Document 2:
The principles and evidence base for state RCH II Programme Implementation Plans (PIPs)

Introduction

This document is **Document 2** of the Reproductive and Child Health II Programme. It summarises the principles, evidence and rationale that underpin the strategic direction and priorities of RCH II, in which context states will be designing their PIPs and logframes. It draws on the experience of RCH I, the Global and Indian evidence base, and established international best practice.

Document 1 of the Reproductive and Child Health II Programme documentation gives a summary and overview of the Policy context in which RCH II has been designed, its strategic direction, the lessons from RCH I, and the institutional and financial arrangements.

Document 3 is the National Level RCH II Programme Logical Framework.

These three documents are necessarily summaries and more detail is provided by the following **RCH II supporting documents** (presented in electronic form).

SD1	RCH II Background
SD2	Good Practices
SD3	Public Expenditure Review
SD4	Performance Based Financing for RCH II
SD5	Demand Side Financing
SD6	Adolescent Health
SD7	Immunisation MYP
SD8	Urban Health for RCH II
SD9	Tribal Health for RCH II
SD10	Gender
SD11	Equity and Access
SD12	BCC in RCH II
SD13	The Demand and Supply nexus
SD14	Public Private Partnerships for RCH II
SD15	MIES for RCH II
SD16	Intersectoral Convergence in RCH II

For the sake of brevity, most references have been removed, but these remain in the supporting documents.

Abbreviations

AIDS	Acquire Immunodeficiency syndrome
ANC	Antenatal Care
ANM	Auxiliary Nurse Mid-wife
AWW	Anganwadi worker
BCC	Behaviour Change Communication
BPL	Below poverty line
CHC	Community Health Centre
CINI	Child in need institute
CNAA	Community Needs Assessment Approach
CNAMA	Community Needs Assessment and Monitoring Approach
COC	Combined Contraceptive pill
DEMO	District Education and Media Officer
DfiD	Department for International Development
DHA	District Health Authority
DSF	Demand Side Financing
EAG	Empowered Action Group
EC	European Commission
ECTA	European Commission Technical Advisory
EmOC	Emergency Obstetric Care
FP	Family Planning
FRUs	First referral units
GDP	Gross domestic product
GoI	Government of India
HIV	Human Immunodeficiency Virus
ICC	Institutional Co-operation Component
IMR	Infant mortality rate
IUCD	Intra uterine contraceptive device
IUD	Intrauterine Device
LHV	Lady Health Visitor
MBB	Marginal Budgeting for Bottlenecks
MMR	Maternal mortality rate
MOH	Ministry of Health
MoH&FW	Ministry of Health and Family Welfare
MTP	Medical termination of pregnancy
NFHS	National Family Health Survey
NGO	Non-Governmental Organisation
NIHFW	National Institute
NNMR	Neonatal Mortality Rate
Obs/gyn	Obstetrics and Gynaecology
PHC	Primary Health Centre
PIP	Programme implementation plan
POP	Progesterone Only Pill
RBM	Results Based management
RCH	Reproductive and Child Health
RET	Regional Evaluation Team
RMP	Registered Medical practitioner

RTI	Respiratory tract infection
SC	Sub centre
SHG	Self help group
SHI	Social Health Insurance
SIP	Sector investment programme
SRH	Sexual and reproductive health
SRS	Sample registration system
STDs	Sexually Transmitted Diseases
STI	Sexually Transmitted Infections
TBAs	Traditional Birth Attendants
ToR	Terms of reference
TT	Tetanus toxoid
ULB	Urban Local Body
WB	World Bank
WHO	World Health Organisation
MoU	Memorandum of Understanding

Chapter 1: Improving Health Outcomes

1.1 *Population Stabilization*

1.1.1 ***Policy Evolution***

In 1951, India became the first country in the world to launch a family planning programme. Since then approaches reducing population growth have taken a variety of forms. The passive, clinic-based approach of the 1950s, gave way to a more proactive, extension approach in the early 1960s. The late 1960s saw the emergence of a "time-bound", "target-oriented" approach with a massive effort to promote the use of IUDs and condoms. This was followed by an even more forceful "camp approach" to promote male sterilization in the 1970s. The excesses of these campaigns lead to a backlash from which it took years for the programme to recover. The 1980s saw the rebuilding of the programme with an emphasis on female sterilization, and maternal and child health. In the 1990s the International Conference on Population and Development, Cairo prompted a paradigm shift, with the advocacy of a client-centred, quality-oriented, reproductive health approach. Method-specific targets were removed, and the programme focused on the unmet needs of clients, and RCH II continues with this approach. The National Population Policy of 2000 while legitimising the new approach also set 2010 as the target date to achieve replacement-level fertility.

1.1.2 ***Regional Variation***

National progress must be seen in the context of striking regional differences. The five Empowered Action Group (EAG) states of Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh, together with the three new states formed in this region, Jharkhand, Chattisgarh and Uttaranchal had an estimated combined TFR of 4.2 in 2000. For this region as whole it would take another 26 years to reach replacement fertility under the current rate of decline (Table 1.1). Thus, without acceleration of fertility decline in EAG states, India cannot hope to achieve replacement fertility by 2010. Assuming the prevalence of below-replacement fertility in some southern states, at best, India could hope to achieve a TFR of 2.6 by this date.

Table 1.1. TFR and projected No. years to reach replacement-level fertility

State	TFR 2000	Mean fall during last 10 years	Years required to achieve TFR of 2.1	Expected TFR in 2010
Andhra Pradesh	2.5	0.81	4	1.8
Assam	3.2	0.61	18	2.6
Bihar *	4.3	1.08	20	3.2
Gujarat	3.0	0.41	22	2.6
Haryana	3.3	0.86	14	2.4
Himachal Pradesh	2.4	1.35	2	1.8
Karnataka	2.4	1.03	3	1.8
Kerala	1.9	0.17	0	1.8
Madhya Pradesh *	3.9	0.86	20	3.0
Maharashtra	2.7	0.79	7	1.9
Orissa *	2.9	0.89	9	2.0
Punjab	2.6	0.82	6	1.8
Rajasthan *	4.1	0.45	45	3.7
Tamil Nadu	2.0	0.49	0	1.8
Uttar Pradesh *	4.6	0.75	34	3.9
West Bengal	2.4	1.02	3	1.8
All India	3.3	0.74	16 (18)**	2.5 (2.6) **
Mean for EAG	4.2	0.82	26	3.4

EAG states. ** State-weighted average.

What are the hopes for a faster reduction in fertility in the EAG states? Table 1.2 shows the position of EAG states with respect to some important determinants of fertility around 2000, average changes in the determinants during the last 10 years, and the number of years it may take the region as whole to reach the levels required to attain a TFR of 2.1. Indicators in some southern states have been taken as the norm for required levels to reach replacement-level fertility.

Table 1.2: Determinants of fertility in EAG States and projected No. years to reach replacement-level fertility

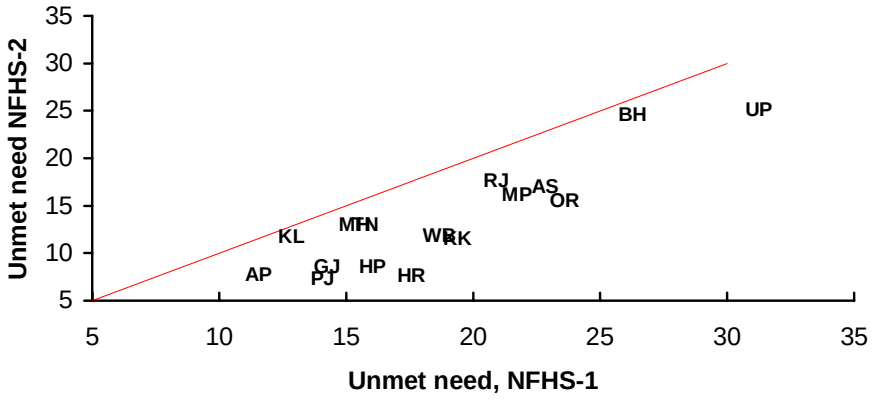
Indicators	Level 2000	Change Over last decade	Required level for TFR of 2.1	Required no. of years
Percent using contraception	34	10	65	31
Median age at marriage	15	0.5	18	60
Unmet need for contraception	21	5	5	32
Ideal family size	3	0.3	2	33
Female literacy rate, age 7+	45	15	80	23
Infant mortality rate	85	28	40	16
Empowerment of women	Low	?	High	?
Exposure to mass media	41	12	75	28
Home visit by ANM (%)	5	?	20	?

It has been estimated that with current trends, it will take the EAG states at least 25 years for the use of contraception, female age at marriage, unmet need for contraception, ideal family size and regular exposure to mass media to reach their respective levels required to attain replacement-level fertility. Only trends in infant mortality and female literacy suggest that they would be reaching the required levels earlier. But an important caveat with respect to their trends must be noted; although the average decline in IMR during the last 10-years has been quite rapid, there has been a substantial deceleration in the rate of decline in recent years, and further decline could be more difficult than the linear projection suggests. With respect to female literacy, the 2001 census has recorded a substantial increase probably because of adult literacy campaigns. It is doubtful whether an increase in literacy by such means would have the same effect on fertility as through formal channels. Thus the prospects for India achieving replacement fertility by 2010 seem bleak.

1.1.3 ***Unmet Need for Contraception***

The NPP document and the recent report of the steering committee on family welfare for the tenth five year plan lays great emphasis on addressing the unmet need for contraception in order to achieve population stabilization. High levels of unmet need for contraception in EAG states are well documented by NFHS-1 & 2 (Figure 1) and district RCH surveys.

Figure 1. Unmet need for contraception (%) in Major States, NFHS-1 & 2



However, it is unlikely that inadequate access to services is the main or even a major reason. A carefully conducted investigation in the Philippines had shown that unmet need for contraception arises from several reasons, such as weak motivation, low female autonomy, perceived health risks, and moral objection to the use of contraception. Elimination of these factors, could be as challenging as

generating fresh demand for contraception. The estimated number of couples with unmet need for contraception is provided in Table 1.3.

Table 1.3: Estimated number of couples with unmet need for contraception, 1998/2003

Major states	Unmet need for contraception NFHS-2, 1998-97			Eligible couples 31 March, 1998 ('00s)	Number of unmet need couples in 1998/2003		
	Spacing	Limiting	Total		Spacing	Limiting	Total
Andhra Pradesh	5.2	2.5	7.7	137876	7170	3447	10616
Assam	7	10	17	38885	2722	3889	6610
Bihar *	12.6	11.9	24.5	171605	21622	20421	42043
Gujarat	4.8	3.7	8.5	81862	3929	3029	6958
Haryana	2.9	4.7	7.6	32555	944	1530	2474
Karnataka	8.3	3.2	11.5	85723	7115	2743	9858
Kerala	6.9	4.9	11.7	51590	3560	2528	6036
Madhya Pradesh *	8.9	7.3	16.2	136767	12172	9984	22156
Maharashtra	8.1	4.9	13	153387	12424	7516	19940
Orissa	8.7	6.8	15.5	58690	5106	3991	9097
Punjab	2.8	4.5	7.3	36740	1029	1653	2682
Rajasthan	8.7	8.9	17.6	92146	8017	8201	16218
Tamil Nadu	6.6	6.4	13	105506	6963	6752	13716
Uttar Pradesh *	11.8	13.4	25.1	274389	32378	36768	68872
West Bengal	6.3	5.5	11.8	129748	8174	7136	15310
All India	8.3	7.5	15.8	1658687	137671	124402	262073
EAG states	10.9	11	21.9	733597	79295	79365	158386

*including newly formed states of Jharkhand, Chattisgarh and Uttaranchal

1.1.4 ***Current Choice of Contraception:***

On a nation wide basis the family planning program currently offers five modern contraceptive options. The temporary contraceptive methods available currently for spacing are the oral contraceptive pill, condoms and intra-uterine devices, and male/ female sterilization for limiting family size.

1.1.4.1 **Oral contraceptive pills**

There are two types of oral contraceptive pill: combined oral contraceptives (COCs), also known as the “the Pill”, and the progestagen-only pills (POPs) also known as the “mini pill”. At present only the combined pill is available in India. When used correctly, COCs have a pregnancy rate of 1-8% in the first year of use. Whilst there may be some side effects such as nausea, breast tenderness, breakthrough bleeding and headache, COCs offer a range of therapeutic advantages such as the regulation of menstrual cycles, decreased menstrual flow, some protection against ovarian and endometrial cancer and benign breast diseases and prevention of ectopic pregnancies. Limitations with of COCs include

strict user compliance and the fact that effectiveness may be lowered when certain concurrent medication is taken. Serious side effects (thrombosis), though rare are possible. In India 2% of currently married women use COCs (NFHS-2 98-99)

1.1.4.2 **Condoms**

Condoms are effective immediately, have no method-related health risks and are the most popular barrier contraceptive in India. They have the advantage of being the only contraceptive method that provides dual protection from pregnancy as well as from STI/HIV. When used correctly every time, the failure rate is 3% in the first year of use (but when account is taken of how condoms are more commonly used, this rate is estimated to be 14%). The NFHS-2(1998-99) shows that 3% of couple use condom as a method of contraception.

1.1.4.3 **Intrauterine Devices (IUDs)**

IUDs are made from plastic and may contain copper or a progestogen. They are the most effective long term, reversible method of contraception. The first year pregnancy rate for the Copper T 200B (effective life 3 yrs) is 0.5 – 3% and the equivalent rate for the Copper T 380 (effective life 10 yrs) is 0.6 – 0.8%. They are suitable for breast feeding women, not user dependent, inexpensive and do not interfere with intercourse. IUD use does, however, require a trained provider for councelling and insertion. IUDs may increase the risk of PID in users with a history of RTI/STIs and those with multiple partners. Increased menstrual flow and cramping are common, usually settling in the first few months. NFHS-2 estimates that 2% of currently married women use IUDs.

1.1.4.4 **Female Sterilisation**

Tubal ligation provides permanent contraception for women. It is a safe, simple surgical procedure relatively free of side effects, can be performed on an outpatient basis under local anesthesia. It requires little surgical time, causes minimal discomfort to the client who can be discharged 2-4 hours after surgery.
The two most common methods are laparoscopy and minilaparotomy. Laparoscopy requires expensive equipment and well-trained surgeons or Obs/ Gyn specialists. Counseling to ensure informed consent is of particular importance in sterilization programmes because the method is intended to be permanent. Tubal ligation is more effective than COCs, IUDs or injectables. The failure rate in the first year for minilaparotomy is 0.4 – 1% and for laparoscopy is 0.1 –0.5% in the first year. Tubal ligation is the most popular and widely promoted method of contraception in India. According to NFHS-2(1998-99), 34% of currently married women in India have accepted female sterilization.

1.1.4.5 **Male Sterilization (Vasectomy)**

Vasectomy is a highly effective, safe and permanent method for men. Men still produce semen and have the same sexual feelings, desire and capabilities. Vasectomy does not cause impotence, weakness or the man's ability to perform work and support the family. There are two methods "conventional vasectomy" and "no scalpel vasectomy (NSV). Conventional vasectomy procedure involves making either one or two small incisions in the scrotum and required blunt and sharp surgical dissection and risk of haematoma. No-scalpel vasectomy is a modified, sophisticated technique that requires no incision, only a small puncture and therefore no stitches. It is a safe, simple procedure that can be performed in low-tech, low-resource setting. The failure rate is usually 0.2 – 1% in the first year. The current acceptance of the method in the country is 2%

1.1.4.6 **Emergency contraception (EC)**

Pregnancy may result following unprotected sexual intercourse, rape or a contraceptive failure. EC is a means to prevent pregnancy in such situations. It is meant for one-time protection for women who suspect they may be at risk of pregnancy. Women seeking emergency contraception should be offered the immediate choice of an acceptable ongoing method of contraception. There are two types of EC; the progestin-only pill and the IUD. The progestin only pill (75mg) can prevent pregnancy within 72 hours after unprotected intercourse. It reduces the risk of pregnancy by 89 percent (from about 8 percent to 1 percent) when used correctly. In the first 24 hours after a single act of unprotected intercourse, it can prevent 95 percent of expected pregnancies. Side effects associated with this type of EC are nausea, vomiting and menstrual irregularities. IUDs can be effective as EC. An IUD must be inserted within 5 days of unprotected intercourse. Very few pregnancies have ever been reported: failure rates are less than 0.1%

1.1.5 ***Expanding contraceptive choices in RCH II***

International evidence shows that increasing the availability of method choice increases acceptance rates. It is estimated that every additional method, increases the contraceptive prevalence rate increased by 12 %. Wider contraceptive choice, including natural methods, helps meet the changing needs of couples during their lives. Multiple methods make switching easier, reduce method-specific discontinuation, improve user satisfaction. Contraceptive choice can be expanded by both adding new methods to the existing range and hincreasing access to the services providing the choice. There are several possible additions that would improve the range of choice offered by the RCH II programme:

1.1.5.1 **Injectable contraceptives**

Injectable contraceptives contain only progesterone. They are highly effective method of contraception. There are two types of progestin only injectables available: Depo-Provera and Noristerat. Progestin only injectable contraceptives are highly effective, have few side effects (amenorrhea, irregular bleeding, and a delayed return to full fertility). Injectable contraceptives do not interfere with sexual intercourse, remembering the daily pill, and can be used confidentially by the woman. They are effective almost immediately and do not affect breast-feeding. Health benefits include decreased menstrual cramps, reduced menstrual bleeding thereby improving anemia, protection against endometrial cancer and decrease in benign breast diseases.

1.1.5.2 **The Lactational Amenorrhea Method (LAM)**

LAM is based upon the natural infertility experienced by breastfeeding women, especially during the early postpartum months. LAM is now being promoted as a contraceptive choice to women. LAM is approximately 98% effective as long as *all* the following conditions are met:

- The mother is less than six months postpartum.
- The woman's menses have not returned.
- The mother is "fully or nearly fully" breastfeeding her baby (whenever the baby cries, at least 6 times a day including night feeds, the baby is being fed exclusively from the breast and intervals between feeding are less than four hours during the day and six hours at night)

Under these conditions, LAM can be highly effective, with no physical side effects and brings crucial benefits to the neonate. The main limitation is that although it costs the health services next to nothing, there are significant opportunity costs for the mother and it offers no protection against STIs/HIV.

1.1.5.3 **Standard Days Method (SDM)**

The Standard Days Method (SDM) is a simple method based on fertility awareness; the woman learns how to tell when the fertile time of her menstrual cycle starts and ends. It is based on WHO data that women who usually have a 26 to 32 day cycle are potentially fertile from day 8 to day 19. SDM allows the woman to identify the days in each cycle when she is least likely to become pregnant if she has unprotected intercourse There are innovative aids to assist women to keep track of their cycle such as CycleBeads™. This method is natural and has no side effects It is effective and relatively easy to teach, learn and use in low resource setting. Limitations include the high degree of motivation the couple must have, it is difficult for women with irregular menstrual cycles, the man must be involving and it does not protect from STI/HIV.

1.1.5.4 **Centchroman**

This is a new form of oral contraceptive pill that does not contain any steroidal hormones, developed by the Central Drug Research Laboratory, Lucknow. It appears to be safe and economical and is sold under the brand names **"**Saheli" and "Centron". It is taken once a week and so is convenient. It is very effective and can increase client privacy. There are no known side effects, except that in about 8% of users there is delay in menses. Fertility typically returns within six months of discontinuation of Centchroman. It is not suitable for women with active or recent liver disease, ovarian disease or chronic cervicitis and it does not protect from STI/HIV.

