dressings and sutures and 31 surgical items.

2.9 Social Insurance

The Government of Gujarat has announced an innovative model of public private partnership with private Gynaecologists called '**Chiranjeevi Yojna**' (Long life). The scheme has been initiated in the five most deprived districts in the state with a high maternal mortality rate. These five border districts have sizable tribal and SC/ ST population and are also 'backward' in terms of overall development. FOGSI, Gujarat Chapter offered services for conducting the deliveries. The rates were fixed for a package of 100 deliveries considering 85% normal deliveries and likelihood of complications in the remaining 15% cases, so that there was no temptation for any doctor to do more caesarean surgeries. The reimbursement was made directly to the gynaecologists for the expectant BPL women. A sum of Rs 200 was paid as transportation allowance to enable the pregnant women to come from remote villages to the clinic. A sum of Rs.50 was provided for the traditional birth attendant or person accompanying the expectant mother to ensure that somebody known to the lady was there at the time of delivery.

2.10 Budget Process and Budget

The process of budget formulation begins in October each year. All offices and facilities submit revised estimates of expenditure for the current year against the budget provision and budget estimates for the next year. This is compiled by heads of the departments and submitted to the Finance Department. Each department also plans new schemes according to the budget available, which is approved by the respective minister and the finance department and included in the annual budget. The budget is approved in the budget session of the state legislative assembly in February.

The finance department releases funds to each department on a monthly basis through the treasury. The state government's budgets for the last few years are given in Exhibits 2 and 3.

Levels and sources of finance: As mentioned elsewhere, the contribution from the Government (Central and State governments combined) is around Rs 21,000 Crore (1 crore = 10 Mill) out of a total health expenditure of Rs 110,000 Crore (Out-of pocket expenditure is therefore as high as 80%). The government contribution of Rs 21,000 crores is about 0.9 % of the GDP. It has been argued (NCMH 2005) that the government contribution to health sector needs to be stepped up to 3% of GDP from the current level of 0.9%. The projected additional requirement of Rs 74,000 (or 2.2% of GDP) consists of an estimated Rs 33,000 crore for capital investment, Rs 41,000 crore for recurring costs and Rs 9000 crore towards premium subsidy for the poor under a mandatory Social Health Insurance Program covering the entire country over the next 15 years.

At present, social insurance accounts for 2.36% of the total health budget in the country, private voluntary insurance schemes for less than 1% of the total health budget, while community insurance is a non-starter. In this connection, it is necessary to point out that Gujarat Government has recently announced the "Chiranjeevi Scheme" to insure women against risks associated with childbirth and this scheme is working very well.

External aid to the health sector, government and NGOs is only 2% of the total health spending. Similarly, though the emergence and growth of NGOs have received much attention in India in recent years, its contribution to the health sector is a negligible 0.3%.

The family welfare program is a 100% centrally sponsored scheme. The budget allocation under the scheme includes expenditure on salary and maintenance of State, District and City Family Welfare Bureaus, Sub Centres, Urban Family Welfare Centres, Post Partum Units, Training Institutes, compensation to family planning acceptors, and drugs for the sub centres. The salaries of State and District Reproductive and Child Health (RCH) Officers are also borne out of family welfare budget. Items such as vaccines, cold chain equipments and contraceptives are supplied by the Ministry of Health and Family Welfare, Government of India and accounted for separately in the family welfare budget. Medicines and drugs worth Rs. 380 million are procured through the Central Medical Service Organization in Gujarat, while around Rs.40 million are spent at the facility level for emergency needs in the districts. Additional inputs under the flexi-pool (pooled funds from donor partners) were provided during implementation of RCH phase I. After implementation of National Rural Health Mission in 2006, the allocation of fund has been substantially increased for RCH II.

Fund Flow: It was observed that states were unable to fully utilise the funds allocated in the annual budget, including central assistance, due to procedural delays. Gujarat State therefore constituted a Society for Voluntary Action (SCOVA) to facilitate the flow of funds. The Governing body of SCOVA is empowered to take decisions on allocation of the budget to spending agencies and spending as per annual plans approved by the governing body. Similarly, District Reproductive and Child Health Societies were constituted at district levels. These alternative fund flow mechanisms were helpful in the timely release of funds. However funds could not be utilised optimally as it took time to switch over to alternative systems as well as the absence of detailed guidelines and lack of clarity. The recently formed State and District Health Societies are expected to overcome the difficulties mentioned above.

2.11 Quality Assurance

The Ministry of Health and Family Welfare , Government of India established the Quality Assurance Committee at State and District levels on 15.12.2004 to ensure quality of services in the Family Welfare Centres, and such orders were also issued by the Honourable Supreme Court on 01.03.2005 after a public interest litigation. Accordingly, the State Government has constituted a State level and District level Quality Assurance Committee.

3. Policies, strategies and plans

3.1 Health Policy:

Gujarat is marked by socio-economic disparities within the state, among districts and between urban and rural areas. There is a need to reduce these disparities with an area-specific approach to reach out to the indigent sections. Increasing urbanisation and migration are also causing various social problems such as crime, poverty, destitution and spread of diseases like HIV/AIDS. Gujarat's Health Policy is based on its Population Policy 2002, which in accordance with the National Population Policy (Government of India 2002), also focuses on improving the quality of life of its people. It also aims at reducing gender discrimination, empowering women, and ensuring extensive service support to achieve replacement level fertility by 2010. Respecting the reproductive rights of men and women is the underlying principle of the population policy.

Objectives: The objective is to provide integrated reproductive health care services, including addressing the unmet need for contraception. The state has committed to strengthen health care infrastructure and support systems to improve access to these services to reduce the total fertility rate (TFR) from its current level of 3.0 to replacement level of fertility (2.1) by the year 2010. In achieving these objectives, an inter-sectoral approach has been adopted. The specific objectives to be achieved by the year 2010 are:

- a) Reduce MMR from 389 to less than 100 per 100,000 live births.
- b) Increase contraceptive prevalence from 54.2% to an average of 70%.
- c) Reduce infant mortality rate from 63 to 16 per 1000 live births.