1.1.5.5 **Female Condoms**

These are safe, pre-lubricated barrier contraceptives. When worn, it lines the vagina gently. It should be used only once and then discarded. It offers protection against both pregnancy and STI/HIV. It requires considerable motivation form the woman.

1.1.6 ***Strategies to expand contraceptive choice in RCH II***

Human resource capacity must be developed to deliver quality family planning services. This will include training, but also strengthening management of public institutions

1.1.6.1 **Expanding the range of RCH services**

To increase access to services and address unmet need, the pool of public sector providers will be increased to deliver quality services. The current number of trained providers for sterilization services is insufficient. Each CHC and PHC will have at least one MO trained in one sterilization method. All the CHC/PHC will have at least one MO posted who can be trained for abdominal tubectomy. This method does not require a postgraduate degree or expensive equipment. Similarly MOs will be trained for NSV. Specialists from District hospitals and CHCs will be trained in laparoscopic tubal ligation .

Operational strategy*:* Training centres will be established in Medical Colleges and District Women's Hospitals (DWH). These centres will create master trainers in the respective methods through a 10 day TOT course. The master trainers will then conduct induction training for the surgical teams from districts comprising of doctors and nurse assistants. This induction training is of 12 working days for doctors and 6 working days for nurses. The master trainers will also train district trainers to mentor, support and supervise the fresh inductees in each district.

To train trainers in NSV, experienced providers will undergo a TOT of 6 days duration. They will in turn train medical officers in an induction training of 3 days. All trained providers will be followed up at the end of one month following the training to assess their proficiency.

A systemic effort will be made to assess the needs of all facilities, including:

- Inventory of staff in position and their training needs.
- The availability of electricity and water.
- Operation theatre facilities for District hospitals/CHCs/PHCs.
- Inventory of equipment, consumables and waste disposal facilities.
- The condition, location and ownership of the building.

At least three functional laparoscopes will be made available per team, as will the equipment and training necessary to provide IUD and emergency contraception services.

Each health facility will be assessed as above. Vacant positions will be filled in on a contractual basis. Sub centre rent may be increased and alternate strategies for constructing village sub centres with community participation will be piloted to see if this facilitates ANMs to reside in the sub centres.

Outcome: An increase in the number of acceptors of male sterilisation, female sterilisation, IUD and emergency contraception services in line with recommended quality standards.

1.1.6.2 **Improving and integrating RCH services in PHCs and Sub-centres**

The capacity of Lady Health Visitors (LHVs) and Auxiliary Nurse Midwives (ANMs) will be built through skill-based clinical training for spacing methods including IUCD insertion and removal, LAM, SDM and EC. They will also be trained in infection prevention, counselling and follow up for different family planning methods. MIS training will also be given to the health workers to enable them to collect and use the data accurately. Their supervisors will be trained for facilitative supervision and MIS. This will help to develop improved supervisory skills and increased ability to interpret and analyse data for adequate feedback and monitoring.

Operational strategy:

- Training centres will be established as in 1.1.6.1. The master trainers will train lead trainers/ANM tutors from ANM training centres, LMOs from District Women's Hospital and doctors and PHN Instructors from Regional Health and Family Planning Training Centres (RFPTC).
- The team of Lead trainers/ANM tutors and RFPTC trainers will conduct follow up of trained LHVs and ANMs after one month and six months of training and provide supportive feedback to the service providers and Medical Officers in-charge (MOIC) of the PHCs.

- Facilitative supervision to each ANM will be provided on a regular basis at least once a month by LHVs and feedback provided to the ANM and MOIC.

Outcome: An increase in the number of acceptors of an expanded range of methods.

1.1.6.3 **Training of District hospital/CHC/PHC staff to offer an expanded choice of services.**

Training providers to offer LAM, SDM, EC and injectables will help to increase the range of choice and ensure quality services and follow-up for the clients.

Operational strategy:

- One day TOT for the Master trainers of the district hospitals and half day training for all the doctors in the district for technical update including follow-up and quality of care issues for injectables.
- The overall strategy to increasing delivery of services is to ensure family planning service availability at District Hospitals throughout the year, at the CHC/FRU for at least six months in a year and PHCs offer services at least once every month.
- Training ANMs to provide family planning services.

***Outcome*:** More people access a wider range of methods from PHCs, CHC/FRUs and District Hospitals

1.1.6.4 **Forging linkages with ICDS division of women and child development department**

The ICDS program provides nutritional and health services through a network of Anganwadi centres. The Anganwadi worker (AWW) is involved significantly in catering to the health needs of mothers. Given the extensive network of the Anganwadi centres and the fact that the AWWs have a very good rapport with the community and are already providing a few family welfare services, they will be trained and be actively involved in counseling clients, provision of spacing methods including oral pills, condoms, LAM and SDM and community mobilization. Convergence of services at the grassroots would ensure increasing the access to and demand for services.

Operational strategy:

- A detailed action plan will be produced in co-ordination with the ICDS department for involvement of the AWWs and their role in increasing access to contraceptive services.
- Department of health officials and ICDS officers will be orientated to the plan.

- AWWs and their supervisors will receive technical training and training in communication skills and record keeping by Medical Officer of the PHC and LHV.

***Outcome*:** More people access family planning services from AWWs.

1.1.7 **Engaging the private sector to provide quality family planning services**

The private sector is the major provider of curative health services in the country. Engaging with it to provide family planning services has the potential to significantly expand the coverage of quality services. Public-private partnerships can stimulate and meet demand and have a synergistic impact of the RCH II. To ensure efficient services of good quality from the private and public sectors, robust monitoring and regulatory mechanisms will be developed.

1.1.7.1 **Incentives and training to encourage private providers to provide sterilization services**

Unless there are incentives for the private sector to venture into this area, its involvement is unlikely. The provision of fixed payments for clients served will encourage the private clinics and doctors to provide services normally given through government health facilities. Mechanisms will be designed to ensure the poorest can also gain access. The clinical skills of private doctors will be developed in vasectomy, abdominal tubectomy and laparoscopy. 43% of the total IUD clients obtain their services from the private sector. Training private lady doctors in IUD insertion and promoting the provider will help to expand coverage of these services increase the total use of IUCD.

Operational strategy: A detailed plan will be developed in consultation with the private sector for determining the amount and mode of payment, the regulation and monitoring frameworks necessary, and safeguards to ensure equity of access. Training for the private sector will be provided as above, and approved, monitored providers will be promoted and eligible for discounted supplies.

Outcome: More people access quality, equitable family planning services from the private sector.

1.1.7.2 **Encouraging the use of public facilities by private doctors on a fee-sharing basis**

Private doctors will be allowed to use public facilities on a fee sharing basis, e.g. in the evening when CHC/PHC s are normally closed. This will optimise the utilization of the existing infrastructure of public health facilities and make services more accessible, especially to day labourers.

***Operational strategy*:** Local private doctors will be identified and invited to participate through consultative meetings, and assist in drawing up a partnership action plan.

Outcome: More people access quality, equitable family planning services from private providers in public facilities.

1.1.7.3 **Regulation and accreditation of public and private sector facilities**

This will be an essential step in improving the quality and coverage of services provided by both the private and public sector. The private sector is unlikely to agree to regulation if it does not also apply to the public sector. Although the relationship must be managed carefully, the private sector has the potential to be become an important stimulus for public sector quality improvement.

Operational strategy: A mechanism for regulation and agreed standards will be developed in consultation with the stakeholders.

Outcome: More people will have access to high quality, regulated services from both public and private sectors.

1.1.7.4 **Providing Safety Insurance Cover**

Private sector providers may be reluctant to collaborate due to the fear of criticism and litigation. Insurance schemes to indemnify private providers will serve as an incentive to provide family planning services with the government.

Operational Strategy: Insurance schemes for private providers will be designed and implemented.

Outcome: More people will access quality family planning services from the private sector.

1.1.8 Stimulating demand for quality Family Planning services

1.1.8.1 **Increasing compensation**

Compensation payments have been increased in EAG states (Government Order M 12013/2/2003-EAG), which makes the following provisions:

Operational Strategy:

- In public facilities, compensation for tubectomy raised from Rs 300 to Rs 400 and from Rs 200 to Rs 400 for vasectomy.
- A minimum cash amount of Rs 200 will be paid for acceptor of tubectomy and Rs 250 for the acceptors of vasectomy (the difference can be retained at the facilities for improving quality).

- Accredited private providers providing services for BPL families without charging user fees will receive Rs. 400 per sterilization and Rs 75 per IUD. Private providers are entitled to charge non-BPL clients a user fee.
- Private providers providing sterilization in public health facilities will be paid compensation of Rs. 100 per case subject to a minimum of Rs 1000/day.
- In case of failure of permanent methods the acceptor will be eligible for safe Medical Termination of Pregnancy and compensation of Rs 5000.

Outcome: More people access quality family planning services from the public and private sectors.

1.1.8.2 **Using the media**

NFHS data shows that exposure to family planning messages in the mass media has a strong and independent effect on the demand for contraception services, and the future intention to use among non-users. Recent research suggests this may be through stimulating discussion between spouses, friends, neighbours, workmates and health workers. Messages need to be focused.

Operational Strategy: Promote the three inter-linked areas recommended for the RCH II BCC strategy to reduce TFR through the mass media:

- Birth spacing.
- Delaying the age of marriage.
- Reducing gender bias.

Outcome: More people access (or plan to access in the future) quality family planning services from the public and private sectors.

1.1.8.3 **Involving satisfied users**

Satisfied users can be important promoters of services.

Operational Strategy: Recruiting such couples to work in liaison with grassroots health workers may assist in stimulating demand for services.

Outcome: More people access (or plan to access in the future) quality family planning services from the public and private sectors.

1.1.8.4 **Increasing the gender awareness of providers and increasing male involvement**

Women worldwide seldom take major decision makers within the family. This is especially true in India. Therefore empowering women and increasing male involvement in family planning becomes essential to ensure that women are truly equal partners in choices regarding fertility control and child birth.

Increasing male involvement in RCH II will not only focus on increased use of male methods but will also aim to encourage men to support women's contraceptive choices and use. Male methods account for only 6% of current contraceptive use. Vasectomy and NSV are safer and easier to perform in primary health centres than tubectomy. Vigorous efforts should be made to promote this method. As males are the main decision makers in Indian households, BCC activities also need to focus on men.

Operational strategy: Gender sensitization training will be provided for all health providers in the CHC/PHC and integrated into all other training activities. The RCH II programme seek to support attitudinal change at all levels of health providers in favor of gender equality, so that they will have greater awareness of factors that influence women's decision making and thereby help them respond better to the needs of women and support her in exercising her choice. Demand for male contraceptive methods, men's reproductive health services and male involvement in RH care of women by will be stimulated through designing and implementing male-focused BCC activities. Service delivery sites for male methods by training health providers in NSV and conventional vasectomy will be expanded so that each CHC and Block PHC in the district has at least a provider trained in NSV.

Outcome: Improved gender awareness among providers leads to more people accessing family planning services, and more men become involved both as acceptors and supporters of their partner's decisions.

1.1.8.5 **Social Marketing**

Despite a longstanding social marketing programme for condoms and pills, there has not been a marked increase in the use of these methods. Experience of neighbouring countries suggests substantial potential for greater use of pills by younger couples, if supported by counselling and BCC activities. The social marketing programme has suffered from:

- A strong urban bias in the distribution network.
- low incentives for commercial participants.
- A limited range of products.
- The simultaneous presence of a wasteful, free distribution system.

Operational strategy: Social marketing of contraceptives, especially in rural areas will be strengthened. A strategy for Social Marketing is being developed and will include marketing of products and also the processes through social franchising. The creation of service availability through social franchising would enhance the availability in rural areas. The range of methods will be broadened. Community based depot holders and distributors will be part of the social marketing strategy. Social franchising would be the method to franchise the processes by franchising services of acceptable quality at affordable prices to the community. Condom vending machines are being introduced on a pilot basis in 54 HIV high-prevalence districts. The project has been promoted jointly by National AIDS Control Organization (NACO) and Department of family Welfare on a cost sharing basis.

Outcome: More people will access a broader range of socially marketed methods.

1.1.9 Contraceptive Requirements

The demand for contraceptives will rise if the above strategies are successful. As per the goals of the 10th plan, permanent method use should be 50%, and reversible method use should be 15% by 2007, compared with the present 35.5% and 8% respectively (NFHS-2 and RHS 98-99). The plan document has also set contraceptive goals for all the states (see Table). To achieve these targets, the required increase in the annual acceptance rates of various methods of contraceptive methods has been worked out. To do this, it was found necessary to correct the official estimates of acceptance rates for the base period (1997-2002). NFHS-2 and RHS have shown that the percentage of sterilized women is 20 percent higher than that suggested by the official estimates of couples currently protected, whereas IUD and pill users are one-fourth and condom users are two-thirds of the corresponding official figures.

A revised figure for "equivalent sterilizations" was arrived at by raising the sterilizations by 20% but dividing the number of IUDs by 12, pill users by 36 and condom users by 27. The corrected annual rate at the state level for 1997-2002 showed strong correlation with the survey-based estimates of modern method use (r=0.83), and suggested that for the modern method use to reach 65% by 2007, the annual equivalent sterilization rate would need to increase by 60% from the average annual rate for 1997-2002. As the population in the reproductive ages is also projected to increase by 19%, the annual number of equivalent sterilizations should be nearly doubled. To achieve the anticipated change in the method mix, the number of sterilizations will need to be increased annually by 8.6% and acceptance of reversible methods must be raised annually by 11% .

Table shows for major states, the annual rate of increase required in the number of new users of sterilizations and spacing methods in order to reach the goals of the tenth plan. To give an idea about the actual magnitude of the task, the table also shows the number of sterilizations to be done and new users of spacing methods (measured in equivalent sterilizations) in the year 2007-8 in each state. Calculations assume that wastage and use-effectiveness of different methods do not vary substantially by state. As per the table, in order to reach the tenth plan goals, Assam, Bihar, Jharkhand, Haryana, Uttar Pradesh and West Bengal would have to make particularly strong effort in increasing the annual acceptance of sterilizations and spacing methods.

1.1.10 Involving Panchayati Raj Institutions, Urban local bodies and NGOs:

1.1.10.1 Establishing depot holders to increase coverage of family planning services

Many women are unable to leave their homes to attend health facilities. This is a major barrier even in life-threatening situations. Involving PRIs, ULBs and NGOs to mobilize the community, sensitising community members to gender issues and training community members will enable women to access contraceptive services closer to home and support them in increasing their mobility.

Operational strategy: One couple from each village will be selected by the villagers themselves and will be trained to provide counselling and services for non clinical FP methods such as pills, condoms, LAM and SDM. They will be supplied with pills and condoms by the ANMs for free distribution and act as depot holders for these supplies. They will also procure pills and condoms from social marketing agencies and provide these contraceptives at the subsidized rate. They will provide referral services for methods available at medical facilities. They will assist in community mobilization and sensitisation.

Outcome**:** More people will access family planning services from depot holders of pills and condoms and be appropriately referred.

1.1.10.2 Building partnerships with NGOs

NGOs have the flexibility to create an enabling environment for increasing acceptance of contraceptive services in the community. New models will be developed for reaching out to younger men, women, newly married couples and resistant communities. These will be and scaled up as appropriate.

Operational strategy:

- Identify suitable NGOs against agreed criteria.
- Provide financial, technical and managerial support for implementation.
- Monitor, evaluate and assess potential for scaling up.

Outcome**:** More people access family planning services through NGOs.

1.1.10.3 **Building new partnerships for expanding contraceptive use**

Involving District Urban Development Authorities (DUDAs) and Cooperative societies will complement the efforts of the public and private sectors in contraceptive service delivery, increasing access and availability of quality services. These agencies will help in stimulating demand for family planning services

Operational Strategy: Agencies who are willing to be partners will be identified. Using their networks, family planning messages, information and motivation to seek services and referral.

Outcome: Community Health Worker couples will be identified by NGOs to provide non-clinical FP services and manage a depot of free and socially-marketed pills and condoms in at least one village in each PHC area.

1.1.10.4 **Involvement of Industrial groups**

In order to broaden the network of contraceptive service delivery, industrial workplaces will be encouraged to provide reproductive health information and services to the community as part of their social responsibility.

Operational Strategy: Identifying and training industrial workers to act as counsellors and depot holder for providing condoms and pills to fellow workers during free time/lunch hours and also act as peer educators.

Outcome: More people will access counselling, pills and condoms through the workplace

1.1.11 ***Studies and Operational Research***

Operational Research and Development in RCH is important not only in modern medicine but also in traditional, ayurvedic, unani systems. DoHFW will continue to commission and fund Research and Development through ICMR. DoHFW will continue to entertain proposals in the form of projects from other research institutions in areas relevant to RCH. Important areas for operational research will include:

- Male involvement and issues affecting male behavior and attitude.
- Behavioural and operational barriers to women accessing contraceptive services.
- How can effective linkages be most efficiently build with the different cadres of field workers from different departments?
- Mechanisms to involve women in planning/monitoring health services.
- Identification and dissemination of best practices in the area of contraceptive services.

1.2 *Maternal Health*

1.2.1 ***The National Population Policy Goals***

- Reduce maternal mortality ratio to less than 100 per 100000 live births by the year 2010 (Current level: 407: SRS 1998, 540: NFHS II 1998-99.
- Increase proportion of institutional deliveries to 80% by 2010 (Current level 34%: NFHS II 1998-99)

1.2.2 ***The burden of maternal mortality***

Maternal death is defined as death of women while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by pregnancy or its management.[1] The Maternal Mortality Ratio (MMR) is the number of maternal deaths per 100,000 live births in one year. WHO estimates show that out of the 529,000 maternal deaths globally each year 136,000 (25.7%) are contributed by India. This is the highest burden for any single country in the world. Estimates of MMR in India in recent years are shown in Table 1.4.

Table 1.4: Recent estimates of MMR in India

Sample Registration Schemes (SRS)	356 (1993)	407 (1998)
National Family Health Surveys (NHFS)	424 (1992-93) Rural 448/Urban 397	540 (1998-99) Rural 619/Urban 267

Estimates of state-wise MMR from the SRS data (1998) are shown in Table 5.

Table 1.5: State-wise MMR (SRS 1998)

State	**MMR**	**State**	**MMR**
Punjab	199	West Bengal	266
Harayana	103	Maharashtra	135
Uttar Pradesh	707	Gujarat	28
Bihar	452	Andra pradesh	159
Rajasthan	670	Karnataka	195
Madhya Pradesh	498	Tamil Nadu	79
Orissa	367	Kerala	198
Assam	409	**India**	**407**

The causes of maternal deaths estimated by the Registrar General of India in 1998 are shown in Table 1.6.

Table 1.6: Cause of maternal death

Cause of maternal death	% Maternal deaths (SRS 1998)
Haemorrhage	30
Anaemia	19
Sepsis	16
Abortion	9
Obstructed labour	10
Toxaemia	8
Other	8

1.2.3 ***Indicators of maternal care***

In 1998-99 skilled attendants conducted only 42.3% deliveries (Table 1.7). This rate increased by 8% in the preceding five years. Half of this increase is due to increased attendance by doctors. TBAs continue to conduct over one third of all deliveries. Skilled attendance rates are low in rural areas (33.5%), among poor population (25.4%) and among illiterate women (25.4%) (NFHS II).

In 1989-99, only 33.6% of births occurred in health facilities/institutions.[3] The increase from the 1992-93 rate of 25.5% was essentially due to increase in deliveries in private institutions, which rose from 10.9% to 16.7%. There was a negligible increase in deliveries in government institution (Table 1.7). Almost 75% deliveries in rural areas continue to occur at home and over 80% births among illiterate or poor women took place at homes in 1998-99 (NFHS II).

Table 1.7. Trends in place and assistance at delivery.

Delivery	1992-93 (NFHS I) %	1998-99 (NFHS II) %
Place		
Home	73.5	65.4
Health facility/Institution	25.5	33.6
Public	14.6	16.2
Private	10.9	16.7
NGO	-	0.7
Assistance		
Traditional birth attendant	35.2	35.0
Skilled attendant	34.2	42.3
Doctor	21.6	30.3
ANM/Nurse/Midwife/LHV	12.6	11.4
Other health professional	-	0.6
Other person	29.5	22.4

There are vast variations in the rates of institutional delivery across the states as shown in table 1.8.

Table 1.8. Institutional delivery rates in different states (NFHS II)

State	% births in a medical institution	State	% births in a medical institution
India	**33.6**	Arunachal Pradesh	31.2
Delhi	59.1	Assam	17.6
Haryana	22.4	Manipur	34.5
Himachal Pradesh	28.9	Meghalaya	17.3
Jammu & Kashmir	35.6	Mizoram	57.7
Punjab	37.5	Nagaland	12.1
Rajasthan	21.5	Sikkim	31.5
Madhya Pradesh	20.1	Goa	90.8
Utter Pradesh	15.5	Gujarat	46.3
Bihar	14.6	Maharashtra	52.6
Orissa	22.6	Andhra Pradesh	49.8
West Bengal	40.1	Karnataka	51.1
Tamil Nadu	79.3	Kerala	93.0

1.2.4 ***Maternal health strategies in RCH I***

1.2.4.1 Essential Obstetric Care Package

The essential and emergency obstetric care packages in RCH I consisted of:

- Early registration or pregnancy (within 12-16 weeks)
- Provision of minimum three antenatal checks by ANM or medical officers.
- Promotion of institutional delivery and provision of safe delivery at home.
- Provision of postnatal care.
- The planned operationalisation of a total of 1748 FRUs to provide comprehensive EmOC. Very few of the FRUs ever became operational.

Other approaches to improving obstetric care in RCH I included:

- **Provision of Additional nursing staff:** All category C districts of Uttar Pradesh, Bihar, Madhya Pradesh, Orissa, Haryana, Assam, Nagaland and Rajasthan were supported to provide additional **ANMs** in 30% of sub-centres. The scheme was extended to the remaining 6 North-eastern States during 1999-00 and Delhi is eligible for 140 ANMs for slum areas.
- **Contracting key additional staff to provide B/CEOC and RTI/STI services: Public Health/Staff Nurses** were hired on contract in 25% of PHCs in C category districts and 50% PHCs in B category districts. **Laboratory Technicians** were contracted by districts and posted to sub districts. Sub-district hospitals, CHCs and FRUs were empowered to hire **private anaesthetists**. States were empowered to contract doctors trained in MTP to visit PHCs/CHCs and sub district hospitals regularly.

- **Promotion of 24 Hr Delivery Services at PHCs/ CHCs.** An honorarium was made available to encourage 24 hr delivery services at PHCs/CHCs
- **Assistance with referral transport.** Funds were made available to Panchayats through district family welfare offices to assist women from indigent families in 25% of the sub-centres in selected states. These funds were only very rarely used.
- **TBA training.** TBA Training was a countrywide activity, despite the overwhelming international evidence that it is ineffective in reducing maternal mortality.
- **RCH Camps.** A scheme for holding RCH camps in remote areas was initiated in 102 districts of 17 states.

1.2.5 ***Progress made in RCH I***

Available data and discussions with the state programme managers are summarized below. The recently analysed DHS (Round-2) conducted in the latter part of RCH I in 2002, provides additional insights. A total of 250891 women (15-44 years) were interviewed. The salient findings are summarized in Table 1.9.

Table 1.9. Maternal care indicators indifferent states (DHS 2002)

ANC		**Place of delivery**	
No visit	26%	Home	59%
One visit	8%	Private hospital	21%
Two visits	19%	Public facility	19%
Three visits	14%	Others	2%
Four or more visits	33%		
Place of ANC		**Assistance at home deliveries**	
Govt institution	33%	Untrained TBA	53%
Private institution	29%	Trained TBA	11%
Home	7%	Relatives/friends	22%
Others	7%	ANM/Nurse/LHV	8%
TT		Doctor	5%
None	20%	None	1%
One	8%		
Two	72%		

1.2.5.1 **Antenatal care**

Data from the Rapid Household survey (RHS, 2000) indicate that 75% of pregnant women receive an antenatal check up, only 30% had the first ANC contact in the first trimester and “Full” ANC coverage was estimated to be 31.8% (RHS 98-99) to 44% (NFHS II 98-99). ANC in populous states with poor health indices such as UP, Bihar, MP is very low and appears to be declining (Table 1.10). There are concerns about the quality of ANC activities (which is largely unknown). For instance, The Ninth Plan envisaged universal screening for

anaemia in pregnant women and appropriate iron folate supplementation.Yet in no states were services for anaemia included as a component of ANC. Data indicate that iron/folate consumption is still very low; in 267 districts less than 30% women had taken enough IFA tablets (RHS 98-99).

Table 1.10. ANC coverage by state (District Level Household Survey)

State	Full Antenatal Care (% of all pregnant women)		
	Round I (1998-99)	Round II (2002)	Difference (RII-RI)
Andhra Pradesh	31.8	38.7	6.9
Assam	24.8	10.3	-14.5
Bihar	10.1	4.4	-5.7
Gujarat	42.7	23.2	-19.5
Haryana	23.9	10.1	-13.8
Himachal Pradesh	52.7	32.4	-20.3
Karnataka	60.1	36.5	-23.6
Kerala	86.1	67.3	-18.8
Madhya Pradesh	20.2	5.9	-14.3
Maharashtra	54.8	9.5	-45.3
Orissa	32.5	13.1	-19.4
Punjab	25.4	14.6	-10.8
Rajasthan	16.6	4.3	-12.3
Tamil Nadu	75.3	21.2	-54.1
Uttar Pradesh	11.2	4.1	-7.1
West Bengal	33.4	13.6	-19.8

1.2.5.2 **Delivery**

National skilled birth attendance rate is around 40% (RHS 40.2%, NFHS II 43.8%). Most deliveries attended by skilled birth attendants occur at institutions. Institutional delivery rates were 34% (RHS) and 36% (NFHS II) in 1998-99.

RCH I envisaged promotion of institutional deliveries both in urban and rural areas. The data suggest some improvement in institutional delivery rates, especially in states like Tamil Nadu and Andhra Pradesh, but overall there was little change. In Kerala over 90% of deliveries occur in institutions. In UP the majority of deliveries take place at home without skilled attendance.

Data from NFHS II show that despite a steep increase in institutional deliveries in Tamil Nadu and Andhra, there has not been a commensurate decline in neonatal mortality. This indicates that the quality of institutional intrapartum, postpartum and neonatal care must be improved. In states where most deliveries occur at home, efforts were made to train TBAs and to increase availability and access to disposable delivery kits. There is no evidence that this affected maternal mortality at all.

1.2.5.3 **Emergency obstetric care**

Under RCH I, 1748 FRUs were to be made operational to provide emergency obstetric care. This activity failed (Table 1.11), the major deficiencies being the availability of specialists and access to safe blood.

Table 1.11. Status of FRUs (FRUs surveyed 760; Facility Survey 1999)

FRU Feature	Fulfilled	FRU Feature	Fulfilled
Infrastructure		**Staff**	
Tap water	50%	Obstetrician	48%
Electricity	96%	Pediatrician	37%
Generator	71%	Anaesthetist	22%
Phone	80%	Gen M.O.	89%
Delivery facility	89%	Doctor trained in EmOC	17%
Aseptic LR	36%		22%
OT	70%	Doctor trained in NBC	
Gynae OPD	63%		
Linkages with blood bank	17%	**Utilization**	34%
		Utilized as referral	

1.2.5.4 **Postpartum care**

Most maternal and neonatal deaths occur in the postnatal period. Very few women receive adequate post-partum care. Only 16.5% women received a postpartum check in 2 months of delivery (NFHS II). Of them, fewer than one third were seen within the first post-partum week, a period associated with high complication and neonatal death rates. There was no systematic effort in RCH I to implement postpartum care to women at home.

1.2.5.5 **Status of different schemes**

The provision of additional ANMs, staff nurses on contract, and hiring of other staff listed above succeeded in only a few states. Most states failed to hire anaesthetists for FRUs. TN and AP succeeded in starting 24 hours delivery services at PHCs/CHCs. The referral transport funds were made available to Panchayats but remained almost wholly unutilised in most states. The experience with RCH camps has been mixed. Some states like TN and Delhi reported excellent response, while most of the other states found them to be disruptive to routine work.

1.2.5.6 **Safe Abortion**

Abortion is a significant medical and social problem in India. There are few reliable data on the extent of problem. An ICMR study (1989) estimated that the rates of safe (legal) and unsafe (illegal) abortions were 6.1 and 13.5 per 1000 pregnancies, respectively. Two thirds of all abortions are performed by unauthorised, often unskilled providers in unauthorised facilities.

Some 9% of maternal deaths (over 12000 per year) are attributed to abortion. This is a preventable tragedy and an indicator of unmet need for family planning, adolescent health and safe abortion services. The National Population Policy 2000 identifies provision of safe abortion as an important operational strategy.

The Indian Parliament passed the Medical Termination of Pregnancy Act in 1971. It lays down the conditions under which a pregnancy can be legally terminated and where the procedure can be performed. An amendment to the Act (2003) allows decentralisation of approval of facilities as MTP centres to district level and provides for punitive measures against unqualified persons performing terminations and terminations in non-approved facilities.

Available service data indicate that MTPs have remained around 0.5-0.7 million in the last decade. The estimated number of illegally induced abortions in the country is in the range of 4-6 million. There has not been any substantial decline in the number of illegal abortions, reported morbidity due to illegal abortion or share of illegal abortions as the cause of maternal mortality. Management of unwanted pregnancy through early and safe MTP services as envisaged under the Medical Termination of Pregnancy Act is an important component of RCH II.

Under RCH I, skills-based training was provided for doctors in MTP techniques and equipment supplied. Guidelines for Manual Vacuum Aspiration technique have been developed to enable medical officers to provide safe abortion services at PHC level and above. There are similar guidelines for the use of RU-486 with misoprestol to promote safe medical abortion in early pregnancy.

1.2.4 ***Lessons from international experiences in reducing maternal mortality***

1.2.4.1 The Antenatal care, TBA and Risk assessment approaches

In the early years of the Safe Motherhood Initiative, launched in 1987, most programme recommendations rested on the hypothesis that obstetric complications could be prevented or predicted by good care during pregnancy and delivery. Antenatal care programmes were expanded in the hope that routine monitoring and improved health practices during pregnancy would prevent or enable early recognition of complications. Recognizing that most women in high mortality countries deliver at home, early programs also focused on training traditional birth attendants (TBAs) in safe and hygienic practices.

ANC and TBA training programmes proved to have **no effect** in reducing maternal mortality.

Neither ANC nor trained TBAs can prevent the vast majority of complications from happening and once one occurs, there is almost nothing TBAs can do to prevent death *in the absence of a functioning health care system.*

Another approach was to based on the hypothesis that obstetric complications could be predicted by screening for risk factors and that high risk women could be monitored and treated. However, women deemed to be at high risk account for only a small percentage of maternal deaths; the vast majority occurring in women with no known risk factors. Whilst certain women (e.g. young age, high parity) do have a higher risk of dying, attention to high-risk pregnancies can only lower maternal mortality where there is a *functioning health system*, (i.e. this approach can only contribute to lowering an already low MMR).

The clear consensus internationally is that scarce resources should not be wasted on extensive unfocused ANC, training TBAs or trying to predict which women will develop life-threatening complications. Instead, *maternal mortality reduction programmes should be based on the principle that every pregnant woman is at risk for life-threatening complications, and that safe delivery and access to emergency obstetric care (EmOC) are essential*.

1.2.4.2 **Interventions that work**

For MMR to be reduced dramatically, all women must have access to high-quality delivery care. This has three key elements:

- A skilled attendant at delivery
- Access to emergency obstetric care (EmOC) in case of complications
- A referral system to ensure that women can reach EmOC in time

Skilled attendance at delivery

The term ‘skilled attendant’ as per the UN definition, refers exclusively to people with midwifery skills who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage or refer complications. Ideally, the skilled attendants live in, and are part of, the community they serve. They must be able to manage normal labour and delivery, recognize the onset of complications, perform essential interventions, start treatment, and supervise the referral of mother and baby for interventions that are beyond their competence or not possible in a particular setting.

TBAs, even after training, do not fulfill the criteria of skilled attendant.

Skilled attendants can prevent maternal disability and death by conducting normal deliveries in an evidence-based way (e.g. clean and safe, partograph, active management of the third stage etc) detecting complications early, providing obstetric first aid and ensuring quickest possible transfer to EmOC.

For most potentially fatal obstetric complications, skilled attendants need the back-up of a functioning health system in order to save the woman’s life. No matter how skilled the attendant is, in the absence of appropriate drugs, equipment, infrastructure and prompt access to EmOC, maternal deaths will still occur. The bulk of maternal deaths are due to unexpected complications.

Emergency obstetric care (EmOC)

Even in the best settings a substantial proportion of pregnant women will develop potentially fatal complications. Two studies in Maharashtra found that 15% of women delivering in rural homes developed complications requiring EmOC.

EmOC is generally categorized as basic EmOC (BEmOC) and comprehensive EmOC (CEmOC). These are defined in Table 1.12.

Table 1.12: Signal functions of basic and comprehensive EmOC services

Basic EmOC	**Comprehensive EmOC**
Skilled health personnel who can provide: - Parenteral antibiotics - Parenteral oxytocic drugs - Parenteral anticonvulsants - Manual removal of retained products - Assisted vaginal delivery	Skilled health personnel who can provide full Basic EmOC *plus*: - Anaesthetic services - Surgical services (Caesarean section) - Safe blood transfusion services

UN guidelines recommend a minimum of one comprehensive EmOC facility and four basic EmOC facilities per 500,000 population.

A UNFPA project in 7 districts in Rajasthan strengthened a total of 31 CEmOC institutions and 52 BEmOC institutions at PHC level. The met need for EmOC rose from 8.8% in 2000 to 14.3% in 2003 (an increase of 62%).

Referral systems

Widely available, good quality EmOC is necessary but not sufficient to reduce maternal mortality. Appropriate utilization is also necessary. Once a complication occurs, the key to saving a woman's life is to get her adequate care in time. The delays leading to death can be divided into:

- Delays in deciding to seek care
- Delays in reaching care
- Delays in getting treatment at the facility

Referral systems are vital in reducing delays. They require communication between households, birth attendants, providers of transport, and with a network of functioning BEmOC/CEmOC facilities close enough to be reached in time.

Not all interventions are equal

There are many interventions that can promote healthy pregnancy and contribute to women's health and the birth of a healthy newborn. However, they do not necessarily have a significant impact on maternal death. For example, tetanus toxoid immunization of the mother (a key element of evidence-based antenatal care) will reduce neonatal mortality but have almost no effect on maternal mortality.

Another example is anaemia. Approximately half of pregnant women in developing countries are anaemic, most of them being moderately anaemic (often due to malaria, parasites or poor nutrition). A recent review of the evidence of the relationship between anemia and maternal mortality found that whilst there is a strong, probably causal, link between severe anaemia and maternal death, there is little or no relationship between moderate anaemia and maternal deaths.

Routine ANC as practiced for decades can be important in connecting woman with health systems that, if functioning, may be critical in saving her life. However in many countries such as Kenya and Tanzania, 85% of women access ANC yet MMR remains very high (typically >1000). Conversely, MMR can be dramatically reduced without increasing ANC: during the 1990s Egypt *halved* its MMR (from 174 in 1992 to 84 in 2000), while utilization of ANC remained at just over 50%.

The key point is that not all interventions are equal in their effect on maternal mortality. A sense of the approximate contributions that different interventions make to maternal mortality reduction is given in table 1.13.

Table 1.13: Estimated contribution of various interventions to reducing MMR

Type of intervention	Approximate % maternal deaths averted
Improved access to CEmOC services	38%
Improved access to safe abortion services	12%
Active management of the third stage of labour	8%
Magnesium sulphate treatment for pre eclampsia/eclampsia	7%
Treatment of iron deficiency	4%
Tetanus toxoid	1%

(adapted from: Wagstaff and Claesson, World Bank 2003).

1.2.5 RCH II: Strategic choices to reduce MMR

India is faced with the biggest global challenge in safe motherhood. The national goal is to reduce MMR by 75% by 2010. Almost all skilled birth attendants in India are located in facilities, both government and private.

There are very few skilled birth attendants at village level at present. Some ANMs conduct deliveries in Sub centres or homes. Even if they reside (unusually) at their posting it is unlikely that they can conduct all the deliveries in their 5000 population, and most ANMs are preoccupied by non-midwifery tasks. The nearest facility in the government sector is a PHC manned by MO and LHV. It is therefore logical to strengthen PHCs to provide safe deliveries and BEmOC. Provision of 24 hr nursing cover and appropriate infrastructure will be necessary.

Many CHCs are designated as FRUs and expected to provide CEmOC as envisaged by CSSM and RCH I. This did not happen and RCH II needs to

address this failure. A functional referral system will be essential to connect community with services. Most functional EmOC facilities are in the private sector. Partnerships will be developed to allow access to poor patients.

It is said that the best index of a functioning health system in a country is state of maternal health services. Health system strengthening is the foundation on which better care for pregnant women will be operationalized.

Guiding Principles
The following principles will guide the planning and implementation of maternal health strategies in RCH II:

- **Equity.** The focus would be on the poor and the vulnerable.
- Interventions will be **evidence-based**.
- There will be a c**ontinuum of care** from community to facility.
- **Health systems will be strengthened** improve maternal health.
- **Services will be integrated** with other RCH II components.

Objectives
- **Improve access to skilled care and emergency obstetric care**
- Improve coverage and quality of antenatal care
- Increase coverage of post-partum care

Strategies

1.2.5.1 Increasing number of facilities offering safe delivery, EmOC and demand for these services

This will be the **highest priority** for RCH II. Two levels of institutions will be targeted:
- PHCs & CHCs for BEmOC(basic emergency obstetric care)
- FRUs for CEmOC(Comprehensive emergency obstetric care)

1.2.5.2 Operationalisation of all CHCs and at least 50% of PHCs to provide 24hr safe delivery and BEmOC by 2010

These facilities will also provide neonatal, infant, child, FP, MTP and RTI/STI services as described in relevant sections. PHCs and non – FRU CHCs with good access and existing infrastructure will be identified by the states. Underserved areas will be targeted to promote the equity principle of RCH II. Infrastructure will be strengthened and appropriate equipment provided for delivery and neonatal care. Newborn care corners will be established and supplies of essential drugs ensured. Ambulances (contracted or otherwise) will be available for 24hr referral.

Norms and guidelines for PHCs will be developed. These will cover infrastructure, staff, drugs, supplies and clinical care protocols (including use of the partograph).

A certification system will be instituted (noting delays and gender issues) with the central criterion of uninterrupted 24hr services for all.

PHC teams will consist of 2 MOs, an LHV and nurses. Nurses will be the key staff in providing 24 hr midwifery services. CHCs will provide specialist services. Group D staff will provide support for asepsis, housekeeping and waste disposal. All staff may contracted. ANMs will work in place of unavailable nurses. Laboratory attendants will provide relevant services (eg diagnosis of RTIs/STIs). Training needs will be assessed for all staff and team training provided.
[A group will prepare detailed guidelines by October 2004].