Table 21: Health and Population Goals for Gujarat

Health Indicators	Current status	2010
Total fertility rate 1998	3.0	2.1
Couple protection rate 2001(%)	54.2	70.0
Maternal mortality rate 1992-93	3.9	<1.0
Infant mortality rate 1999	63.0	16
Under 5 mortality rate 1996	20.4	<10.0
% Children fully immunised 1998-99	48.0	100.0
% Deliveries by trained attendants 1998-99	74.2	100.0
% Institutional deliveries 1998-99	46.0	80.0

Source: Government of Gujarat, 2002.

3.2 Gender Equity Policy

The Government of Gujarat has formulated a Draft Gender Equity Policy in 2004. Certain measures are Gender planning, sensitisation, mainstreaming, analysis & audit, and convergence (Government of Gujarat, 2004)

3.3 Nutrition Policy

Gujarat Government developed a State Nutrition Policy (May 1998), with the overall goal of reduction of malnutrition of all types including underweight and micronutrient deficiencies amongst children, adolescent girls and women in child bearing age (Government of Gujarat, 1998).

3.4 Strategies and Plans at State Level

We describe below the process adopted by the Gujarat State for formulating strategies and action plans (Government of Gujarat, SPIP 2005] at the state level.

The participatory process for the formulation of RCH II design was initiated with the formation of a multi-disciplinary design team under the aegis of the department of health and family welfare. The 15 member design team comprised of experts/representatives from government, non-government organisations, academic/research institutions, and development partners. The first two meetings discussed the progress made under RCH I, experiences gained, lessons learnt, and set the state specific priorities for RCH II. This was followed by a Marginal Bottleneck for Budgeting (MBB) planning workshop to conduct an MBB survey to do a situational analysis. Subsequently, a Log Frame Analysis (LFA) was prepared and shared with other development partners for inputs. Following a workshop with all stakeholders, an expert group consisting of state authorities, development partners, programme managers, and research institutions was formed to finalise the State Program Implementation Plan (SPIP).

3.4.1 MMR Reduction

The strategies for reducing the Maternal Mortality Rate (MMR) from the present level of 389 per 100,000 to below 100 per 100,000 live births are as follows:

- a) 90 % complete antenatal care
- b) 90 % deliveries assisted by Skilled Birth Attendants
- c) 80% institutional deliveries
- d) Increased access to Emergency Obstetric Care
- e) 90 % coverage of post partum care
- f) Early & safe abortion services (1/100,000 Population)
- g) Access to RTI/ STI services in all Primary health centres and community health centres

Detailed Plans of action for achieving each of the above mentioned targets for each year of the RCH II programme are given in the State Programme Implementation Plan 2005-2010. For illustration, we reproduce some of the action plans below.

Table 22 gives the annual plan for achieving 90 % complete ante natal care by 2010.

Table 22: Plan for Ante Natal Care

% women receiving complete ANC	Current Status (RHS-2)	Cumulative Objectives				
		2005-06	2006-07	2007-08	2008-09	2009-10
Overall	27.21	32	42	57	75	90
Urban	32.03	37	47	62	80	95
Rural	22.96	27	37	52	70	85
SC/ST	23.62	28	38	53	71	86

Source: Government of Gujarat, SPIP 2005

RHS: Rapid Household Survey

Similarly, the annual plan for Emergency Obstetric Care services is given below, see Table 23.

Table 23: Plan for Emergency Obstetric Care Services

Type of EmOC services	Current Status (RHS-2)	Cumulative Objectives				
		2005-06	2006-07	2007-08	2008-09	2009-10
BEmOC (100 % FRUs, 50 % CHCs, 10 % PHCs)	56	181	366	380	380	380
CEmOC 90 % FRUs	39	64	102	102	102	102

Source: Government of Gujarat, SPIP 2005

RHS: Rapid Household Survey

3.4.2 Population Stabilisation

The strategies to reduce the unmet need for spacing, and terminal methods are given below.

- Increase access to non clinical contraceptives through community based marketing
- Improve access to non clinical contraceptives through Social Marketing
- Popularise IUD 380 as an alternative to sterilisation
- Strengthen sterilisation services in each block
- Increase the availability of services through Public-Private Partnerships
- IEC and advocacy for late marriage, spacing, and small family

The annual plan for achieving the above mentioned targets is given below in Table 24.

Table 24: Plan for Unmet needs: Spacing and Terminal methods

Unmet Needs	Current Status	Cumulative Objectives				
		2005-06	2006-07	2007-08	2008-09	2009-10
Spacing	3.11	2.75	2.0	1.5	1.0	0.5
Terminal Methods	9.84	8.5	7.0	5.0	3.0	1.0

Source: Government of Gujarat, SPIP 2005
RHS: Rapid Household Survey

3.4.3 Other strategic Areas

Some of the other areas where state level strategies and plans were formulated include

- Health infrastructure
- Human Resource Development and Capacity Building
- Logistics and Supply system
- Referral system, and
- Health Management Information system

3.5 Plans at District Level:

Following the announcement by the National Rural Health Mission, the state Department of Health and Family Welfare has also prepared a District Programme Implementation Plan (DPIP) for a few districts. The process of formulating the DPIP was the same as that followed by the state for the State Programme Implementation Plan.