1.2.5.3 Operationalisation of CEmOC at 2000 FRUs by 2010

This will be planned and managed carefully as a similar intervention failed in RCH I. This unfinished agenda will achieve the UN norm of one CEmOC unit for 5,00,000 population. The FRUs will be planned to complement facilities in the private sector. DoFW has prepared guidelines for operationalization of FRUs. A certification process will be instituted to accredit the quality of FRU services.

1.2.5.4 Ensuring access to safe blood at all district hospitals and FRUs

Blood transfusion is an essential element of CEmOC. All FRUs and district hospitals must have 24 hr access to safe. DoFW has developed guidelines for blood storage facilities and these will be established at all FRUs and all district hospitals will have access to a blood bank.

1.2.5.5 Anaesthesia for EmOC training for MBBS MOs

One of the principal reasons for the failure of the RCH I programme to operationalise the planned 1748 FRUs was the lack of anaesthetic services. DoFW has developed a 14-week course in anaesthesia for EmOC for MBBS MOs. The first batch completed training at AIIMS last year. By 2010, 4000 MOs will be trained to address the acute lack of anaesthetic skills for EmOC at FRUs.

1.2.5.6 Training MBBS MOs in caesarean section

In view of the non-availability of obstetricians for at FRUs, the Federation of Obstetrics and Gynecological Societies of India (FOGSI) has developed an EmOC course including caesarean section for MBBS MOs. This important step in capacity building in CEmOC and operationlisation of FRUs will be implemented in a step-wise manner. A pilot phase will be evaluated before scaling up.

1.2.5.7 Providing EmOC services to BPL families at recognized private facilities

Mechanisms will be developed to allow BPL families to avail EmOC services in the private sector. This is extremely important because for some more time to come EmOC will not be universally available in the public sector whilst in many

areas private services are available. Voucher, insurance or other innovative schemes will be designed and piloted. Public-private partnerships will be built.

1.2.5.8 Other recommendations

- Transfer specialists (obstetricians/anaesthetists/paediatricians) from dispensaries and PHCs to FRUs and CHCs where they can contribute to emergency care of women and children. Involve general surgeons in providing EmOC, wherever possible.
- Use telecommunication systems to improve referral systems
- Provide incentive to doctors and other staff to work at PHCs/CHCs/FRUs providing 24hr services. Improve living quarters, working conditions and recognize good work.
- Provide imprest money to ANMs and MOs to run SCs/PHCs/CHCs/FRUs smoothly (to undertake minor repairs and ensure upkeep, purchase drugs/ supplies from market in emergency, hire emergency transport etc.)
- Encourage establishment of maternity hospitals / nursing homes in small towns in private sector.

1.2.6 ***BCC and Community Mobilization Strategies***

1.2.6.1 **Janani Suraksha Yojana (JSY)**

Learning from the lessons of RCH I; RCH II will include innovative strategies to stimulate demand for safe delivery and other RCH services. JSY is a modified version of the National Maternity Benefit Scheme. Its twin objectives are:

- To reduce maternal and infant mortality through promotion of institutional deliveries.
- To protect the female foetus and child.

Pregnant women belonging to BPL (below poverty line) will be eligible. Some of the draft provisions of the JSY include the following:

- Pregnant woman choosing institutional delivery will receive financial assistance, more for the girl child.
- Assistance (Rs.1500) will be provided for cesarean delivery.
- Transport assistance (Rs.150) will be provided to a rural woman for travel to a health centre for delivery.
- TBAs who mobilise women for antenatal care, institutional delivery and post-natal care will be provided with financial assistance.

Information about JSY will be widely promoted in the community to help stimulate demand among poor families for skilled delivery and other services. This demand

side strategy will also seek to reorient the role of TBAs to become promoters of positive community behaviours to reduce maternal and neonatal mortality.

1.2.6.2 **Other measures**

- Coordinated BCC activities to raise awareness of danger signs in pregnancy, labor and the post-partum period.
- A sustained social mobilization effort to promote institutional delivery with the help of panchayati raj institutions, opinion leaders, NGOs, self help groups as well as AWWs, link volunteers, ANMs and other stakeholders with rewards for villages that achieve high rates of institutional delivery, and save mothers with obstetric emergencies through timely action.
- Promote referral transport for routine deliveries and EmOC. Make referral transport funds available with AWW/ANM. Map facilities; plan transport options; encourage innovative solutions by communities.

1.2.7 ***Provide Skilled Care To Pregnant Women At The Community Level***

1.2.7.1 Promote deliveries by skilled births attendants at Sub-centres and in the community

- Encourage more ANMs to provide skilled care in these settings. States will be encouraged to include sub-centre strengthening for deliveries as a priority for their PIPs and logframes.

A new cadre of Community Skilled Birth Attendants (C-SBAs) will be introduced. After a training of one-year, a C-SBA will provide midwifery care as in the community. The training of the first batch of C-SBA being designed. A pilot scheme will be piloted during RCH II.

1.2.6.2 **Extend role of ANMs to administer obstetric first-aid**

Many ANMs conduct deliveries in sub-centres and homes. They are all likely to witness obstetric emergencies. At present, ANMa are not permitted to administer injectable oxytocics, misoprestol, magnesium sulphate or antibiotics, all of which can be life saving. It is therefore recommended that the ANM be permitted to use these drugs after systematic training. Safeguards will be provided to ensure that the drugs are administered in line with agreed protocols. Once the role of ANMs is extended in this way, appropriate drug supplies will be ensured.

1.2.7.3 **Improve Coverage, equity and Quality of Antenatal Care (ANC)**

- ANC is important for not only for mothers but also the newborn. There is a need to enhance coverage and quality of ANC in the program. RCH II aims to raise the proportion of pregnant women receiving 3 ANC checks to 80% from the present level of 44% (NFHS II).
- Make special efforts to reach women of BPL, SC/ST and other marginalized groups, targeting primigravida and adolescent mothers.
- Ensure fixed day ANC services in the community and facilities and involve AWWs, women's groups, TBAs and other community partners to reach out to each pregnant woman, especially the above mentioned groups.
- Improve quality of ANC by ensuring: First check up in first trimester, total 3 check ups or more. two doses of TT and ingestion of 100 tablets of IFA
- Improve counseling at ANC sessions, focusing on: promotion of institutional deliveries. danger signs in pregnancy, birth preparedness:
- Early care of the newborn, immediate and exclusive breastfeeding drying/wrapping and delaying bath.

1.2.7.4 **Strengthen Postpartum Care in the Community**

Post-partum and newborn care will be improved significantly in RCH II, focusing on the home. Even the mothers who deliver in institutions are likely to discharged within a day or so. The **IMNCI** protocols are being modified to include algorithms and advice on post-partum care. AWWs will visit neonates and mothers on days 1,2,7,14 and 28 with particular emphasis on the first two visits. They would use the modified IMNCI charts to identify problems, counsel and refer if necessary.

The *key messages* for the mothers will include: danger signs, nutrition, Iron-folic acid, birth spacing and newborn care.

1.2.7.5 **Vande Mataram Scheme**

The Government has recently launched a scheme to involve private sector in safe motherhood / FP activities. Under this scheme, the gynecologist members of the FOGSI will volunteer to provide free outpatient care services (antenatal and families planning) to pregnant women on a fixed day each month. Doctors who are not members of FOGSI will also be welcome. Each enrolled Vande Mataram physician will be provided a kit consisting of IFA tablets, condoms, OCs and IUDs by the government for free distribution to patients. The scheme was launched on 9/2/04 and will be implemented by state governments.

1.2.7.6 **Implement strategies for promoting safe MTP**

Objectives

- To expand the network of facilities providing quality MTP services in the government and private sectors.
- Train more health professionals to conduct safe MTP
- Provide MTP counseling at the community level.
- Increase awareness regarding safe MTP in the community.

Strategies

Community level

- Spread awareness of safe MTP and the availability of services thereof.
- Enhance access to confidential counselling, by ANMs, AWWs and link volunteers.
- Promote post-abortion care by ANMs, link volunteers and AWWs..

Facility level

- Provide quality MVA facility at all CHCs and at least 50% PHCs that are being strengthened for 24 hr delivery services.
- Provide comprehensive and high quality MTP services at all FRUs..
- Encourage private and NGO sectors to establish quality MTP services.
- Promote use of medical abortion in public and private institutions: disseminate guidelines for use of RU-486 with Misoprestol.

1.3 *Reproductive tract and sexually transmitted infections*

1.3.1 ***The burden of reproductive and sexually transmitted infections***

Only recently have reproductive tract and sexually transmitted infections (RTI/STI) been recognized as a public health problem, especially as the relationship between HIV infection and RTI/STIs became clearer. Data from India have brought them onto the reproductive health agenda (Table 1.14).

Table 1.14 Summary of studies on STI prevalence among women in India

Study Population	Prevalence (%)								
	GC	**CT**	**Syphilis**	**TV**	**HSV** (clinical)	**HPV** (clinical)	**Cervical dysplasia**	**HBV**	**HIV**
Community-based									
Ever/ currently married women	0.0 - 4.2	0.5 - 28.7	0.2 - 8.8	4.3- 27.4		11.8	3.8% grade III dsplasia		
Unmarried & married women	0.3 - 3.9	5.2	0.2 -10.5	0.8 - 14.0				4.8	2.0
Facility-based and convenience samples									
STD clinic patients	1.3 - 16.5		29.3 - 43.3		4.0 - 15.4	6.7 - 15.6			1.2 - 13.6
Sex workers	4.9 - 16.5		30.0 - 63.0			0.5			49.9
Gyn. OPD	1.0 - 5.5	0.2 - 31.3	4.4 - 5.6	0.4 - 26.0	0.3 - 25.0	0.6 - 42.4	9.2% sev. dys-karyosis 5.4% malignant		0.0
ANC		2.3	1.0 - 6.2	17.8					0.1-1.2
Gyn. OPD: 'vaginitis'	0.0 - 2.6	2.6- 12.2	2.2	1.6- 17.6					
Gyn. OPD: cervical erosion		3.0					1.6% mod. dysplasia 13% sev.dys-plasia 1.8% malignant		
Infertility and PID patients	0.1 - 11.0	0.5 - 24.2	0.5	0.5					
Acceptors of tubal ligation	0.1 - 2.2	0.0 - 0.2	0.5 - 7.0	0.9					

GC= Neisseria gonorrboeae; CT= Chlamydia trachomatis; TV= Trichomonas vaginalis; HSV= Herpes Simples Virus; HPV= Human Papilloma Virus; HbsAg= Hepatitis B surface Antigen; HIV= Human Immunodeficiency Virus

[From: UNFPA, Population Council. Reproductive tract infections: a guide for program managers. New Delhi 2001]

1.3.2 ***Present strategies***

To create awareness and generate demand for treatment of these infections, the National AIDS Control Organization (NACO), in close collaboration with the DoFHW, has been organizing the Family Health Awareness Campaign every six months. During the campaign, detection, management and referral for RTI/STI cases is undertaken. Prevention, early detection and effective management of common reproductive tract infection have been included as an essential component of care to be delivered through the existing primary health care infrastructure.

The DoHFW has provided the necessary drugs for treatment and also inputs to fill the gaps in laboratory support in PHCs/CHCs. However, upgrading the skill of staff through training has lagged behind in most states. DoFHW has coordinated with NACO. NACO provides the input for diagnosis and management of RTI/STI at and above district level. To strengthen the services for RTI/STI at sub-district level, assistance from the government will be provided in the form of training, drug kits, disposable equipment and provision for contracting two laboratory technicians per district for the FRUs.

The importance of prevention, early detection and effective treatment of RTI/STI is well recognized by public health experts, practitioners and the public themselves. Reliable easy to perform tests for accurate diagnosis of RTI/STI are available. Most of the infections still respond to commonly used antibiotics and chemotherapeutic agents. A beginning was been made in RCH I but there was insufficient progess in this important area and RTIs/STIs control needs to be given a major thrust in RCH II.

1.3.3 ***Strategies in RCH II***

Objectives

- Promote recognition and referral for those with suspected RTI/STI.
- Strengthen services for diagnosis and treatment of RTI/STI at PHCs, CHCs, FRUs and district hospitals.
- Strengthen linkages and synergy with NACO activities.

Strategies

Community level:

- Train and permit ANMs to provide presumptive treatment to cases and their partners for common RTIs/STIs; provide first line drugs in ANM's kit.
- Train AWWs and link volunteers to identify/refer cases of RTI/STI.
- Promote awareness regarding RTIs/STIs in the community for prevention, early care seeking and treatment.

Facility level

- Operationalize services for the diagnosis and comprehensive treatment of RTI/STI at all FRUs, all CHCs and at least 50% PHCs.
- Revise essential drug list.
- Post technicians, strengthen laboratories, ensure availability of supplies.
- Provide 1st line RTI/STI drugs at remaining PHCs
- Train MOs and LHVs.

(It has been decided to hold a consultation on this subject to review guidelines for management of RTIs/STIs in community and facilities. The recommendations of the consultations will be incorporated in the PIP in due course.]

1.3.4 Operations research

- Refine and test syndromic algorithms for the treatment of RTI/STIs.
- Estimate burden of RTIs/STIs and sensitivity of the causative organisms.
- Assess utility of microbicides in preventing RTIs/STIs.

1.4 *Newborn and child health*

1.4.1 National Goals

- **The National Population Policy goal**

Reduce infant mortality rate (IMR) to 30 per 1000 live births by the year 2010 (Current level 64: SRS 2002).

- **Enabling goal**

Reduce neonatal mortality rate (NMR) to below 20 per 1000 live births by 2010 (Current level 44: SRS 2000).

1.4.2 Child Survival: the challenge for India

India is faced with an unparalleled child survival and health challenge. The country contributes 2.4 million of the global burden of 10.8 million under-five child deaths, which is the highest for any nation in the world. Nearly 26 million infants are born each year, of whom 1.2 million die before completion the first 4 weeks of life and 1.7 million die before reaching the first birthday (Table 1.15).

Table 1.15: Newborn and child health burden in India

Indicators	
Infant mortality rate	64 per 1000 live births: (SRS 2002)
Neonatal mortality rate	44 per 1000 live births (SRS 2000)
Annual mortality burden (approx.)	
Live births	26 million
Child deaths	2.4 million
Infant deaths	1.7 million
Neonatal deaths	1.2 million
Nutrition related statistics	
Low birth weight (LBW)	30%
Proportion under-5 children underweight	47% (NFHS II)
Proportion under-5 children stunted	45% (NFHS II)

1.4.2.1 **Why and when do children die?**

The principal causes of infant deaths are neonatal disorders, pneumonia, diarrhoea and measles. Low birth weight and undernutrition are the most important risk factors of child mortality. The first few days and weeks of life are the most risky. A recent ICMR study at 5 rural sites showed that a quarter of under-5 child mortality occurs by day 3 (Table 1.16). There is an overwhelming consensus in the country that saving newborn lives is critical to the success of the "second" child survival revolution in India.

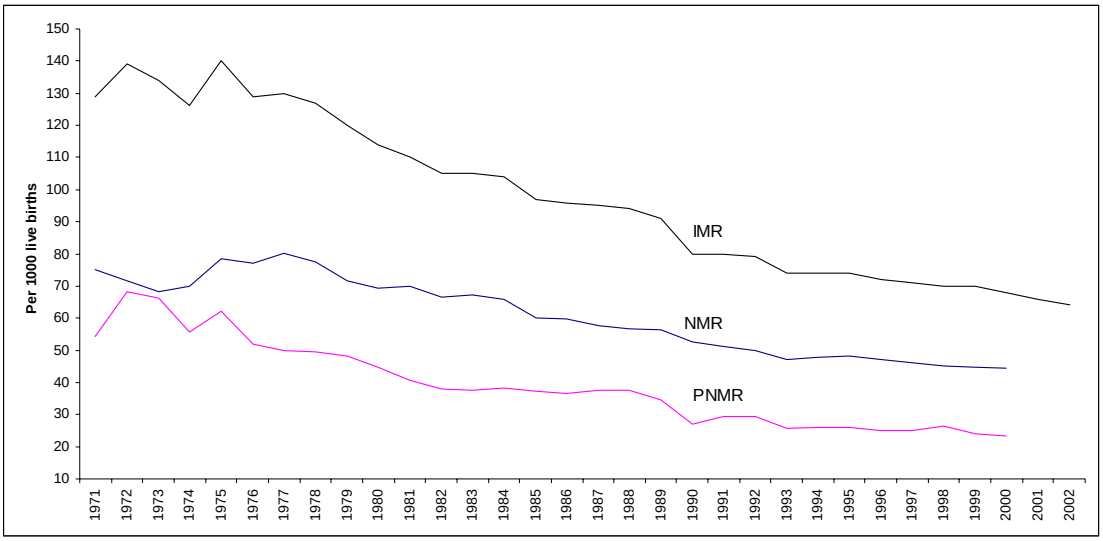
Table 1.16: Timing of under-5 child deaths*

Age completed	Under-5 child deaths (cumulative)
Day 1	20%
Day 3	25%
Day 7	37%
Day 28	50%
1 year	75%
5 years	100%

*Extrapolated from data from an ICMR study. (2003)

Since the early seventies, IMR has declined by almost half (Figure 1). Under-five CMR also fell from 144 per (1978-83) to 95 per 1000 live births (1988-93) in the last two decades.

Fig. 2: Trends in infant mortality rate (IMR), neonatal mortality rate (NMR) and post-neonatal mortality rate (PNMR)



Child health interventions such as immunization, oral rehydration therapy and the increase in skilled attendance at delivery have helped in saving millions of neonates and children since the seventies. Family planning services and the Integrated Child Development Services have played an important contributory role in this reduction in CMR. This progress is also attributed to overall socio-economic development, improved educational status of the population and better access to healthcare in the government and private sectors.

However, in recent years the rate of reduction in infant mortality has slowed considerably. The average decrease in IMR was around 3% each year in the two decades preceding 1992. In the subsequent 10 years the decline has been of the order of only 1.5% per year (Table 1.17).

Table 1.17: Trends in IMR and NMR per 1000 live births.

Year	IMR	NMR	NMR as % IMR
1972	*139*	*72*	*51%*
1982	*105*	*67*	*64%*
1992	*79*	*50*	*63%*
1993	74	47	63%
1994	74	48	65%
1995	74	48	65%
1996	72	47	65%
1997	71	46	65%
1998	70	45	63%
1999	70	45	64%
2000	68	44	65%
2001	66	-	-
2002	64	-	-

The challenge for RCH II is to accelerate the reduction in childhood mortality to reach the national and Millennium Development goals.