4. Health Policy Processes: General and Maternal Health

4.1 Process of Policy Formulation

As mentioned in the earlier section, Gujarat's health policy is a part of its Population policy. Below, we describe the process adopted by the Gujarat government in formulating its population policy (Government of Gujarat, 2002). The state population policy has drawn on inputs from a collaborative process. The State government has taken the following initiatives in this direction:

- A Social Infrastructure Development Board was set up for achieving overall development in the state, which identified priorities of reducing the infant mortality rate and maternal mortality rate and thereby achieving a replacement fertility level and subsequent population stabilisation.
- Under the directive of the Chief Minister of Gujarat, a high-level committee on population stabilisation headed by Hon. Minister of Health and Family Welfare was formed in February 2000. The members of the high level committee include:

Health and Family Welfare Minister of Gujarat
Chief Secretary, Government of Gujarat
Additional Chief Secretary, Health, Government of Gujarat
Additional Chief Secretary, Family Welfare, Government of Gujarat
Additional Chief Secretary, Finance, Government of Gujarat
Principal Secretary, Social Justice and Empowerment, Government of Gujarat
Principal Secretary, Planning, Government of Gujarat
UNFPA State Programme Coordinator, Gujarat (Invitee)

- The orientation programme for Members of the Legislative Assembly (MLAs) on population and development issues was organised on March 14, 2000 with support from UNFPA. The objective was to sensitise them on issues related to IMR, MMR, gender discrimination, population growth and the need for linkages between the social institutes and health system.
- A working group of experts from various fields comprising health, education, development, services, management and panchayati raj was formed on March 22, 2000, which met regularly to discuss relevant issues so that perspectives from different fields were built in to strengthen the policy.
- A state level consultative workshop was organised on May 1, 2000 with UNFPA support to bring together experts from various fields, including representatives from governmental organisations, non-governmental organisations and institutions working in the field of development, to deliberate upon issues of population and development and suggest measures to draft a realistic policy.
- A population policy statement was released on May 11, 2000, the day India's population crossed the one billion mark.
- The first draft document was prepared by September 2000. Following discussion with key stakeholders including government officials and broad consultation for consensus, the final draft was produced in October 2000.

4.2 Strategic Themes:

In order to achieve the above objectives, the following strategies were adopted (Government of Gujarat, 2002).

- **Paradigm shift from population control to a reproductive and child health approach:** The Family Welfare programme will be changed from a population control focus based on targets and incentives to a comprehensive reproductive and child health (RCH) programme. The RCH services will be treated as the right of the people. The programme will be strengthened to meet the needs of women, men, adolescents and children as close to the community as possible.
- **Improving quality of services and make them more client focused:** One of the reasons for limited achievements of the past policies and programmes in the population and health

field has been the lack of quality of services. The new policy will pay special attention to the quality of services and ensure that they meet the needs of the population leading to widespread acceptance of the services.

- **Promote gender equality, women's empowerment, and male participation:** Realising that causes of many reproductive and other health problems arise from gender imbalances in the society, the policy and programmes will institutionalise gender perspectives in all education and training programmes and communication media.
- **Decentralisation: structural changes and financial reform:** The state constituted a Gujarat Population Commission (GPC) under the chairmanship of the Chief Minister. The Commission comprises elected representatives, members from concerned departments, experts, representatives from non-governmental organisations, the corporate sector and international agencies. The commission will oversee the implementation of the policy and review the progress to ensure that the set goals as envisaged in the policy document are achieved. It will also act as an advisory body to the government on population and development matters. For furthering decentralised planning and programme implementation, Panchayati Raj institutions are an important means.
- Promoting inter-sectoral coordination and partnership between governmental organisations, non-governmental organisations, the corporate sector, co-operatives and the private sector: Partnerships will be promoted between and among government, non-governmental organisations, corporate and private sectors and co-operatives. In Gujarat, the network of cooperatives is well spread. In some areas linkages exist between health workers and cooperatives. Inter-sectoral coordination within government will also be enhanced. These efforts will promote synergy, minimise duplication, and facilitate effective utilisation of resources.
- Enforcing accountability of public, private health and social service sector: Success of population and reproductive and child health policies are largely dependent on the accountability and efficiency of the health and related social services. The government will set up effective mechanisms to ensure that health and other social services that are supportive to population stabilisation and reproductive and child health objectives are performing as per the expectations. Such mechanisms will involve the government, the academic community and social organisations in reviewing and monitoring the programmes.
- **Resource mobilisation, alternative financing and better financial utilisation:** Government resources have always been less what is required in most social programmes. The government will make efforts to develop partnership with various agencies and other sectors, and mobilise more resources from various sectors. Various innovative systems such as community cost sharing, health insurance, health cooperatives, corporate and philanthropic donations etc. will be tried out. But the guiding principle in all this will be maintaining social equity in providing services.
- **Social mobilisation and Information Education & Communication:** Social mobilisation is important for the success of all programmes. This will lead to the generation of greater demand for the services and thereby better utilisation.

4.3 Reproductive and Child Health programme II:

The Gujarat Government formulated its RCH II policy based on its Population Policy 2002. Currently, the RCH II programme is being modified to suit the framework of the National Rural Health Mission, through a participatory approach. The major steps included in the process are:

- Using evidence to assess the current situation: Government Management Information System, District level household surveys, and National Family Health surveys
- Primary survey on facilities: A Survey of sample First Referral units and a Marginal Budgeting for Bottlenecks (MBB) survey in selected districts to understand the managerial issues at the field level. The survey also included a tool to investigate the demographic profile, health infrastructure, human resources, training needs, logistics including equipment and instruments and other resources.
- Feedback from RCH Phase-1
- Preparing a Logical Framework and a strategy document for RCH-II
- A core group consisting of public health experts, academicians, NGO representatives, management experts, civil society partners, administrators and programme managers of the department of Gender and Adolescent Health experts was formed. This group synthesised the inputs from all stakeholders and drafted the state Programme Implementation Plan.
- Convergence with the departments having close synergy with the RCH programme, such as Women's Empowerment and Child development, Rural Development, Urban Development, Social justice and Empowerment (Tribal development), Education and Youth Affairs, Panchayat (Local Self Government) and the State AIDS Control Society.