1.4.2.2 **Newborn health**

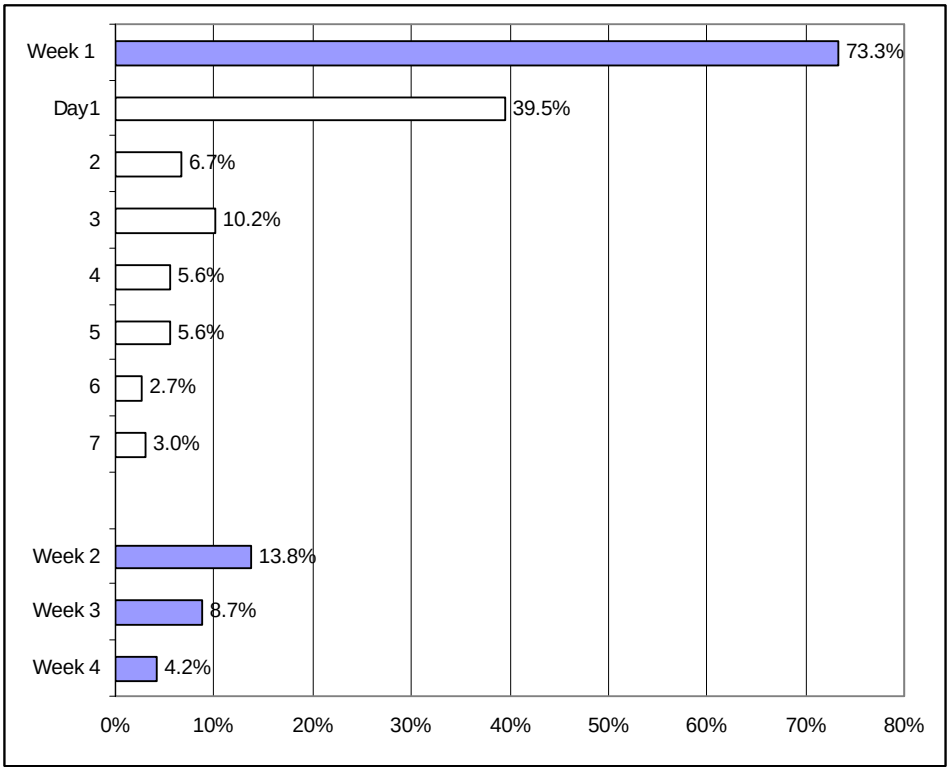
The first four weeks of life are the neonatal period. Neonatal mortality has declined significantly in India since the seventies largely due to maternal tetanus toxoid immunization leading to the near elimination of neonatal tetanus, the increase in institutional delivery and the increase in skilled attendance at birth. Between 1972 and 1992, NMR declined by almost 30% (Fig 2). However, NMR in the last decade has become static, hovering around 45 per 1000 live births. This is a major cause of concern, and there is an urgent need to take steps to improve neonatal health and survival. **Neonatal mortality presently constitutes nearly two thirds of infant mortality and half of under-5 child mortality.**

At 1.2 million deaths under 4 weeks of age each year, India contributes 30% of the global burden of neonatal deaths; highest for any country. NMR shows a wide variation in different states being the lowest in Kerala (just 10) with highest rates are seen in Orissa and Madhya Pradesh (around 60).

Within the neonatal period, the first week is crucial. Three fourths of all newborn deaths occur during the first week of life (the early neonatal period). The major causes of neonatal mortality are bacterial infections (52%), asphyxia (20%), prematurity (15%) and others (13%). Neonatal tetanus still causes over 48,000 deaths in the country (WHO 2000 estimates). Newborn deaths in the first week of life are predominantly caused by the birth asphyxia and prematurity, whereas those after the first week are mostly due to bacterial infections. Irrespective of the primary causes of deaths, over three fourths of neonatal deaths occur among infants who are born low birth weight (weighing less that 2500g at birth). In India,

one third of all neonates are low birth weight (LBW), this rate is among the highest in the world.

Fig. 3:Timing of neonatal deaths (n=1387)



(Provisional data from ICMR study, as home-based care of young infants)

Only 36% of births in India occur in institutions, the remaining three quarters take place at homes (NFHS II). The proportion of home births in rural areas is 75% and among the poor families 80%. There is a clear relationship between the proportion of non-institutional deliveries and neonatal mortality rate: the higher the home delivery rate, the higher the neonatal mortality rate. There is a wide variation in regard to the proportion of institutional deliveries in different states. In Kerala, the state with the lowest NMR, institutional delivery rate is a high 93%. In Tamil Nadu the rate is 79%%, while in Rajasthan, Bihar and UP, the institutional delivery rates are under 25% (NFHS II).

For a long time newborn care has been erroneously equated with the hospital-based care of babies requiring incubators and other expensive equipment. The principles of newborn care are simple and eminently achievable through community and primary care. A study from Gadchiroli (Maharashtra) conducted by Dr. Abhay Bang and colleagues has shown that in the rural setting of high rates of home deliveries and an NMR of over 60 per 1000 live births, it is possible to reduce NMR and IMR dramatically by 62% and 45%, respectively, over a period of 3 years by delivering a package of neonatal care interventions through community-based health workers (Lancet 1999).

1.4.*2.3* **Essential newborn care (ENC) in CSSM and RCH I**

Essential newborn care (ENC) became a part of the Child Survival strategy in the Child Survival and Safe Motherhood programme and continued into the RCH I programme. The focus has been strengthening of facilities with equipment and the training of physicians. Operationalisation of newborn care was accomplished in 80 districts in RCH I. Newborn health interventions in RCH I were limited in scope, and primarily facility-focused. Community-based interventions were neither comprehensive nor implemented effectively. There is an urgent need to orient RCH II to the care of newborn infants in homes where most neonates are born, and many fall sick and die.

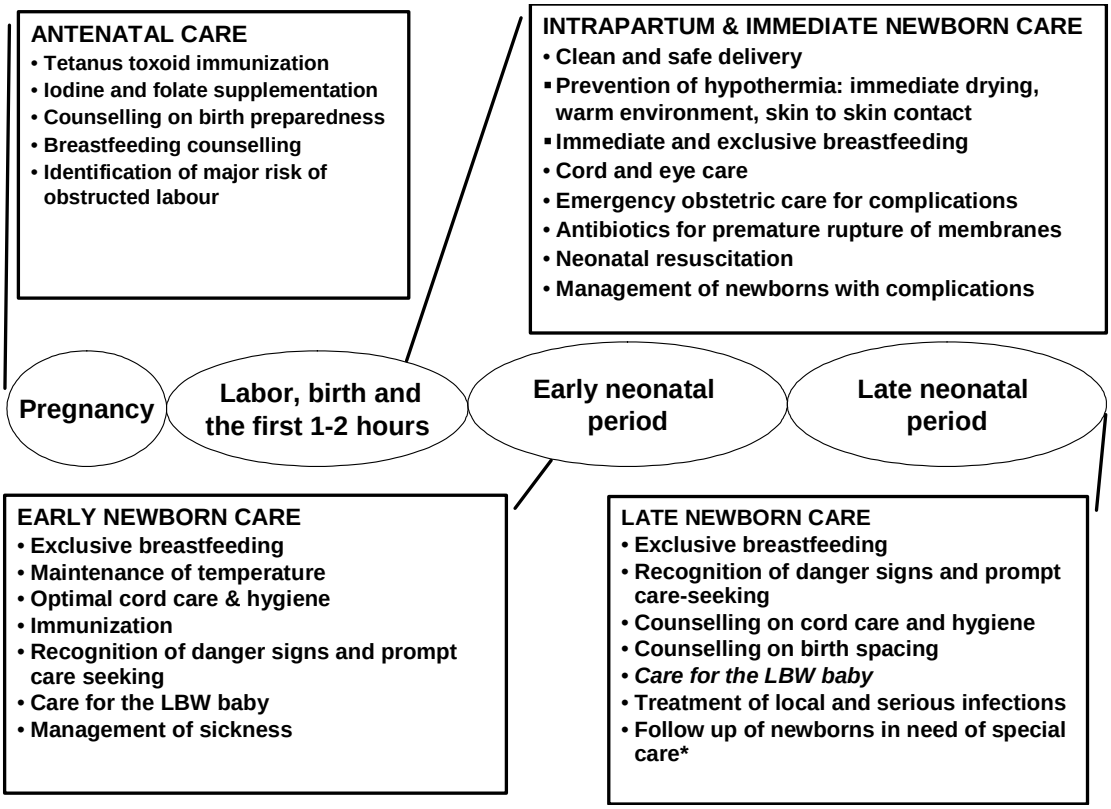
1.4.2.4 **Interventions that save newborn lives**

Newborn health is inseparable from maternal heath. Maternal problems such as undernutrition, young age, infections, anemia, hypertensive disease and tobacco abuse are associated with low birth weight. Complications of labour and delivery not only cause maternal morbidity, but also lead to foetal compromise, stillbirth, birth asphyxia and neonatal mortality.

Skilled attendants at delivery and EmOC are the most important maternal health interventions with enormous benefit to newborn survival and health. These two interventions form the bedrock of maternal health in RCH II that would help save thousands of neonates (Section 1.2).

Figure 3 depicts the model of essential newborn care that forms the basis of the recommendations in this PIP. ENC needs to delivered wherever the neonates are, at homes or in facilities. The principles of ENC do not change, only the delivery mechanisms and the degree of sophistication varies. In RCH II, there will be a focus on the home-based newborn care recognizing the reality of home births in much of the country, and the fact that even babies delivered at facilities return home in a day or two, and remain vulnerable to excess morbidity and mortality especially among the poor families. Home visits by providers AWWs (or link volunteers) with the help of TBAs (wherever relevant) would be ensured for neonates on days 1,2,7,14 and 28 in RCH II. At these contacts, the AWW (or link volunteer) would provide home-based care to both the baby and the mother (using IMNCI approach).

Figure 4. Effective newborn health interventions



Neonatal survival calls for ensuring a continuum of care from maternal interventions to neonatal interventions, and from home-based interventions to the facility-based care. Age at delivery and birth spacing have a profound positive impact on newborn survival and health. NFHS II data show that NMR (per 1000 live births) is 63 if maternal age at delivery is <20 years, 55% higher than that if the mother is 20-29 years old. Likewise, the NMR of 36 (when birth interval is 2-4 years) becomes almost double, when the birth interval shortens to less than 2 years.

1.4.2.5 **Scenario-based prioritisation for state PIPs and logframes**

Among newborn health interventions, some are easier to implement than others. Drying and wrapping the neonates can be implemented more readily than resuscitation, kangaroo mother care is more achievable than incubator-based care, oral antibiotic treatment is easier than treating infants with gentamicin injections. It is more important to promote clean delivery kits and exclusive breastfeeding than build newborn care units in resource-constrained circumstances. If a health system cannot achieve sufficiently high levels of maternal TT coverage and reduce neonatal tetanus drastically, it is unlikely that it can effectively provide care for sick neonates at PHC level. **The capacity of the health system is thus an important determinant of the likely effectiveness of interventions, will vary between states and must be addressed in state PIPs and logframes.**

In view of the variable complexity of newborn health interventions and variations in state's health system capacity, it is proposed that a scenario-based approach may be taken at the state/ district level in prioritizing newborn health strategies.

States with high neonatal mortality rate (NMR), of say over 50 per 1000 births, are likely to have most deliveries at homes, often by TBAs and would have a high post-neonatal mortality due to poor coverage of the simple child survival interventions. These states may work with TBAs for improving home practices in newborn care, eliminate tetanus neonatorum, and promote clean deliveries, exclusive breastfeeding and birth spacing. In states with NMR of 25-50 per 1000 live births the emphasis should be on home-based newborn care with the help of TBAs, AWWs and link volunteers. As the NMR declines, institutional care of newborn infants will become increasingly critical for achieving further improvements in newborn survival. In areas where NMR is under 25 per 1000 live births, institutional care supported by home-based care would be appropriate.

Thus, newborn health action in states like UP or Rajasthan with predominantly home deliveries may be in the community settings, while the major thrust of newborn health strategies in a state like Tamil Nadu, where institutional delivery rates have picked up, will be further strengthening facilities for newborn (and maternal) care. The above stratified approach based on different newborn health status and health system scenarios may be applied in different states (or districts) in consultation with experts and program managers in RCH II.

1.4.2.6 **Diarrhoeal disease**

Diarrhoea is one of the leading causes of child death. NFHS II showed that 19% children under the age of three suffered from diarrhoea in the preceding two weeks. Most of these deaths are due to dehydration. Dehydration can be prevented and treated by timely and adequate replacement of fluids. Persistent diarrhoea contributes to malnutrition which further enhances the risk of morbidity and mortality. Dysentery is an acute from of diarrhoeal disease that leads not only to dehydration but other complications which may prove fatal. 14% children with diarrhoea have dysentery (NFHS II).

The Oral Rehydration Therapy (ORT) programme was introduced in 1986. The main objective of the programme was to prevent death due to the dehydration caused by diarrhoeal disease. Health education aimed at rapid recognition and appropriate management of diarrhoea was a major component of the CSSM and RCH I program. ORS packets are provided at sub-centre as part of the drug kit-A under RCH I. Use of home available fluids and ORS has resulted in a substantial decline in the mortality associated with diarrhoea from estimated 1.0-1.5 million children every year prior to 1985 to 6-7 lakhs deaths in 1996. Social marketing and supply of ORS through the public distribution system are being taken up in some states. NFHS II data is disappointing regarding ORS in diarrhoeal episodes; only 27% coverage (Table 1.18) and usage of ORS was low among

children who had diarrhoea (26.8%) even though 62% of mothers knew about ORS (NFHS II).

Table 1.18: ORS usage: % of mothers whose children received ORS for diarrhoea.

State/UT	ORS use	State/UT	ORS use
Major states		Smaller states	
Andhra Pradesh	39.6	Arunachal Pradesh	40.2
Assam	37.1	Chattisgarh	NA
Bihar	15.4	Delhi	39.1
Gujarat	28.9	Goa	55.6
Haryana	25.7	Himachal Pradesh	45.6
Karnataka	34.3	Jharkhand	NA
Kerala	47.9	J & K	47.5
Madhya Pradesh	29.8	Manipur	50.7
Maharashtra	33.2	Meghalaya	22.4
Orissa	35.1	Mizoram	44.7
Punjab	42.3	Nagaland	29.7
Rajasthan	20.3	Sikkim	27.0
Tamil Nadu	27.9		
Uttar Pradesh	15.8	INDIA	26.8
West Bengal	40.5		

(NFHS II 1998-99)

1.4.2.7 **Acute Respiratory Infections (ARI)**

Acute respiratory infections (ARI), mainly lower respiratory tract infections ("pneumonia") are a major cause of death in children, accounting for about 30% of under-five deaths. The disease is extremely common. NFHS II data shows that 19% children under the age of 3 years experienced cough with fast breathing (indicating lower respiratory tract infection) during the two weeks preceding the survey. Timely treatment based on well-researched algorithms can save most children with ARI. The majority of cases of ARI have non-severe disease, and can be managed in the community with oral co-trimoxazole. Severe ARI cases require urgent referral to a facility for injectable antibiotic therapy and supportive care.

The ARI control program was initiated as a pilot project in 14 districts in the country in 1990. Ten more districts were added in 1991. Since 1992, the ARI control became a part of the CSSM programme which continued into RCH I 1997. Co-trimoxazole tablets are being provided at sub-centres and above. ANMs are being trained to treat children with ARI. The Rapid Household Survey (2002) showed that utilization of government facilities for children with ARI was very low (14%), whilst NFHS II data suggests that the proportion of children with ARI taken to a facility or provider was 64%.

Research has shown that community health workers, can effectively manage ARI and bring down IMR (Lancet 1992). In RCH II the aim will be to translate these findings and experiences to dramatically reduce ARI deaths using the IMNCI approach.

1.4.2.8 **Challenges in managing sick neonates and children**

There is no single intervention would prevent all neonatal and infant morbidity. Many of them will fall ill. While preventive and promotive approaches will be continued with added vigour and intensity, the management of sick neonates and children at household, community and facility levels will receive more emphasis in RCH II. Dramatic reductions in deaths due to diarrhoea, ARI, severe malnutrition and neonatal sepsis are possible in the next 5 years. State PIPs and logframes must address the challenges of reducing neonatal and children mortality by deciding how to answer the following questions:

How best to:

- Promote early recognition of sickness?
- Promote healthy household practices (e.g. immediate and exclusive breastfeeding, food and fluids in diarrhoea, warmth for sick newborn)?
- Avoid harmful practices?
- Promote early care seeking
- Ensure access at community level to a provider who can manage and refer sick neonates and children?
- Promote community and home-based care of mild to moderate illnesses that require no referral?
- Promote referral and ensure safe transport of neonates and children with severe disease?
- Make ORS more widely available and used?
- Involve AWWs as providers for sick neonates and children?
- Enable ANMs to use gentamicin to treat neonatal sepsis?
- Ensure PHCs/CHCs/FRUs function and can provide care for sick neonates and children?
- Ensure sick neonates and children of BPL families receive care in private facilities?

1.4.2.9 **Breastfeeding and complementary feeding**

Exclusive and immediate breastfeeding is the single most important child survival intervention. Breast fed infants have better nutritional status and lower rates of morbidity and mortality. Breast milk not only provides essential nutrients for the first six months of life, but also protects the child against infections and enriches child development.

WHO recommends exclusive breastfeeding for the first 6 months. Successful breastfeeding requires initiation of breastfeeding soon after birth, and avoidance

of pre-lacteals or supplementary feeds. The Baby Friendly Hospital Initiative launched since 1992, aims at promoting successful breastfeeding in the facilities where deliveries take place. However a lot more needs to be done to promote breastfeeding in the community. According to NFHS II, the proportion of exclusively breast fed infants at 4 months of age was only 37% and that at 6 months a pathetic 19%. Delays in initiating breastfeeding is very common. Only 16% mothers initiate breastfeeding within the desired one hour after birth, and only 37% do so by the end of the first day. As many as 63% women discard colostrum.

From 6 months of age, the introduction of complementary food is necessary to meet the nutritional needs of infants. However, in a majority of children starting of complementary foods is delayed and, if introduced, is often insufficient in nutrients. Only 46% infants receive solid food at 9 months of age (NFHS II). Poor nutritional status is a potent risk factor of neonatal, infant and child mortality. The nutritional status of children in India continues to be a cause for a serious concern. According to NFHS II, 47% children under 3 years of age were undernourished and 45% were stunted. Over one third of all neonates have low birth weight.

Strategies to promotion exclusive and immediate breastfeeding and the introduction of appropriate complementary feeding will be important strategies for state RCH II PIPs and logframes, and will be implemented in partnerships with DWCD.

1.4.7 **Integrated Management of Neonatal and Childhood Illness**

IMNCI is the Indian adaptation of the WHO-UNICEF generic IMCI (Integrated Management of Childhood Illness)

1.4.7.1 ***The generic IMCI (WHO-UNICEF)***

The IMCI concept builds on the lessons learned from disease-specific child survival initiatives such as control of diarrhoeal disease, management of ARI and malaria. IMCI was based on the recognition that globally, five childhood illnesses; pneumonia, diarrhoea, measles, malaria and malnutrition kill 70% of 11 million under-five children. Significantly, many sick children often have more than one of these diseases. Disease based algorithms or clinical approaches tend to cause providers to ignore the less obvious morbidity, or overlook need for counselling (e.g. for complementary feeding). WHO therefore developed a single, integrated, and effective approach to managing childhood illness, the IMCI.

The IMCI strategy has three components:

- Improved case management

- Health systems strengthening
- Improved household practices.

WHO-UNICEF rolled out the first component in mid-nineties with the aim of improving the performance of providers, through training and support at first-level health facilities. Evidence-based case management guidelines structured into algorithms were developed. These guidelines relied on detection of cases using simple clinical signs without laboratory tests, and offered empirical treatment. Initially IMCI only covered children from 7 days to 5 years (excluding the early neonatal period) and targeted health workers at primary facilities, not community-based workers (e.g ANMs, AWWs).

1.4.7.2 ***Lessons from IMCI implementation in other countries***

Recently, two global reviews of IMCI have been undertaken; the Multi-Country Evaluation (MCE) and the Analytical Review, addressing IMCI implementation in many counties. The salient findings of these reviews of IMCI are:

- **IMCI improves the health worker performance:** IMCI introduction led to a more rational use of antibiotics, more frequent administration of the first dose at the facility, improved efforts by health workers to educate caregivers in home treatment and increased knowledge among mothers about how to administer drugs correctly.
- **IMCI did not change key family practices:** Family behaviours such as careseeking and exclusive breastfeeding did not improve.
- **Health system constraints severely limited the potential impact of IMCI:** Constraints included infrequent supervision, high staff turnover and low morale, conflict between IMCI requirements and previous protocols, difficulties in scaling up and low utilization of government health services.
- **IMCI implementation costs no more than routine care:** Cost per child of caring for under-fives in IMCI district was lower than in the comparison district.
- **IMCI implementation did not improve inequities in care seeking and access to health services and hospitalis:** The proportion of poor children availing of health services in IMNCI areas was no better than in non-IMNCI districts.
- **Implementation of health system improvements and community components lagged behind training activities:** which limited programme effect and led to a lack of improvements in family behaviour.
- **IMCI coverage was low:** in countries due to lack of financial and human resources.
- **None of the countries implemented the three components of IMCI (training, health systems and community) in an integrated manner.**

These important lessons must be born in mind in when states designi their PIPs and logframes.

1.4.7.3 ***IMNCI country adaptation and implementation so far***

India is in the early stage of implementation of this strategy. The adaptation committee appointed by GoI completed its task early in 2003. The most significant modification is the inclusion of children aged 0-6 days. Recognising newborn care as a national priority, the Indian version of IMCI is called the Integrated Management of *Neonatal* and Childhood Illness (IMNCI). The IMNCI technical guidelines and training modules developed in India are unique in many ways (Table 1.19).

Table 1.19: Differences between generic IMCI and India IMNCI

Features	**Generic IMCI**	**India IMNCI**
Coverage of 0-6 days (early newborn period)	No	Yes
Basic health worker module	No	Yes
Home visit module by provider for care of newborn and young infant	No	Yes
Training		
Home-based training	No	Yes
Duration of training on newborn/young infant	2 of 11 days	4 of 8 days
Sequence of training	Child first then young infant	Newborn/young infant first then child

The chart book and facilitators guide have been revised for use in India. A unique feature of IMNCI is the provision of home visits by the provider for preventive, promotive and referral/curative service for newborns. A module on home-based training has also been developed. The training period has been reduced from 11 days in the generic version to 8 days in the India module. The India IMNCI protocol has also been adapted for the health workers, namely, ANMs, and AWWs. This module is requires translation into local languages. The IMNCI training package is being introduced in the UNICEF sponsored Border District Cluster Strategy (BDCS) in 6 districts. This is the first application of IMNCI in a programme setting.

1.4.3 ***Newborn and child health strategy in RCH II***

In RCH II, a comprehensive newborn and child health package of interventions will be implemented in the country with the aim of achieving a decisive breakthrough in neonatal, infant and child mortality. The knowledge about what saves the lives of children in a cost-effective manner is available to the nation and the world at large. The mission in RCHI II is to translate this knowledge into action and usher in the second child survival revolution in the country.

1.4.3.1 **Guiding principles**

The following principles will govern the planning and implementation of newborn and child health strategies:

- Evidence-based interventions
- Approach integrated with family planning and maternal health components of the programme
- Equity-driven implementation and monitoring
- Rational mix of community and facility-based interventions
- Phased decentralized priority setting at state and district levels
- Participation of the private sector

1.4.3.2 **The IMNCI-Plus Approach**

The objectives of IMNC plus strategy in RCH II are to:

- Implement, by 2010, a comprehensive newborn and child health package at the level of all Sub-centres (through ANMs) Primary health centres (through medical officers, nurse and LHVs) & First referral units (through medical officers and nurses)
- Implement by 2010 a comprehensive newborn and child health package at the household level in 250 districts (through AWWs)

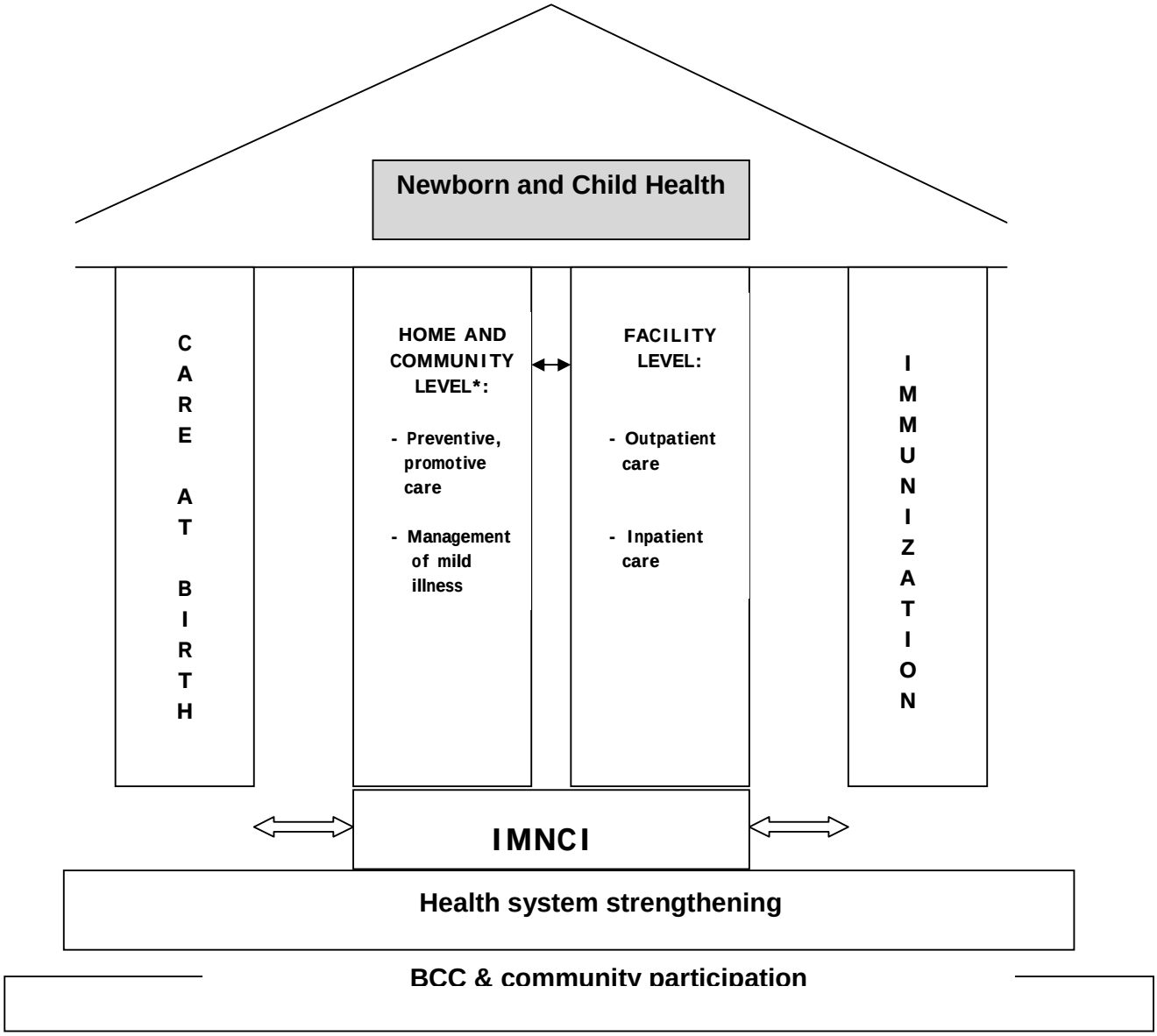
The above strategies will be built on the existing skills of the care providers, and the existing structures and systems. Several activities and approaches of RCH I will be continued with enhanced quality and coverage. There will, however, be significant new activities such as home-based newborn care.

More details of IMCI training and the roles of various levels of health workers are presented in supporting document XX “Newborn and Child care”.

Figure 4 depicts the model of newborn and child health strategy in RCH II. It has three complementary elements:

- Care at birth
- IMNCI
- Immunisation.

Fig. 5: RCH II: Newborn and Child Health Package



*Also linked to post-partum care of the mothers
(complication detection and management; and counseling on nutrition and spacing)

1.4.3.3 **Care at birth**

This component is linked intimately to maternal care. The underlying principle is that wherever an infant is born she is provided warmth, resuscitation, clean care and exclusive breastfeeding. She is weighed and examined, and if her clinical needs are not manageable at the place of delivery, she is referred and transported to a facility. RCH II aims to promote institutional deliveries. Newborn care is relatively easy to implement in facilities because of the presence of skilled birth attendants (doctor/ nurse/ ANM/LHV) and an enabling environment. However, a large proportion of deliveries will continue to occur at home attended by TBAs, especially in EAG sates. It is therefore, considered desirable to impart *newborn care* skills to TBAs in areas with high rates of home deliveries, in order to enable them to contribute, as much as possible, towards newborn survival and health in partnership with the families and the AWWs/ ANMs/LVs.

1.4.3.4 **IMNCI**

The IMNCI approach will be the centrepiece of newborn and child health strategy in RCHI II. A comprehensive model of IMNCI will be implemented. It will include:

- A home/community-based component (ANMs and AWWs).
- A facility-based outpatient care component
- A component on the management of sick neonates and children in the inpatient setting at PHCs, CHCs FRUs will be added. Health system strengthening and community components will be addressed effectively to ensure effective implementation.

(*The RCH II PIP has provided for funding for introducing pilots in Micronutrients; detailed schemes after being drafted, will form part of the PIP. The recommendations of the consultation on Vitamin A will be incorporated after a view has been taken by MoH&FW on the same)*

*1.4.4 **The Multi-year Strategic Plan for UIP***

(See SD 7)

The immunization programme will be strengthened further in RCH II. India aims to achieve zero-polio status in 2005, and the efforts for sustaining polio eradication will be continued in the initial year of RCH II. Coverage of routine immunization will be enhanced with a focus on underserved communities. The Department of Family Welfare has developed a detailed Medium-term Strategic Plan for the Universal Immunization Program (UIP) (2004-09). This will be integral to RCH II and is summarised below:

1.4.4.1 **Introduction**

India's UIP is one of the largest in the world in terms of quantities of vaccine used, numbers of beneficiaries, the numbers of immunization sessions organized, the geographical spread and diversity of areas covered.
Immunization is one of the most cost effective interventions for disease prevention. Traditionally the major thrust of immunization services has been reduction of infant and child mortality. However, newer vaccines like Hepatitis B vaccine is administered in infancy, give life long protection against liver cancer

and other complications of Hepatitis B infection in adults. Immunization delivery is also a vehicle for health promotion and other health services addressing morbidity of public health significance in all age groups. Immunization is thus not simply an item of national expenditure but truly one of national investment.

1.4.4.2 **Situational analysis**

The **impact** of the UIP is measured in terms of vaccine preventable diseases (VPD) burden. Between 1984 and 2002 the infant mortality rate (IMR) in India has fallen from 104 to 66 deaths per 1000 live births. Over the last 15 years there has also been a general decline in the reported number of cases of the six main VPD as can be seen in Figure 5. Despite these improvements the stated goals were not fully achieved thus there is an urgent need to address the immunization system deficiencies and emphasise the need for system strengthening and vigilant monitoring and surveillance.

The **output** of the UIP is measured in terms of antigen coverage and drop out rates. Antigen coverage rates are a measure of "access" to immunization services. Drop out rates indicate service utilization and are useful to consider when prioritising improvements to the acceptability of services.

Figure 5 shows national reported coverage for each antigen since 1990. Reported coverage rates have increased, with the exceptions of 1992 and 2001. BCG coverage rates have been over 100% for the last three years (perhaps due to under estimation of the denominator). The reported national BCG - measles drop out rate is 10% in 2002. 56% of infants nationally were fully vaccinated in 2002 according to official figures.

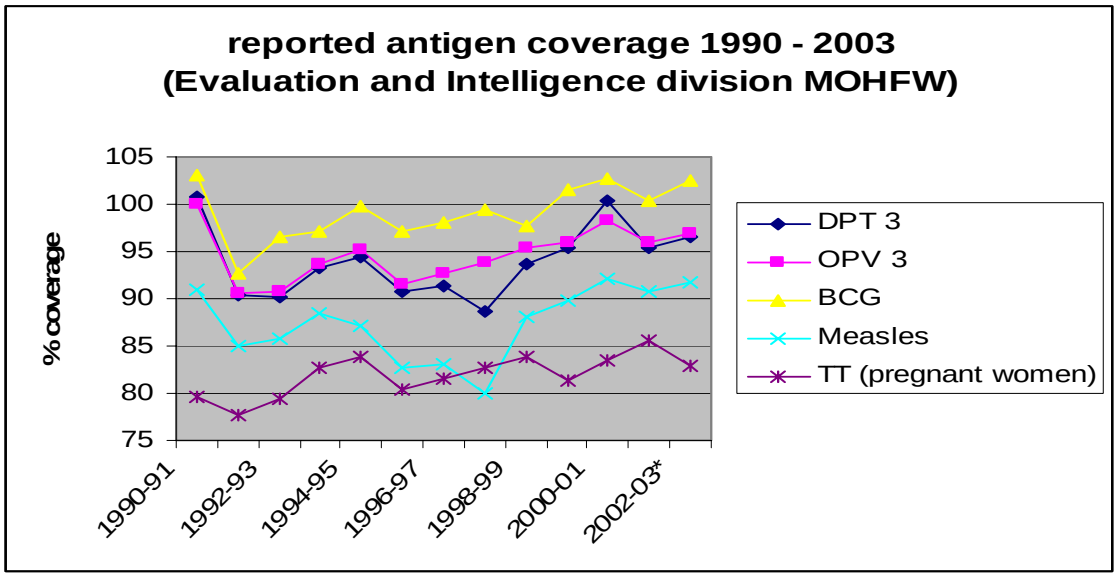


Figure 6: reported national coverage rates by antigen 1990 - 2002.

Source: **Evaluation and intelligence division MoHFW.**

The variation between States in *reported* fully vaccinated coverage rates in 2001 – 2002 are shown in figure 7. This shows much lower coverage rates in the Northern States of Uttar Pradesh, Bihar, Rajasthan and Jarkhand, compared to the Southern States.

176 (72%) districts surveyed showed a decrease in full immunization rates over the five years; average decrease 15.4% (varied 0.1 – 64.2%)
66 (27%) districts surveyed showed an increase in full immunization rates over the five years; average increase 9.4% (varied 0.1 – 41.1%)
2 districts showed no change in full immunization rates

A drop in coverage rate is also seen at State level, as seen in figure 6. The states with the lowest percentage of districts surveyed achieving >80% DPT coverage in 2002-2003 are: Assam (0%), Bihar (0%), Jarkhand (0%), Madhya Pradesh (0%), Rajasthan (0%), Uttar Pradesh (0%) and West Bengal (12%). The States showing the greatest reduction in percentage of districts achieving >80% coverage between 1998-99 and 2002-2003 are: Andhra Pradesh, Gujarat, Haryana, Madhya Pradesh, Maharastra and Orissa.

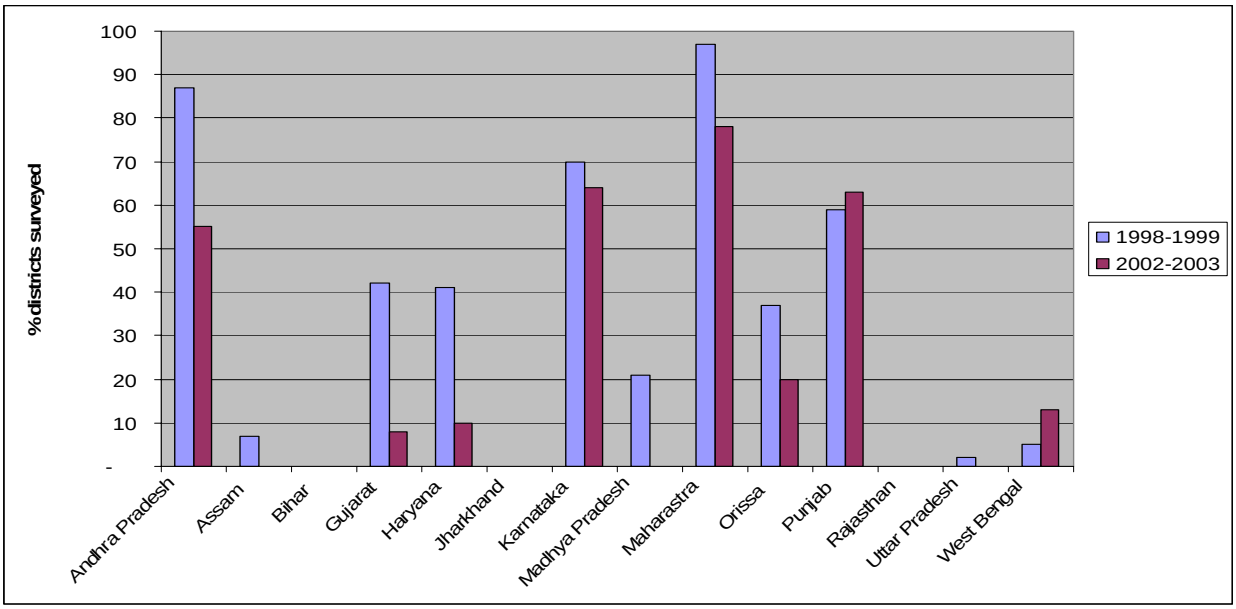


Figure 7: % districts surveyed with >80% DPT 3 coverage in key States in 1998 - 99 and 2002 – 03

Drop out rates: In 2001, the average evaluated BCG – measles drop out rate by state was 14.4%. The drop out rate is an indicator of acceptability or demand for immunization services. Drop out rates were highest in Andhra Pradesh (37.5%), West Bengal (27%) and Meghalya (35%). Almost 6.3 million children who came into contact with immunization services (receiving BCG) in 2001 did not receive

their measles vaccine. 93% of these infants live in 15 states and over half live in Andhra Pradesh, Uttar Pradesh, West Bengal and Bihar.

1.4.4.3 **Constraints**

The most common constraints are:

- Coverage not uniform
- Poor implementation
- Poor monitoring
- High dropouts
- Declining coverage in some major States
- Over reporting
- Injection safety
- AEFI monitoring
- Re-orientation of staff
- Cold chain replacement plan
- Vacancy of Staffs at field level
- Surveillance of vaccine preventable diseases
- Vaccine logistics
- Maintenance of equipment

1.4.4.4 **The UIP Multi-year Strategic Plan**

This medium term plan addresses the geographic and social inequities in immunization coverage rates. It aims to increase awareness of all stakeholders about immunization strengthening and strengthening management roles at each of three specific levels; centre, state and district. The plan aims to strengthen the immunization infrastructure within the broader RCH II programme as well as inter-sectoral linkages.