Reforms underway in the State of Gujarat include:

- Application of GIS in planning of activities related to RCH services
- Contracting out services for developing IEC services
- Contractual Appointments
- Creation of Block Health Office to assist District Health Organisation
- Creation of Community based volunteers in urban areas
- Delegation of powers to medical officers to undertake minor repair work in PHC/SC buildings
- Entrusting Rural Health and Medical Services & Management of PHC to a Voluntary Organisation
- Establishment of Emergency obstetric care services in tribal and inaccessible areas.
- Establishment of Quality Control Circles
- Establishment of blood transfusion network
- Grouping of Community Health Centres (CHCs)
- Link Couple Scheme

- Mapping of expertise available for training in private and NGO sector
- Samaydan scheme for private practitioners
- Urban health care project
- Financial decentralisation for Medicines and Maintenance
- Grant-in-aid institutions as a policy instrument to promote autonomy
- Continuing medical education through monthly teleconference
- Development of software for RCH programme monitoring

5. Health Human Resources

5.1 Health Administrative Staff

The top-level Management at the Department of Health and Family Welfare consists of a Principal Secretary (Health and Family Welfare), Secretary (Family Welfare) and a Joint Secretary (Health). The secretary (Family Welfare) is also the Health Commissioner. Various branches of the commissionerate such as health, medical services, medical education and the central medical stores are headed by additional directors. The health commissioner is assisted by 15-20 programme officers, technical and other support staff.

For administrative reasons, the 25 districts of Gujarat are grouped into 6 regions; Ahmedabad, Vadodara, Surat, Rajkot, Bhavnagar and Jamnagar. The Regional Deputy Director, RDD (Health & Family Welfare) is the administrative head at the regional level, assisted by Assistant Director, Account Officer, Administrative Officer, Paramedical staff (Approximately 15) and support staff (approximately 25). The RDD directly supervises the performance of district level programme officers such as the Chief District Health Officer (CDHO), the Chief District Medical Officer (CDMO), the District RCH Officer, the Additional District Health Officer, the District TB Officer, the District Leprosy Officer and superintendents of community health centres in the region.

Provision of primary health care is an important focus of the three tier Panchayati Raj Institution (PRI). The Chief District Health Officer is the head of the primary health care structure at the district level and is responsible for implementation and monitoring of district health programmes. The Chief District Health Officer is assisted by 4-5 programme officers. The Chief District Medical Officer and the Regional Deputy Director are responsible for the provision of secondary care at the community health centres, district and sub district hospitals.

Gujarat has recently (April 2005) introduced a Block Health Officer (BHO) to supervise the working of 4-5 primary health centres and a few community health centres in each district. Each BHO is assisted by one Block Information, Education and Communication Officer (BIECO), one Block Health Visitor (BHV) and six support staff. Gujarat has a total of 169 Block health offices.

5.2 Human Resource strategies:

Staffing norms are specified for each tier of the three tier delivery system of healthcare delivery in rural areas

- Each primary health centre has a Medical Officer (Graduate degree)
- Each community health centre has one specialist (Post Graduate of any specialty), and three Medical officers
- Each District hospital has 14 specialists and 10 Medical Officers

See Table 25 below for details of all staff. It is worthwhile to mention here that states like Tamil Nadu and Maharashtra have 2 Medical Officers in primary health centres.

Table 25: Staffing norms for various health facilities at district level and lower

Health Facility	Staff	Class	No. of staff	Population covered
Sub centre	Health worker female (ANM)	III	1	5000 (3000 in tribal areas)
	Health worker (Male)	III	1	
Primary health centre	Medical Officer	II	1	30,000 20,000 in tribal areas
	Pharmacist	III	1	
	Health worker female(ANM)	III	1	
	Health Assistant (Male)	III	1	
	Health Assistant (Female)/LHV	III	1	
	Laboratory technician	III	1	
	Driver (if vehicle available)	III	1	
	Peons/Ayahs	IV	2	
Community Health Centre	Superintendent (Class I)	I	1	1,00,000
	Medical officers (Class II)	II	3	
	Nurse Mid-Wife (staff nurse)	III	7	
	Technical Staff	III	3	
	Support Staff	IV	11	
District Hospital	Specialists	I	14	
	Medical Officer	II	10	
	Nurses (1: 3 beds)	III	50	
	Technical staff	III	25	
	Administrative staff	III	36	
	Support staff	IV	100	

Data Source: Government of India, 2005: Class I is Highest

The total number of medical and para medical staff in Gujarat is given in Table 26 below.

Table 26: Availability of health personnel, Gujarat and India

Category of Health Personnel		Gujarat	India
Doctors	Total	59811	1316671
	Allopathic Doctors (Registered :2003)	37194	639729
	ISM Doctors (Registered:2003)	22617	676942
	No. of Doctors in Government	2712	67576

	No. of Doctors in Private	57099	1249095
	Doctor (all) population ratio	1:846	1:780
Nurses	Registered general nurses (2004)	85406	839862
	Nurse population ratio	1:592	1:1223
ANMs	Registered ANMs (2004)	35780	502503
	ANM population ratio	1:1414	1:2043

Source: Health Information of India, 2004

In Table 27, we show the number of staff required as per the norms in Table 25 and the percentage of vacancies and shortfalls.

Table 27: Vacancies and shortfalls of staff at the Government facilities, 2005

Sub Centres , Primary Health Centres, Community Health Centres

	Required	Sanctioned	In position	Vacant (%)	Shortfall (Required-vacant) (%)
Medical Officer at PHC	1070	1070	912	158 (14.8%)	158 (14.8%)
MPW Female/ ANM	8344	7274	6650	624 (8.6%)	1694 (20.3%)
MPW (M)	7274	5405	2389	3016 (55.8%)	4885 (67.2%)
Health Assistants female -LHV	1070	1227	952	275 (22.4%)	118 (11.0%)
Health Assistants male	1070	1265	616	649 (51.3%)	454 (42.4%)
Physicians	271	0	0	0	271 (100%)
Surgeons	271	254	95	159 (62.6%)	176 (64.9%)
Gynecologist	271	35	19	16 (45.7%)	252 (93%)
Pediatrician	271	35	8	27 (77%)	263 (97%)
Total specialists at CHC	1084	324	122	202 (62.3%)	962 (88.7%)
Radiographers	271	271	154	117 (43.2%)	117 (43.2%)
Pharmacist	1314	1413	1022	391 (27.7%)	319 (24.3%)
Lab technicians	1341	1357	1025	332 (24.5%)	316 (23.6%)
Nurse midwife	2967	2769	1453	1316 (47.5%)	1514 (51%)

Source: Government of India, 2005

At the sub-centre the male and female health workers (Multi Purpose Workers, MPWs) carry out the activities of mother and child care, family planning and immunisation. Health assistants (male and female) supervise 4 health workers each of the corresponding category. Their job functions are administration and supervision.