Medium term goals and strategies:

The medium term plan envisions six goals, each with its own set of objectives and strategies. The six goals and their respective objectives with strategies to achieve these objectives are summarized below:

Goal 1: Districts will provide efficient and safe immunization services to all infants and pregnant women

To achieve this goal the following **objectives** have been identified:

*****Regular quality immunization sessions are planned and held.
*Adequate trained staff are empowered to provide quality immunization services.
*An annually upgraded cold chain inventory according to the levels of the network, allowing for new equipment, substitution, replacement, spare parts, fuel and others will be maintained in order to maintain a functional status of 90%
*An efficient vaccine and injection equipment management and logistics system to forecast and deliver adequate supplies of vaccines in a timely manner

*The implementation of safe injection practices and waste disposal

To achieve the above objectives following strategies will be adopted:

Strategies:

Coordination between National and State level; Printing and supply of National operation guideline; Strengthening of supervision; Prioritisation of poorly performing districts; Prioritisation of under served populations within districts; Proper Micro Planning Filling up of vacancies; Strengthen training for all categories of staff; Assessment of Cold Chain, Procurement and Installation of Cold Chain Equipment, proper inventory management, Cold chain maintenance and repairs; Timely supply of vaccine, ensuring Quality Control of Vaccines; Phased introduction of AD syringes and safety boxes

Goal 2: Contribute to global polio eradication, measles mortality reduction and neonatal tetanus elimination

Objectives:

*Polio eradication certification by 2007
*Elimination of neonatal tetanus by 2009
*Reduction in measles mortality by 2/3 by 2010, compared to 2000 estimates
*Achieve and maintain 70% coverage of 2 doses of vitamin A to children <3yrs

Strategies:

Routine immunization for polio, Supplementary immunization campaigns, AFP virological surveillance, Strengthen service delivery, Increase reporting and action on cases, Data analysis, Safe delivery practices, Targeted SIAs, Strengthening Measles surveillance and outbreak response

Goal 3: The UIP will have sufficient and sustainable funding with established adequate, accountable and efficient fund flows

Objectives:

*Adequate and reliable financial resources at national, state and local levels for the UIP to achieve goals and objectives
*Political commitment for adequate annual funding at all levels

Strategies:

Strengthening National financial planning, build partnerships (strengthening ICC)

Goal 4: Sustain demand and reduced social barriers to access immunization services

Objectives:

*Widespread support by families and communities
*All eligible children and pregnant women are immunized
*High level political and administrative support for immunization

Strategies:
Coverage with print, electronic media and other mass media, improve interpersonal communication.

Goal 5: Accelerated introduction of licensed new and under utilized vaccines against diseases with significant mortality and morbidity in India

Objectives:
*Institutional mechanisms in place to adequately obtain, review and utilize information for deciding on introduction of new and under utilized vaccines.
*Review need for MMR or MR vaccine in India's immunization programme.
*Review need for introduction of Japanese encephalitis (JE) vaccine.
*A phased introduction of Hepatitis B vaccine.

Strategies:
Improve coordination between MoHFW, research institute, NRI and development partners, disease burden study, Surveillance, Training

Goal 6: To monitor and use accurate, complete and timely data on vaccine preventable diseases, AEFIs and antigen coverage and drop out rates by district

Objectives:
*Institutionalised surveillance for VPDs and early detection of any outbreaks
*Strengthened vaccine quality and injection safety by developing a monitoring system for reporting and responding to adverse events following immunization (AEFI) by 2009.
*An effective, efficient, complete and timely immunization recording and local area monitoring system by 2009.

Strategies:
Introduction of software database system; Increase accuracy and use of data at local levels; Private sector and community involvement; Laboratory confirmation and strengthened linkages with surveillance, AEFI, NRA; Strengthen monitoring system at local level; Decentralization of monitoring to strengthen local use of information for action; Use of data at different levels; Use of surveys and Linkages with private sector.

1.4.5 Health System Issues

Facilities will be strengthened to offer quality care for newborn infants and children. All PHCs will provide the outpatient level IMNCI. A minimum of 50% PHCs countrywide (being developed into 24 hr delivery institutions) will provide in addition:

*Care of neonates born in facility.
*Inpatient care of sick neonates brought from outside.
*Inpatient care of sick infants and children.

*Suitable norms, standards and guidelines will be developed, and integrated with those for other RCH II services.
*Norms for facility infrastructure, equipment, human resources, drugs, supplies and referral system will be defined.
*Based on norms 2000 FRUs will be operationalized for providing integrated maternal, child and family planning services in RCH II.
*A system of monitoring and certifying the operationlisation of facilities will be implemented.

While operationalising the facilities equity will be ensured so that underserved areas get adequate coverage.

1.4.5.1 **Ensuring referral of sick neonates and children**

Referral funds will be made available to AWW/ANMs for transport of sick neonates and children. PHCs, CHCs and FRUs will have ambulances (outsourced or otherwise) to cater to the referral transport of sick neonates and children. Communities would be educated about the availability of referral funds/ transport, and BPL/SC/ST families would, in particular be encouraged to avail of these resources. Community based organizations (PRIs, women's groups, youth groups etc.) will be mobilized to innovate local solutions and mechanisms to ensure transport of sick neonates and children.

1.4.5.2 **Extending the roles of ANMs and AWWs**

To ensure that the life-threatening conditions of sick neonates and children are managed quickly and effectively, it is of fundamental importance that the providers closest to the communities have the necessary skills and the mandate to mange these diseases. This is particularly critical for the poorest who cannot seek care away from homes due to lack of resources. At present ANMs cannot manage newborn babies with sepsis because they are not permitted to administer gentamicin injection, and AWWs cannot treat diarrhoea or pneumonia with ORS and co-trimoxazole. This PIP recommends that:
*ANMs be permitted to administer injection gentamicin to neonates (similarly community-SBAs).
*AWW,s be permitted to administer ORS and cotrimoxazole as per the IMNCI algorithms.

This strategy will go a long way in improving access to treatment by critically sick neonates and children, especially those of the poorest families. Skills-based training and supportive supervision will be instituted to ensure acquisition and retention of skills by health workers to administer the specified drugs. Injection safety norms will be followed strictly for gentamincin injections. Disposable or AD syringes will be provided.

1.5 *Adolescent Health*

(See SD 6)

1.5.1 ***Introduction***

Adolescents (age 10-19) constitute over 23% of the population in India, numbering 230 million. Adolescence is a phase of rapid physical growth, psychosocial development and sexual transformation. Adolescents are not a homogenous group but, depending upon the region, culture, socio-political and economic background, have diverse educational, career, social, behavioural, developmental and health needs. A large number of adolescents lack formal or informal education. School dropout rate amongst boys is 54% and girls 60%. Many of them work in unsupervised and unsafe conditions.

Data from NFHS-2 indicate that median age at marriage of girls in India is 16 years. Early marriage has profound consequences on demographic dynamics. The age specific fertility rate age 15 -19 is 107 per 1000. Habits and behaviours picked up during adolescence have a life-long impact. Risk-taking habits, substance abuse, food fads, rebellious attitude, cynicism often have roots in adolescence experiences. Sexual relations in adolescents occur before they acquire skills in self-protection. Several studies indicate that sexual activity in Indian adolescents starts at a relatively early age. Only 59% of adolescents know about condoms and 49% know about oral contraception. Contraception use amongst married adolescents of age 15-19 years is only 7%. Young people between the ages of 10-25 years make up 50% of all new HIV infections.

Many adolescents suffer from malnutrition and anaemia. About 59% boys and 37% girls are stunted (NNB 2000). Anaemia among adolescents is very common (56% Baroda study). Many are not immunised against tetanus. Adolescence is the last opportunity to correct growth lag. Studies show that pregnancy before 16 years is associated with an adverse effect on maternal and newborn health outcomes. The extra nutritional requirements of pregnancy coming close after the adolescent growth spurt contribute to the poor nutritional status of girls who conceive as teenagers enhancing the risk of foetal growth restriction and low birth weight. Anaemia during adolescence can only get worse during an ensuing pregnancy, again contributing to foetal growth restriction and predisposition to maternal morbidity and mortality. Thus, ill health during adolescence has profound implications for maternal, perinatal, neonatal and infant mortality.

A large number of adolescents in India are out of school, get married early, work in vulnerable situations, are sexually active, unemployed, and are exposed to peer pressure for initiating tobacco or alcohol use. These factors have serious social, economic and public health implications. Adolescent pregnancy, excess risk of maternal and infant mortality, sexually transmitted infections and reproductive tract infections in adolescence, rapidly rising incidence of HIV in the 15-24 year age group, high rates of tobacco and substances use are some of the

health challenges. The National Population Policy 2000 called for developing an adolescent health package for adolescents.

Table 1.20: Key elements and health implications for adolescents

Domains	Health implications
1. Growth and Development • Body and mind changes of adolescence	• Smooth transition to adulthood. • Understanding body and mind changes of adolescence. • Preventing psychological stresses and complexes. • Menstrual/sexual hygiene. • Graining self esteem and self confidence.
2. Nutrition • Macro- and micronutrient needs	• Prevention of anemia • Attaining optimum growth potential
3. Reproductive & Sexual Health • Confident sexuality • Contraception • Pregnancy • RTIs/STIs • HIV	• Healthy sexual attitudes • Postponing early sexual debut • Avoiding early unwanted pregnancy • Preventing unsafe abortion • Preventing and treating RTIs/STIs • Preventing HIV infection
4. Marriage and parenthood • Marriage • Pregnancy and child birth • Parenthood (child care)	• Marriage at appropriate age • Marital harmony • Pregnancy at appropriate age • ANC, tetanus immunization and IFA • Skilled attendance at delivery • Post-partum care • Child health and development
5. Life skill education • Self help, negotiation and decision- making skills • Negotiating skills • Coping with stress • Avoiding tobacco, alcohol, and substance abuse • Physical activity • Healthy diet	• More responsible attitudes • Better social adjustment • Preventing addiction • Better fitness • Preventing adult diseases • Better coping behaviour

Health workers attitudes to adolescents, and the lack of privacy and confidentially when seeking reproductive health services are know to be significant barriers to demand and adolescents avoid visiting public health facilities. Therefore, on the one hand, we need to reach out to them in their communities, and on the other, orient the health system to the felt and unmet needs of the adolescents.

The prevalence of anemia, malnutrition, adolescent pregnancies, the looming threat of HIV/HIDS and the requirements of unfinished adolescent development and growth have to be kept in view while designing effective interventions for adolescents. Services for adolescents cannot be provided on the basis of "one size fits all'.

The health needs of a 10 years old boy who is at the threshold of puberty are very different from an 18 years-old girl who has just got married. In addition, adolescents, for a variety of reasons, present themselves to the health workers with complaints that may have little to do with their real, underlying concerns or problems. Many such concerns are related to growth, development, bodily concerns; or stress due to studies, career or relationships.

Health services in their present form are designed for curative purposes and adolescents' needs for information, counselling and specified services (contraceptive, IFA, etc) are not available. Adolescents perceive many barriers in seeking care and counselling. The health system must be made more adolescent friendly. Innovative experiences in NGO settings have demonstrated how adolescent health needs can be comprehensively and effectively addressed by interdisciplinary teams.

It is important to note that the scope of adolescent development is very broad. The health component is just one critical component of a holistic national effort to nurture the youth of India. The Ministry of Youth Affairs and Spots is the nodal Ministry for Adolescents. In addition, Departments of Education, Women and Child Development, Rural Development and the state governments have important roles to play in this endeavour.

The DoFW would take lead in developing strategies and tools for promotion of adolescent health for dissemination through other departments and partners.

RCH II aims to address the prime health needs of adolescents with a focus on married or out of school adolescents, and on interventions that can be delivered through the health system, both public and private, in synergy with other health initiatives, in particular the National AIDS Control Organization.

1.5.2 ***The adolescent health initiative in RCH II***

Goal:

To achieve optimum health and development of the adolescent segment of the population, in a phased manner.

Objective: To introduce a comprehensive Adolescent Health Initiative (AHI) in selected districts in collaboration with partner departments and other stakeholders.

The AHI will consist of two components:

- Adolescent friendly health services
- Adolescent health counselling services

1.5.2.1**Coverage**

The AHI package will be implemented in 75 (about 12% districts) districts in the country in RCH II during 2003-08. These districts will be those where IMR has declined to less than 60 per 1000 live births. The districts will predominantly be in the non-EAG states where more urgent maternal health and child survival priorities have already been tackled to a significant extent. The tentative phasing of the program will be as follows:

Table 1.21

Preparatory phase:	
2003-04	• Preparation of action plan • Development of behavior change communication strategy • Development and pilot testing of training and counseling modules • Capacity development
Implementation phase:	
2004-05	5 districts
2005-06	10 districts
2006-07	20 districts
20007-08	40 districts

1.5.2.2 **Operationalising Adolescent Health Initiative in a district**

The AHI at the district level will be implemented by the District RCH/FW Society through a District Partnership for Adolescent Health (DPAH) consisting of representatives of: Health department, Education department, Welfare department, ICDS, NGOs PRIs, National Service Volunteers, Nehru Yuva Kendra Sangathan, National Reconstruction Corps volunteers, other youth organizations, local chapters of Indian Academy of Pediatrics & FOGSI and other stakeholder groups. The DPAH may constitute tehsil/block level partnerships for imparting the initiative.

Under the AHI, adolescent friendly health services will be provided at PHCs, CHCs, FRUs and district hospitals in the selected districts. Adolescent Health Clinics will be conducted at least once every week at these facilities to provide following services:

Clinical services

- General examination
- Nutrition advice
- Detection and treatment of anemia
- Easy and confidential access to medical termination of pregnancy
- Antenatal care and advice regarding child birth
- RTIs/STIs detection and treatment
- HIV detection and counseling
- Treatment of psychosomatic problems
- De-addiction
- Other health concerns

Counselling services

- As per the behaviour change domains referred to above

Table 1.22: Adolescent Health Clinics

Facility	Adolescent Health Clinic: Frequency and Providers	Partners for running the Clinics
PHC	At least once a week; run by MO, LHV	NGOs, members of FOGSI / IAP
CHC, FRU, District Hospital	At least once a week, run by MO/ Obstetrician/ Paediatrician (or by designated contracted private practitioners)	NGOs, members of FOGSI / IAP and contracted private providers

1.5.2.3 **Adolescent Health Counselling Services**

Table 1.22: Contents of the communication package for the two sub-groups of adolescents

Domain	Age 10-14 years	Age 15-19 years
1. Growth and Development	Understanding and coping up with changes during puberty: physical, emotional, sexual Anatomy/physiology of reproductive system, menstrual system, conception, pregnancy and child birth Menstrual/sexual hygiene Gender issues, roles and rights	Reinforce contents for age 10-14 years, plus: Legal rights
2. Nutrition	Balanced food Iron/folic acid supplementation	Reinforce contents for 10-14 years.
3. Reproductive and Sexual Health	Healthy sexual attitudes	Reinforce contents for 10-14 years, plus: Contraception Abstinence Adolescent pregnancy Risks of RTIs/STIs Preventing HIV infection Safe abortion
4. Marriage and Parenthood		Appropriate age for child birth, birth spacing Care during pregnancy, birth preparedness, skilled attendance at birth, post-partum care Newborn and child care (including breast feeding, immunization, complementary feeding, early stimulation, sickness)
5. Life Skill Education	Self help skills Healthy and positive habits Tobacco, alcohol abuse Substance abuse Healthy diet Exercise	Enforce content for 10-14 years, plus: Negotiating skills Stress handling skills

Table 1.23: Adolescent health counseling services

Target group	Strategy	Channel/provider*	Tools /training required	Operational target
RURAL ADOLESCENTS **1.1Unmarried Out of school**	Group counseling sessions	AWW, NGO's SHGs block extension officer, male health worker, self help groups, National Service Volunteers, National Reconstruction Corp volunteers *(Identify coordinator)*	Training module/s for all categories of counselors BCC/IPC materials	At least one session each for boys and girls every 1-2 months in each village
1.2 Married	Individual /couple counseling sessions	ANM, AWW, block extension officer, NGOs, male health worker, link worker *(Coordinator ANM/AWW)*	BCC/IPC materials	First contact within one month of marriage, then once every 6 months
2.URBAN ADOLESCENTS **2.1Unmarried Out of school**	Group counseling session Help line	NGO's,volunteer physicians (IAP, FOGSI, members), local bodies members, self help groups, National Service Volunteers, National Reconstruction Corp volunteers *(Identify coordinator)*	BCC/IPC materials	At least one session each for boys and girls every 1-2 months
2.2 Married	Individual, couple counseling and group counseling sessions Help line	NGOs, AWWs, volunteer physicians (IAP, FOGSI, members), local bodies members, self help groups, National Service Volunteers, link/outreach workers *(Identify coordinator)*	BCC/IPC materials	At least one contact within one month of marriage, then once every 6 months

***NB: Training modules on counseling for all categories of providers and counselors will need to be developed.**

RCH II will focus primarily on out of school married/unmarried adolescents. In districts with adolescent health programs, social marketing of sanitary napkins should be promoted.

1.5.2.4 Evaluation and operational research

Adolescent health is a new component for RCH II. In order to convert this initiative into a sustainable activity, it will be important to carefully monitor and evaluate its implementation. The lessons learnt should be ploughed back into the ongoing and future phases of the programme. It is also important that operational research studies are built into the programme to develop new strategies, as adolescent health emerges as an increasingly important priority for India in coming years.

A consultation on Adolescent Health would be held after which this chapter of the PIP would be refined.

1.6 *Urban and tribal health*

(See SD 8 & SD 9)

1.6.1 ***Urban Health***

1.6.1.1 **Background**

RCH indicators in urban slums are worse than the urban average. Recognizing the seriousness of the problem, the Government of India has identified Urban Health as an important element of the Tenth Five Year Plan; National Population Policy, 2000; National Health Policy 2002 and the forthcoming RCH II Programme. The provision of quality primary health services in urban areas has emerged as a priority for both the Central and the State Governments in view of increasing urbanization and the growth of slums and low income populations within India's cities.

1.6.1.2 **RCH II and the Urban Health Programme**

Goal:
To improve the health status of the urban poor community by provision of quality Primary Health Care Services with a focus on RCH services to achieve population stabilization.

Objective:
To provide an integrated and sustainable primary health care service delivery, with emphasis on improved Family Planning and Child Health services in the urban areas of the country, particularly for urban poor living in slums and other health vulnerable groups.

Coverage:
There are 423 towns and cities having a population of more than 100,000 (2001 census). These cities have been broadly classified into 4 main categories:

- Mega cities with a population of more than one crore.
- Million plus Cities.
- Large Cities with a population of 1 - 10 lakhs
- Towns with a population less than 100,000.

There are many agencies involved in urban health initiatives across India: GOI, State Governments, Municipal Corporations, Private providers, NGOs etc. The proposed Urban Health Programme envisages implementing urban health projects in a phased manner in all the states with priority being accorded to the EAG and Northeastern states. A tentative allocation of Rs 350 crores has been earmarked for the implementation of urban health projects in identified cities in the 10th Five Year Plan (2002-07). States are required to prioritize the cities which have the largest slum populations. In the Mega cities, projects will build on the platform created by earlier projects such those implemented in Kolkata,

Bangalore Delhi and Hyderabad under the World Bank IPP VIII assisted initiatives.

1.6.1.3 **Urban Health Project Development**

The process of project development will involve:

- A situation analysis of public, private and NGO sector facilities available in the city along with their functional status and type of services provided.
- Consultations with service providers and stakeholders.
- Identification and mapping of slum population and other vulnerable groups
- Development of a management implementation plan and budget.
- Development of a monitoring and evaluation mechanism.

City level Task Forces will be established. Following the above process, gaps will be identified and the Task Force in close coordination with the State level Urban Health Task Force will develop Urban Health Projects. A nodal officer will be identified and a cell established at state level to plan, coordinate and supervise the Urban Health Projects.

1.6.1.4 **Urban Health Project Strategies**

Urban health Projects should include the following key strategies:

- Improving access to RCH services through renovation, improvement and re-organization of existing facilities, redeployment of available state Government staff and establishing new facilities. Mobility support may be contracted in, and trained female volunteers will work at community level.
- Strengthening existing urban health infrastructure at first and second tiers to cover all slum areas.
- Improving the quality of Family Welfare Services by increasing the supervisory, managerial, technical and interpersonal skills of all levels of health staff including female volunteers, through pre-service, in-service and on-the-job training.
- Involving NGOs and the private sector in urban PHC delivery.
- Stimulating the demand for RCH services through integrated BCC activities and enhancing the participation of communities and municipal leaders in the design, implementation and supervision of the services.
- Promoting convergence of efforts among multiple stakeholders including the private sector to improve the health of the urban poor.
- Developing effective linkages and referral between the communities, 1st and 2nd tier service levels.
- Strengthening Monitoring and Evaluation mechanisms.

1.6.1.5 **Service Delivery Model**

Presently, MH&FW provides different types of Urban Family Welfare Centres (UFWCs) and urban health posts (UHPs) in different states. GoI supports 1083 UFWCs, 871 UHPs, and 3,239 beds under sterilization beds scheme. The post artum centres (550 at district level and 1012 at sub-district level) supported until 2002 by GOI are now being funded by the State Governments with additional support from Planning Commission. There are many other projects run by state Governments, Municipalities, NGOs and the private sector. In view of the range of activities and stakeholders, the programme envisages the implementation of a uniform service delivery model by

- Integrating facilities run by state governments, Municipalities and other agencies.
- Upgrading existing infrastructure.
- Establishing new rented facilities.

Flexibility to meet local needs will be important but a suggestive model might include:

- A **first tier** of facilities (UHCs) will be set up, one for approximately 50,000 population with emphasis on reaching the most vulnerable.
- An appropriate number of **second tier** of facilities will be identified for referral (hospitals, maternity homes, private/NGO nursing homes etc).
- The existing service delivery system will be **reorganized and restructured** to serve a defined area and population.
- Renovation and improvement of existing Government facilities will be preferred to new construction.
- Potential **private partners** for either tier will be identified to improve the coverage and quality of services and harness the skills of potential partners whilst ensuring equity of access for the poorest.
- **Opening hours of UHCs and types of outreach activities** will be decided in consultation so that they meet local needs.

1.6.1.6 **Package of services**

A minimum package of services will be provided in both tiers The UHCs will provide OPD services: a comprehensive package of RCH, simple curative, basic lab, counselling, depot holding and referral services to 2nd tier facilities. They will coordinate outreach activities through link workers and women's health groups, stimulate demand through integrated BCC activities, coordinate with NGOs training link volunteers and provide compensation for family planning acceptors.

Second tier facilities will provide tubal-ligation and vasectomy, institutional delivery, EmOC, safe abortion, and child/newborn care services.

1.6.1.7 **Human Resources**

Existing facilities may be relocated to ensure equitable coverage of marginalised settlements and staff redeployed. Any new staff will be contracted in. ANMs will be given a clearly identified area in which they will provide outreach services. Clear-cut roles and responsibilities should be defined for all staff to ensure their primary and exclusive utilization in the delivery of quality PHC.

Suggested UHC staffing pattern to cover a population of 12000-15000 population:

1 Medical Officer (LMO)
1 PHN/LHV
3-4 ANMs
1 Lab assistant
1 Staff clerk with computer skills

Referral centres such as maternity homes will be supported to engage specialists on contractual basis. No regular staff at the referral centre may be supported by the project. Experiences from IPP VIII Kolkata project suggest that hiring of part-time specialists on a fee-sharing basis can be very successful.

Financial support will depend upon the specific Projects received from the State Governments to meet the outlined objective of providing Integrated Primary Health Care & FW Services in urban areas. The main activities to be considered for financial support are listed in section 1.6.1.4.

1.6.1.8 **Referral and community level activities**

For each UHC options for appropriate 2nd tier facilities will be identified, from either public or private sector. Upgrading existing facilities may be considered, and linkages with central, state, corporate, private and charitable facilities should be promoted. Agreements will be entered into with these facilities to provide services such as institutional delivery, EmOC, terminal methods of family planning, safe abortion etc., on an equitable basis.

Link volunteers (a woman from the community able to spare 3-4 hours a day, preferably selected by an NGO) will promote services. The need for volunteers will be periodically reviewed. Where possible they will be integrated with other slum development activities to encourage sustainability and intersectoral collaboration. The capacities of link workers to facilitate health improvements in the community will be built by NGOs. Link volunteers will form women's health groups as the basis of health promotion efforts at the community level**.** Capacity building should focus on RCH services. Honoraria may be paid to the volunteers, managed by an NGO.

Activities that reach out to the most vulnerable and underserved will be planned as a means of stimulating demand and ensuring equity of access. An outreach plan for each UHC focusing on the most vulnerable communities with the poorest health indicators will be developed. Mobility support for outreach activities will be budgeted for. The outreach service package, as a minimum, should inform on the availability and promote Family Planning, child health services (including immunization), counselling, household level new born care, safe delivery, ANC and safe abortion services. NGOs will be important partners in outreach activities.

Demand generation BCC activities will be designed and integrated to promote the above RCH services. A BCC strategy will be developed based on the local situation. Private sector and NGO participation in BCC activities will be promoted particularly with partners who have proven experience in BCC. The BCC strategy will focus on interpersonal or group communication, include a description of expected behaviour change for different audiences and will identify BCC benchmarks for monitoring.

The different capacities of the various agencies involved in the implementation, management, and monitoring of the proposed UHP will need to be built in order to handle the additional responsibility. The needs at various levels of implementing agencies will be identified and a capacity building plan developed. Management capacities can include communication, administration, finance, accounts, evaluation and documentation skills. Programme capacities may include technical RCH II service delivery, follow-up, monitoring, referral, counselling, participatory approaches, BCC and building linkages with other agencies.

1.6.1.9 **Public-Private Partnerships**

Strong partnerships between the DoFW, GOI, state Government and the ULBs will increase the chances of success. DoFW will provide technical assistance, the state government will provide leadership to the project, facilitating ground implementation by the ULBs. The private sector will be economically and formally engaged for service delivery to fill in gaps. There is a considerable capacity among private providers (NGOs, medical practitioners and other agencies) which will be explored and operationalised. Such partnerships are particularly likely to be viable in urban areas. A central issue concerning Public-Private Partnership (PPP) is the centrality of ensuring equity of access for the poorest and most vulnerable; groups that some private providers may not be familiar with serving.

PPP initiatives based on social marketing and social franchising will be piloted. States may find it helpful to hear the experiences from elsewhere in the country, to provide concrete directions for expanding PPPs.

PPP approaches will need to be different depending on the context:

- In cities or parts of a city where 1st tier public sector health infrastructure (Health Posts or UFWCs) is already available, a partnership with NGOs

could be proposed for enhancing utilization of these existing Public Sector services through training Link Volunteers, women's groups, social mobilization and BCC.

- In cities or parts of a city where no public sector 1st tier facilities are available, the entire first tier service delivery component may be contracted out through partnership with a charitable hospital, NGOs or an appropriate private agency. NGOs and specialized agencies may also be contracted for activities such as identification and training of link volunteers or similar community level institutions, supporting BCC and activities, providing training on specific programme issues specially those pertaining to urban poverty, carrying out baseline and end line surveys. Private medical practitioners could also be engaged on part-time basis for first as well as second tier facilities (based on the experience in IPP VIII in Kolkata and neighboring cities). 2nd tier services (including laparoscopic tubal ligation and no-scalpel vasectomy services) and diagnostic services may be outsourced to private medical facility on reimbursement basis. A uniform rate list needs to be enforced for such services, and a clear agreement to ensure access for the most vulnerable.

Appropriate mechanisms for agreeing and managing contracts with the private sector needs to be proposed. This is a specialist area requiring management, legal and finance skills. Accreditation methods must be agreed to ensuring quality, equity of access, reporting and monitoring performance.

1.6.1.10 **Coordination and inter sectoral convergence**

Mechanisms for effective linkages and coordination between various departments and the private sector will be developed to improve, for instance, sanitation, drainage and water services. Such mechanisms may be proposed at facility, central, city or state levels. A UHC level coordination forum and city level coordination forum respectively may be constituted. At the State level a Monitoring Committee or Task Force under the Chairmanship of Secretary (FW) with representation from other Departments to review and monitor the progress of implementation and a Governing Council under the Chairmanship of Chief Secretary comprising Secretaries of the other concerned Departments, Ministries, NGOs, Donor Agencies and GOI and other stakeholders may be established to oversee programme implementation, budget and inter-sectoral coordination. The Governing Council will issue the necessary directives for inter-departmental coordination and release of funds.

1.6.1.11 **Management and monitoring**

An M&E plan will include appropriate benchmarks. Any urban HMIS will be consistent with the national HMIS. Baseline indicators will be measured using the data already available from the District Health Survey and other available reports. Benchmarking will specially focus on contraceptive usage, terminal methods adoption, immunization coverage, TT coverage, safe abortion, safe delivery, infant and neonatal care. Key processes and outcomes will be

monitored monthly by the City Programme Management Unit. State quarterly progress compilations by state will be sent to GOI. In-depth 6-monthly reviews and a mid-term rapid assessment may also be undertaken.

While designing Projects, duplication will be avoided. The roles of management units and key staff at each level will be clearly stated. A state Proramme Management Unit may be established for the periodic review of programme implementation and to undertake discussion and decisions on UH programme activities. A City Programme Management Unit at the city level to review and strengthen programme implementation should be established. A state UH Programme Officer will be responsible for guiding and coordinating the UH programme in various cities of the State. A City UH Programme Officer shall be the nodal official for the implementation of the UH programme at the city level. In addition, support staff may be requested based on requirements. All new positions under the Urban health programme would be contractual. Existing staff re-deployed in various capacities for the Urban health programme would continue to get their salaries from their original programme / scheme.

Funds will be released to the state Government, state RCH Society who in turn will release funds to the implementing authority within one month of the receipt of funds. At the state level, Health & FW Department will be the nodal Department for implementation of UHP, overall coordination, collection of SOEs from implementation agencies and their onward submission to the GOI for audit.
Budgets will be developed for activities defined in the proposal based on the above stated broad guidelines to justify resource request, keeping in view that the focus remains on RCH services. The Project should indicate component wise and year-wise budget and also separately for activities linked directly with Family Planning and Child Health services.

1.6.1.12 **Cost recovery mechanism and sustainability:**

Cost recovery will be integral to the proposal, as will the principle of inclusion of the poorest and equity of access. The experiences of the Kolkata IPP VIII project in cost recovery may be drawn upon: Kolkata levied differential user charges on services provided, these were put in an amalgamated fund which was used to sustain project activities after the project period. Such a fund at city level would be steadily built to partially sustain the recurring costs after project completion. Such a fund can be built through several sources of contribution including:

- User charges at 2nd tier (not for BPL) for diagnostic services, surgery etc.
- Registration fees/family health card charges from all families collected at first tier and during outreach camps.
- Donations from businesses and individuals.
- Funds from National Slum Development Programme (ULB can access 5 times the amount generated at local level by communities from NSDP)
- A portion of lease/rental income from Municipal or Public sector buildings.

In addition to the corpus health fund, contributions to community and institutional sustainability will also develop in the form of capacity at community level (through

federation of community groups) and the enhanced capacity of the ULB to plan and mange such programmes.

1.6.2. Tribal Health

1.6.2.1 **Background**

The tribal population in India is socio-economically disadvantaged. Tribal communities are not one homogenous group; belonging to more than 400 different ethno-linguistic, religious and cultural groups. There are six predominantly tribal states where more than 50 percent population is tribal and another nine states where the majority of the scheduled tribe population lives.

The health and education indicators for tribal people are poorer than for the rest of the population and women and girls from these groups do particularly badly. The main reasons for the poor health status of tribal people are:

- Poverty and under-nutrition in both macro and micronutrients.
- Poor environmental sanitation, hygiene and lack of safe drinking water.
- Lack of access to health services.
- Social barriers preventing access and utilization of health services.
- Specific diseases such as malaria, TB, Yaws, Sickle cell anemia and Thalassemia.

1.6.2.2 **The magnitude of the problem for tribal people**

Many data are not sufficiently disaggregated to describe the health status of tribal people.

Table 1.24: Health Outcomes among Scheduled Castes, Tribes, and the rest of the Population in India 1998-1999

Health Indicator	Scheduled Castes	Scheduled Tribes	Rest of Population
IMR	83.0	84.2	61.8
Under 5 Mortality	119.3	126.6	82.6
TFR	3.15	3.06	2.66
% Children underweight	53.5	55.9	41.1
Children with anaemia	78.3	79.8	72.7
% Children with ARI (prev 2/52)	19.6	22.4	18.7
% Children with diarrhoea (prev 2/52)	19.8	21.1	19.1
% Women with anaemia	56.0	64.9	47.6

From NHFS II data it is known that:

- In some tribal areas, 60% of girls marrying below 18 years.
- 43 % of pregnant tribal women did not receive any ANC.
- 39% did not receive any tetanus toxoid.
- Only 49% were given iron and folic acid tablets.
- 81% of pregnant tribal women delivered at home.

- 44% of all deliveries were attended by TBAs and 32% by other untrained persons.
- Only 14% of tribal women had any postnatal care.
- The unmet need for family planning is 15%.
- 42% of currently married women had any reproductive health problem.

Clearly, tribal people especially women and children require special attention if their health status is to be improved.

There is low utilisation of health services in tribal areas because:

- Sparsely distributed tribal population in difficult forest and hilly regions.
- Poorly located sub-centres, PHCs and CHCs.
- Service providers not in post.
- Lack of suitable transport facilities for quick referral of emergency cases.
- Lack of appropriate HRD policies to encourage/motivate the service providers to work in tribal areas
- Inadequate mobilization of NGOs.
- Lack of integration with other health and sector programmes.
- BCC activities may be inappropriate.
- Services are not client friendly.
- There are cultural barriers to access.
- Non involvement of local traditional faith healers.
- Weak monitoring and supervision system.

1.6.2.3 **Objectives of Tribal Health**

The **Goal** of RCH II in tribal areas is improved RCH health outcomes for tribal people.

The specific **objectives** are to:

- Assess the unmet RCH needs in tribal communities.
- Provide integrated, appropriate and quality RCH services.
- Ensure equitable access to these services.
- Stimulate demand for these services.
- Improve service coverage and acceptability.
- Promote community participation and inter-sectoral coordination
- Provide opportunity for employment of tribal people
- Promote and encourage tribal systems of medicine

Strategies to be adopted:

Basic health and RCH services need to be integrated in the overall development of tribal areas. Tribal communities have many strengths such as strong community bonds, positive value towards health and a strong faith in the traditional healing systems. Close partnerships will be developed with NGOs that

are active in the tribal areas. They should be involved in the planning, management and delivery of health care services. The approach to tackling tribal health problems has to be multi-pronged, area specific and needs-based. This is especially important, as the tribal population of India is not homogenous.

For instance, the seven states in the North East will require a different strategy since the education level is high in these areas and economically they are better than other tribal groups in the country. In the in the ERG states the health of the tribal population is lower than that of the general population. There is a need to have special focus on tribal populations.

In order to increase utilization of health services by the tribal population some suggested innovative approaches include:

- Involving the community in the planning process as well as in the management and implementation of services and programmes.
- Using community-based workers (men and women) as social mobilisers, educators and providers of non-clinical services.
- Involving locally elected bodies including tribal boards.
- Involving NGOs.
- Promoting tribal systems of medicine, and tribal healers where appropriate.

1.6.2.4 **Promoting community participation**

Working with PRIs will be important to bringing health onto the local political agenda. They need to be actively involved in the planning and management of health care delivery system. Community based organization should be motivated to take active part in the management of local services.

Community Based Providers will be trained to improve access and demand for services among the tribal population. Community based volunteers can play an important role in extending outreach services to tribal populations. In difficult terrain and sparsely populated areas it may be an advantage to have a team of men and women, preferably a married couple, working as CBD workers. This has been successfully implemented by SARTHI in 150 tribal villages of Gujarat and SEWA-Rural in Bharuch district of Gujarat. By having a male worker the reproductive health needs of men can be addressed. The CBD workers can also act as depot holders for contraceptives and other health related products like IFA tablets, ORS, DDK and sanitary pads.

BCC should be carefully developed with full community involvement. Community could either provide land for its construction of facilities or input in terms of time.
A large network of Anganwadi workers is available in the tribal areas under the ICDS scheme. They will be involved in creating awareness and demand for services for women and children.

1.6.2.5 **NGO and public private partnerships**

Mapping of NGOs will be useful in tribal areas, and credible NGOs especially with a proven track record of clinical service provision should be encouraged to take responsibility for managing RCH and other health services in sub-centres, PHCs and CHCs where the public health system is deficient. NGOs and the corporate sector should be encouraged to take up CBD projects covering minimum of a population in the block and be assigned coordinating function for the mobile health services, referral transport, awareness creation and social mobilization.

ISMPs and tribal system of medicine practitioners may be provided orientation and training to provide counselling services for RCH services. They can potentially be depot holders for contraceptives such as condoms and pills and refer clients to public health facilities for IUDs, sterilization, immunization, ANC and other services.

1.6.2.6 **Communication Strategy**

BGG will be carefully developed to prioritise local behaviour change objectives. In order to stimulate demand for RCH services, the BCC strategy must be appropriate for the tribal population to be served. A communication strategy needs to be based on the values, beliefs and practices of the tribal population, with regional differences. Tribal dialects should be used in audio-visual presentations and local tribal artists and cultural groups involved in designing and testing BCC materials.

1.6.2.7 **Support to infrastructure and service delivery**

Facilities for EmOC will be established at block level. PHCs and sub-centres will be strengthened and the skills of public sector providers upgraded, not just in terms of technical training; special emphasis will be given to developing skills in counselling, the appreciative inquiry approach to quality improvement, supportive supervision and infection prevention.

Mobile clinics can be very useful in providing curative and preventive care through regular visits on fixed days to sub-centres. Teams may comprise doctors (allopathic and/or ISM&H), ANMs and HWs (M). AWWs, Sahayika, PRI, NGO and traditional tribal medicine practitioners will provide local assistance. Facilities may need to be re-equipped and strengthened according to the local RCH needs. Mini sub-centres might be established in limited hilly, remote and difficult to approach areas, staffed by ANMs, with flexible population norms between 700 to 2000 (DWCD has followed a similar approach for the ICDS scheme in remote tribal areas by establishing mini Anganwadi centres for a population of 300).

1.6.2.8 **Human Resource development**

Skilled assistance at birth will be promoted by piloting Community Midwife training. One approach might be to recruit local married women for training and assistance setting up their services. This will need to be closely monitored to assess the quality of the services offered.

More suitable and responsive human resource development policies for tribal areas will be explored (e.g. the possible relaxation of entry qualifications for ANM training for local tribal women, possibly involving a longer duration of training at the ANM training schools. This will be subject to the approval of the Nursing Council of India. New ANM School will be considered for tribal areas or special batches of ANM training exclusively for tribal girls at existing ANM schools will be considered. The short duration training in EmOC anaesthesia (Chapter 1.2) will be provided for MOs in tribal areas.

1.6.2.9 **North Eastern States**

The states of Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tirupura and Sikkim have a large tribal populations but present a different set of characteristics both demographically and geographically from the rest of India and will require different approaches.

The North Eastern states:

- Are relatively geographically isolated from the rest of India.
- Have underdeveloped communication networks.
- Are prone to natural disasters.
- Have strategically important shared borders with other countries.
- Contain difficult terrain with poorly developed transport systems.
- Contain some sparsely distributed tribal populations in forests and hills.

It is thus difficult to provide RCH services in these areas and the unit cost of such services can be extremely high.