5.3 Maternal Health

The state department of Health and Welfare has a total of only 10-12 officers in the top management position for planning and monitoring the entire RCH programme in the state (Exhibit 1) which has around 1.15 million childbirths every year.

Policies for establishing First Referral Units (FRUs) for emergency obstetric care was part of the Child Survival & Safe Motherhood programme being carried forward in RCH Phase-I, II. We give the status of FRU specialists (Sanctioned, Filled, Vacant) in Table 28 below.

Table 28: Specialists at FRUs, 2004

No.	District	No.	Gynaecologists			Paediatricians			Status of Superintendent	
			S: Sanction	F: Filled	V: Vacant	S	F	V	F	V
1	Ahmedabad	5	3	2	1	3	2	1	4	1
2	Amreli	5	2	0	2	2	0	2	2	3
3	Anand	4	1	1	0	1	1	0	2	2
4	B K	5	4	2	2	4	1	3	5	0
5	Bharuch	4	2	1	1	2	1	1	2	2
6	Bhavnagar	5	3	0	3	3	1	2	3	2
7	Dahod	3	2	1	1	2	1	1	1	2
8	Dangs	1	1	0	1	1	0	1	0	1
9	Gandhinagar	4	3	3	0	3	3	0	3	1
10	Jamnagar	5	3	1	2	3	0	3	4	1
11	Junagadh	5	4	1	3	4	0	4	4	1
12	Porbandar	1	1	1	0	1	1	0	1	0
13	Kheda	3	3	2	1	3	2	1	2	1
14	Kutch	5	2	2	0	2	0	2	2	3
15	Mehsana	4	4	2	2	4	0	4	3	1
16	Narmada	3	1	1	0	1	0	1	2	1
17	Navsari	5	4	3	1	4	2	2	4	1
18	Panchmahal	3	2	0	2	2	0	2	3	0
19	Patan	3	2	0	2	2	0	2	3	0
20	Rajkot	6	6	2	4	6	0	6	5	1
21	S K	4	2	2	0	2	0	2	3	1
22	Surat	6	2	1	1	2	0	2	4	2
23	S' nagar	4	2	1	1	2	0	2	1	3

24	Vadodara	5	4	2	2	4	2	2	4	1
25	Valsad	3	2	1	1	2	1	1	2	1
Total		65	32	33	65	18	47	69	32	
Percentage			49	51		28	72			

Source: State Family Welfare Bureau, 2004

At present, under the FRU set up, 40 units are functional, 17 obstetricians and 19 blood banks.

5.4 Training for RCH activities

It can be seen that 51 % of gynaecologists and 72 % of Paediatricians positions are vacant in First Referral Units. Under the ongoing National Rural Health Mission and RCH-II, this issue is being addressed by training and empowering Medical Officers, Nurses and female health workers (ANMs). Medical Officers and nurses are trained to perform and assist caesarean sections at the community health centre level, and other procedures such as forceps and vacuum extraction, removal of retained products and repair of vaginal tears. ANMs are trained to give drugs for prevention and management of Post Partum Haemorrhage, eclampsia and infection as well as manage the 3rd stage of labour.

Training for Basic and Emergency Obstetric care taken up by the state is as follows:

- BEmOC for Medical Officers of community health centres in selected districts (15 days)
- CEmOC for Medical Officers by FOGSI (2.5 months for MOs, 15 days for surgeons, and 2 days for O&G specialists)
- ANM training in Basic Obstetric skills (15 days demonstration and practice in community health centres/District Hospitals placed in the labour room).

The State has also made an arrangement for hiring private Gynaecologists for emergency obstetric care.

Gujarat has a good training infrastructure consisting of one State Institute of Health and Family Welfare, 5 regional training centres and 17 district training centres. There is one training institute for Public Health Nurses, 2 schools for training Lady Health Visitors, and 11 ANM training schools. There have been many revisions in the ANM training duration and syllabus over the decades responding to the Programme priorities at the National level. The ANM is now called the Female Health Worker (FHW). This new FHW course is of shorter duration (18 months) and has less emphasis on midwifery skills (Mavalankar 2005) raising issues of competence of FHWs for conducting deliveries. There is only one government nursing college in the state.

6. Role of Civil Society in Health

6.1 Laws related to women's health (Gupta, 2002)

Constitutional provisions: There are several laws which directly or indirectly affect women's life and health. Given the traditional gender structure, which is highly male dominated, special efforts

are required to protect women's rights, which are guaranteed in the constitution. Here we present an indicative list of laws which are in related to women.

Medical Laws

- The Medical Termination of Pregnancy Act, 1971.
- Pre-Natal Diagnostic Techniques (regulation and Prevention of Misuse) Act, 1994.
- Drugs and Cosmetics act, 1940.

Occupational Laws

- Maternity Benefit Act, 1961.
- Equal Remuneration Act, 1976.
- Working Hours and Conditions for Women Workers.
- Special Provisions for Health and Welfare.

Laws Facilitating Social and Mental Well Being

- Guidelines and Norms Prescribed by the Supreme Court of India against Sexual Harassment at Work.
- Laws relating to Rape
- Immoral Traffic (Prevention) Act, 1956.
- Dowry Prohibition Act, 1961
- National Commission for Women Act, 1990.
- The Child Marriage Restraint Act, 1929.

As is common in the legal system, most laws come into effect only when the affected party complains to the police or other authorities. Some laws are grossly violated without any action being taken by the government. For example under the Child Marriage Restraint Act, 1929, the minimum age for marriage as per law is 18 years for women. But the median actual age at marriage is less than 18 years implying that more than half the women in India marry before the legal age. Similarly, many instances of dowry harassment, rape etc. go unreported and the acts remain on paper. Fortunately some NGOs and women's organisations have periodically taken up certain causes to ensure improvement in the implementation of the acts.

PNDT Act: Gujarat Government is very concerned about the adverse sex ratio, and hence is seriously implementing the Pre-Natal Diagnostic Techniques (Regulation And Prevention of Misuse) Act, 1994: The Pre-natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994 was formed to provide regulation for the use of pre-natal diagnostic techniques (for the purpose of detecting genetic or metabolic disorders or chromosomal abnormalities or certain congenital malformations or sex linked disorders) and for the prevention of the misuse of such techniques for the purpose of pre-natal sex determination leading to female feticide. Amendments have been made to the Principal Pre-Natal Diagnostic Techniques Act and rules and it is now referred to as the Pre-Natal Diagnostic Techniques (Regulation and Prevention Of Misuse) Amendment Act, 2002

6.2 Women and Drudgery

The presence and availability of basic amenities such as access to bathrooms, toilets, safe drinking water and fuel for cooking decides the level of drudgery that a woman has to undergo. It decides her levels of physical, emotional and psychological well being. Given that India is a poor country, women have to carry out not only household work including cooking, washing, taking care of children but also look after cattle and do farm work. Access to modern amenities of life like tap water, electricity, cooking gas etc. are very limited and hence most women have to spend a lot of time and effort on daily chores. As per the State Gender Development Report, Gujarat ranks 4th in terms of Drudgery in women's lives. Women's drudgery may have negative impact on maternal health, especially in terms of increased calorie requirement during pregnancy and resulting low birth weight of children.

6.3 Crimes against Women in Gujarat

Table 29 below gives the data on registered crimes against women in Gujarat State. In total, registered crimes against women numbered 12.70 / 100,000 population. It must be noted that crime in general, and especially against women, are highly under-reported and hence the official statistics may just give some indication of the trend but the actual levels of crime may be very different.

Table 29: Registered Crimes against Women, Gujarat State

Crimes Against Women	Section	1997	1998	1999	2000	2001	2002	2003	2004
Rape	IPC 376	0321	0311	0304	0314	0235	0262	0230	0331
Kidnapping	IPC 363, 366	0769	0914	0896	0765	0731	0697	0739	0777
Murder	IPC 302	0376	0345	0351	0334	0284	0277	0287	0254
Attempt to Murder	IPC 307	0102	0106	0087	0080	0075	0077	0072	0064
Dowry Deaths	IPC 304 B	0085	0063	0057	0055	0043	0036	0031	0027
Torture	IPC 498 A	2419	2989	3365	3542	3191	2866	3185	3781
Molestation	IPC 354	1073	1192	1118	0976	0803	0759	0705	0763
Eve Teasing	IPC 509	0083	0114	0134	0147	0091	0094	0082	0092
Abetment to Suicide	IPC 306	0523	0536	0575	0497	0473	0434	0403	0438
Grievous Hurt	IPC 325	0300	0305	0294	0260	0237	0236	0189	0205
Simple Hurt	IPC 324	0832	0996	0963	0910	0817	0708	0591	0669
Child Marriage	C.M.R.A 4,5,6	0021	0017	0026	0020	0008	0023	0009	0016
Attempt to commit Suicide	IPC 309	0221	0234	0209	0153	0150	0102	0077	0069
B.P. Act	110.117	0377	0267	0319	0222	0348	0286	0372	0338
Suicidal death	Cr. PC 174	1476	1638	1774	1668	1632	1455	1483	1358
Accidental Death	Cr. PC 174	3077	3767	3378	3029	2750	2686	2545	2554
Others	IPC 337	0647	0839	0828	0754	0673	0462	0537	0523
I.T.P.A , 1956 3 TO 8	3 To 8	0005	0006	0039	0047	0061	0031	0063	0030
TOTAL		12707	14639	14717	13773	12602	11491	11600	12289

Source: (UNIFEM 2005)

6.4 Women and Work Participation

As against 9.7% male workers in rural areas having regular employment, only 1.8% women have regular employment. In urban areas the regular employment of women is 24.7% compared to 35.6% for men. Women in Gujarat are more active in the labour market but the increased participation is mainly in the unorganised and informal sectors with low quality of employment. Almost 85% of

unpaid work is done by women. Women generally have jobs with lower prestige and remuneration but sometimes women's jobs are more demanding. With the increase in literacy rates in Gujarat, women are getting into organised employment in increasing numbers. There are very few occupations except perhaps nurses, which are dominated by women.

6.5 Women And Leadership

The State of Gujarat ranks **12th** in terms of women taking leadership roles in political and management fields. There is increased participation by women at the Panchayat level because of new legal provisions of reservation of 33% elected seats for women. There are some NGOs which promote women's leadership through Panchayats institutions. Women's representation in the State Assembly and Parliament remains low as most political parties are not serious about women's participation in politics.

6.6 Women in Decision Making

Besides political participation, women are also increasingly playing active roles in decision making in other sectors of life. Even though the current number and proportion may be small, it is increasing. The following table gives details about women in decision making in Gujarat.

Table 30: Women in Decision Making, Gujarat

Members in Parliament	3
Members in State Assembly	12
Women Contestants In Parliamentary Elections	11
Women Contestants In State Assembly Elections	37
Women Panchayat Members	3336
Women In Administration	27
Women CEOs Of The Companies	3
% Of Women Managed Small Scale Industries	20.57

6.7 Mechanisms at state level for implementing laws/ policies:

The following Departments and Commissions in Gujarat are responsible for preventing violence against women, implementing laws and policies and providing support services related to women.

- Department of Women And Child Development
- Director of Social Defence for Women's Development
- State Welfare Board:
- The Police Services And The Department Of Home
- The Judiciary
- The Gujarat State Legal Services Authority
- Department Of Health And Family Welfare
- State Sexual Harassment Prevention Committee
- Department Of Social Justice And Empowerment

6.8 Origin and Structure of Civil Society Organisation in Gujarat:

NGOs (and other civil society organisations) have a long and rich history in Gujarat. Many religious sects of Hinduism and Jainism created some forms of social organisations to promote religious activities including the building and maintenance of temples. Besides this, given that Gujarat was the birth place and work place of Mahatma Gandhi, there were several individuals and organisations inspired by him in Gujarat. These are called Gandhian NGOs and have a deferent ethos. Gujarat also has a wide variety of more modern NGOs with commitment to certain causes. Health related and women's NGOs are also quite active in Gujarat. Of late, more NGOs have started because of increased international and national funding for development and health work. This is especially true for HIV.

6.9 Relationship between State and Civil Society:

As India is an open and democratic society, there is a formal and informal relationship between state and civil society organisations. Before independence, a large number of NGOs were either oppositional - trying to oppose the British Government, or purely developmental or reformist - trying to reform the society. After independence, the relationship between government and NGOs was one of mutual contempt or could be classified as uneasy co-existence. Until recently the government did not take into account the existence of NGO efforts during their planning for health services. In the last few years, there has been more and more acceptance by the government and encouragement of public-private partnership, where various government health programmes are contracted out to the NGO sector. Even now there is very little formal engagement between the government health sector and private (for profit) organisations or individual medical practitioners. The private sector and the NGO sector had always played a complimentary role to the government services and provide assistance in areas where government efforts were lacking. For example, the private sector is quite active in the provision of medicine as the government medicines budget is highly inadequate.

Government services are generally geographically spread and uniform, whereas private and NGO services are patchy and located only in certain places. The NGO sector is much smaller than the government, while the private sector is much bigger than the government. The government has focused largely on preventive services but neglected curative care while the private sectors only provide curative care. NGOs are active in both sectors - curative as well as preventive care.

Realising the short comings of government bureaucracies and its procedural orientation, the government has recently set up "Disease Specific Societies" or "Health Societies" (Rogi Kalyan Samithis). These are registered as NGOs under the NGO Act and hence are procedurally much more flexible and outside the government audit and accounting procedure. But they are largely directed by the same government officers who run the government health departments. Some people have called these societies government owned NGOs (GONGOs). Under various national health programme and especially under the National Rural Health Mission, more and more funds will be diverted through these health societies.

There is also an increasing trend towards involving NGOs and research and training organisations in government policy making and strategy development. This is largely due to the insistence of international partners such as UNFPA etc. During the formulation of the Population Policy in Gujarat, widespread consultations were held with civil society partners. Some of the key drafts of

government policy documents are also made by such partners. Thus in India and especially in Gujarat, there is much more active interaction and relationship between NGOs and the government.

Unfortunately, these relationships at times are highly based on the orientation and outlook of the health secretary or commissioners. There are some individuals who are pro-NGOs and hence involve them in many government activities, while individuals who are anti-NGOs do not consult the NGOs in key decision-making activities. To some extent political calculations and policy stances may affect GO-NGO relations.

In Gujarat, there have been several models of NGOs as given in the table below:

Table 31: Models of NGOs in Gujarat

Name of the NGO	Type	Comments
SEWA, Ahmedabad	Trade Union of self employed women workers	Health is a small part of their total activities. Their main activities are working with grass root level health workers, TBAs and health insurance.
SEWA Rural, Jhagadia	Service provision at primary and secondary level	Health is their major focus. There is a balance of preventive and curative service. They also conduct training
Chetna, Ahmedabad	Support and resource NGO	Works through providing developmental, management and technical support to smaller field NGOs and advocacy at national and inter-national level through networks
Bhansali Trust, Radhanpur and Deesa	Provides focused elements of primary care, child development and secondary level	Supported by diamond merchants from Mumbai, some activities closely linked to government services. Others are independent.
Locost, Vadodara	Manufacturing and provision of generic medicines to NGOs	Supporting NGOs through provision of high quality medicine at low cost; also promoting rational therapeutic
TBA Union	Trade Union of TBAs	It is organised with the help of SEWA and other NGOs who believe in important role of TBA; this is also recognised by the government

6.10 Civil Society and Maternal Health

India has a number of vibrant, active and enlarging civil society organisations, including NGOs, community based organisations, religious and other faith based organisations, and human rights groups. Some are also quite active in the health area, including maternal and child health. Some of the women's NGOs have very actively opposed certain public health policies. For example, the introduction of injectable contraceptives in India was challenged in the Supreme Court of India by certain women's NGOs and they effectively blocked the availability of injectable contraceptives for more than 10 years. Their main objection was that injectable contraceptives are not safe and hence will put Indian women at increased risk. Even today injectable contraceptives are not in the public family planning programme. Unfortunately, none of the women's NGOs or other civil society organisations who strongly opposed the introduction of newer family planning methods did any concrete action on the issue of high maternal mortality, which is clearly a preventable problem.

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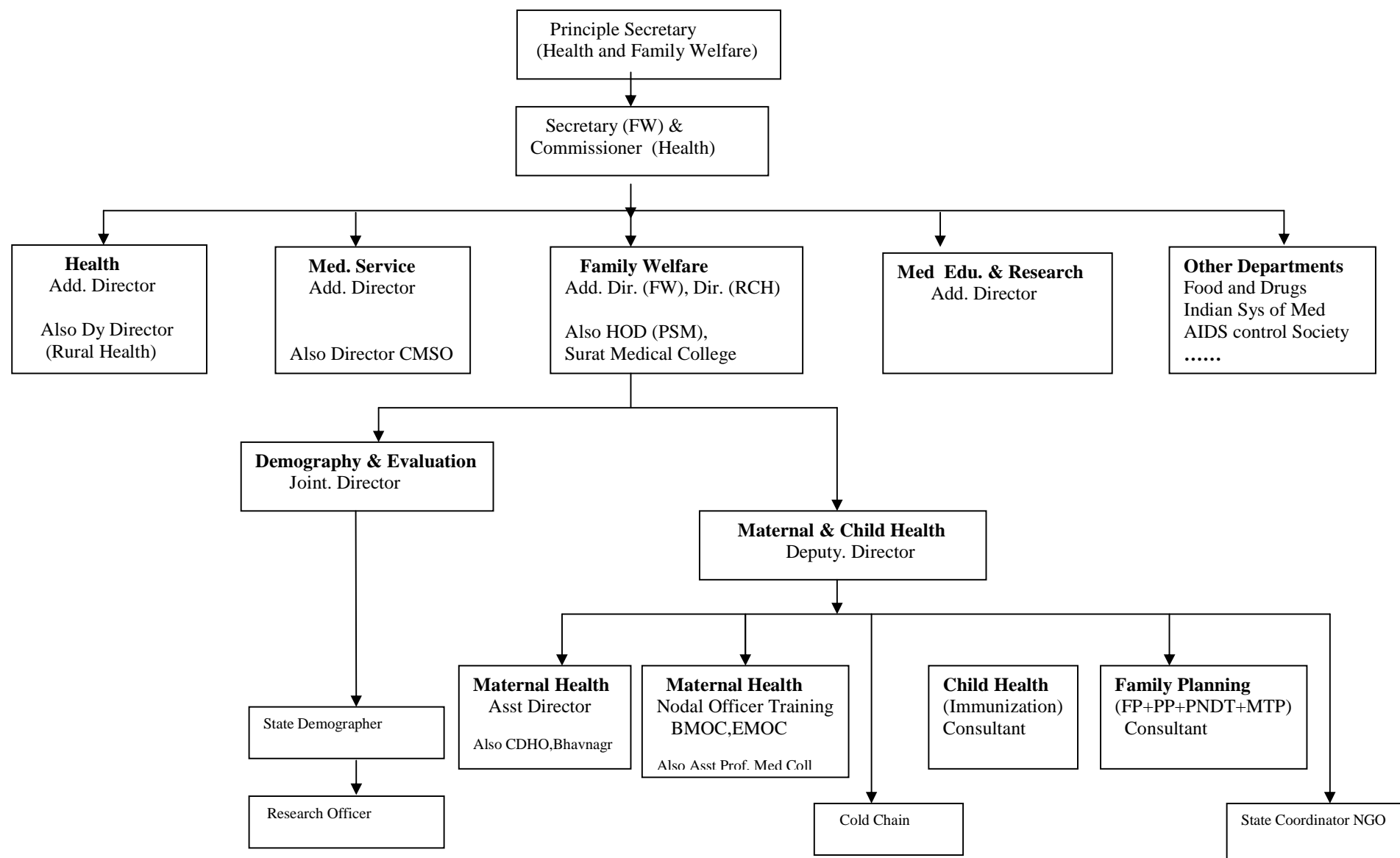
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Annex 1: Organisation of the Family Welfare Department



Annex 2: Gujarat State Annual Budget and provision for Health and Family Welfare

Rs in Crore (1 Crore= 10 Mill)

No.	Scheme	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
1	State Budget	24670.98	37792.84	31054.02	31998.03	32100.11	35702.19	36754.11
2	Annual Plan	7600.00	7200.00	7600.00	7800.00	8200.00	11000.00	12503.50
3	Provision for Social Sector						4025.98	4426.24
4	Health and FW Budget (Plan+Non-Plan)	973.08	953.83	948.74	919.41	931.31	1044.27	1256.34
5	Family Welfare (Central+State+Flexipool)		88.40	127.27	469.06	116.82	188.18	262.20
6	Expenditure on Maternal Health							
	Break up of Health & FW Budget							
7	Secretariat						23.00	8.03
8	Medical and Public Health						831.93	846.96
9	Other expenses						1.16	1.24
10	Family Welfare (Central+State)						127.68	180.17
	Sub Total						983.77	1036.40
11	Flexipool-Central assistance for RCH II						60.50	82.03
12	Flexipool for other programmes						0.00	137.91
13	Total Flexipool- NRHM						60.50	219.94
14	Total for Health & Family Welfare Sector						1044.27	1256.34
	Funding by External Agencies during 10th Plan period (2002-07)						Allocation	Expenditure
15	World Bank RCH I						27.55	24.64
16	World Bank RCH Subproject-Vadodara						10.10	7.24
17	UNFPA Supported IPD Project						36.45	13.58
18	EC supported Sector Investment Programme						248.00	110.00
19	UNICEF supported BDCS Project						6.50	6.50
							328.60	161.96

Annex 3: Gujarat State Budget Analysis : 2005-06 and 2006-07

Rs in Crore (1 Crore= 10 Mill)

No	Scheme	2005-06				2006-07			
		Central	State	Total	%age	Central	State	Total	%age
1	State Budget			35702.19				36754.11	
2	Annual Plan			11000.00	30.81			12503.50	34.02
3	Provision for Social Sector			4025.98	11.28			4426.24	12.04
4	Health and FW Budget			1044.27	2.92			1256.34	3.42
5	Family Welfare Budget			188.18	0.53			262.20	0.71
6	Expenditure on Maternal Health								
	Break up of Health & FW Budget								
7	Secreteriate			23.00	2.34			8.03	0.77
8	Medical and Public Health			831.93	84.57			846.96	81.72
9	Other expenses			1.16	0.12			1.24	0.12
10	Family Welfare-Total	111.30	16.38	127.68	12.98	98.54	81.63	180.17	17.38
	Sub Total	111.30	16.38	983.77	100.00	98.54	81.63	1036.40	100.00
11	Flexipool-Central assistance for RCH II	60.50	0.00	60.50		82.03	0.00	82.03	
12	Flexipool for other programmes			0.00		137.91	0.00	137.91	
13	Total Flexipool-Central assistance NRHM	60.50	0.00	60.50		219.94	0.00	219.94	
14	Total for Health & Family Welfare Sector	171.80		1044.27		318.48		1256.34	

