

# Safe motherhood with attempts at total reproductive health care: a community-based experience

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In view of the many preventable obstetric, gynaecologic and contraceptive problems in the rural community surrounding our institute, we moved out to offer our services. Starting with immunisation of all infants and children by the cluster approach (1984-1985), tetanus toxoid to newlyweds/adolescents (1985-1986) was gradually added. Next addition was door-step antenatal care with high risk approach and timely referral, intranatal, family planning advice and, wherever possible, services. Gynaecologic screening was undertaken in 1988. Inexpensive delivery kits were given to would-be mothers in 1991 and breast feeding advice in 1992. In five years there has been no maternal mortality or major morbidity. Perinatal mortality was reduced per 1000 births to around 21 in 1993, from 85 in 1986 in the villages, and from 104 in 1989 to 38 in 1993 in slums, where services were started in 1989-90. Family planning acceptance has increased, especially for permanent methods. Out of all symptomatic women in 1989, 73.5% had some gynaecologic disorder, whereas the figure for 1994 was 51.2%. Safe motherhood can be best achieved by total reproductive health care with a holistic approach.

Health for all seems an empty slogan when we look at the condition of women's reproductive health in developing countries. While it is true that material and human constraints have contributed to this sad state of affairs, lack of commitment, planning, managerial skills and supervision at all levels of care are generic aggravating factors.

## Background

In an earlier study carried out at Sevagram, about three fifth of the women interviewed were vague and showed reluctance in answering questions about their knowledge and attitude towards contraception and medical termination of pregnancy (Chhabra and Shende 1985, 1987). As a result, adolescents continue to suffer severe sepsis due to abortions performed by unskilled persons in unhygienic surroundings (Chhabra and Shende 1991). In our research related to medical termination of pregnancy (MTP) it was observed that some 30% of all women seeking MTP were unwed teenagers; 75% of the MTPs in these girls were in the second trimester, most of them between 18-20

weeks of pregnancy (Chhabra et al 1988). Following these observations we carried out a survey of school girls, mostly (82.5%) between 13 and 16 years of age. Only 19.5% of them had any knowledge of menstruation; more knew something about contraceptives than the process of conception. Their sources of knowledge were mostly films and television, posters, books, and the like (Chhabra et al 1990).

Between January 1990 and December 1994, 7615 deliveries took place in the obstetrics and gynaecology department of Mahatma Gandhi Institute of Medical Sciences, Sevagram in Central India. About 1.25% of all women who gave birth there had eclampsia and 3% of all who had abortions were admitted with severe sepsis resulting from a badly damaged uterus or a stick in the abdomen. In 1994, the MMR was 574.5/100,000 live births. Major killers of mothers were still eclampsia, sepsis (post-abortion or postpartum), third stage labor complications and hepatitis.

The perinatal mortality rate was 71/1000 births. Major

factors responsible for stillbirths and neonatal deaths were still obstructed labor with abnormal presentations, disproportion, eclampsia, etc., as it has been for some years (Chhabra et al 1992). Around 20% of all obstetrics cases admitted were illiterate women, 65% of them with haemoglobin less than 10 gms% in the last trimester of pregnancy.

In view of this sad state of affairs, we moved out of the medical institute to reach the nearby community, mainly to serve its most vulnerable sector, mothers and babies.

### Material and methods

Community-based services were attempted in the nearby 23 villages and 5 urban slum areas within 25 kms of our rural institution. Sometimes during the rainy season, communication was difficult and we could not reach each other easily; in many villages there are no telephones. Population in the 23 villages was 15,103 of whom 4,477 were women of reproductive age. In the slums, the numbers were 9867 and 3946, respectively. At first only infants and children were immunized (1984-1985), but later the policy of giving tetanus toxoid injection to newlyweds and adolescent women was introduced (1985-1986), when baseline information had been collected by home visits by physicians and nurse midwives using a uniform questionnaire. From 1987, antenatal care was provided using a high risk approach and referral, through early morning home visits. Because the team was not stationed in the community, advice for intranatal care was given with family planning services. Since 1991, inexpensive delivery kits have been provided and, since 1992, exclusive, early breast feeding has been emphasized. Gynaecologic and cervical cancer screenings were carried out in 1987-1988 and 1994 in the villages and in 1994 in slum areas.

Between 1990-1994, 71 girls/women from different areas have been helped through a welfare project for unwed mothers and their babies. The objective was to save the lives of these unwed mothers who come to us with advanced pregnancies.

### Results

Results are encouraging. In emergency situations there have been occasional adverse, avoidable perinatal outcomes due to communication gaps (personnel, transport, etc.) but in five years, there was no maternal mortality or major morbidity in the limited areas where we have been working, pregnancy being detected earlier with more institutional deliveries (Table I, II) and abortions and perinatal mortality have declined (Table III). In five years there has been no maternal mortality or major morbidity. Perinatal mortality per 1000 births was reduced to around 21 in 1993, from 85 in 1986 in the villages, and to 38 in 1993 from 104 in 1989 in slums, where services were started in 1989-90. Family planning acceptance has increased, especially for permanent methods. Acceptance of various methods of family planning has also improved (Table IV, V, VI) with a shift to lower parity women or their husbands accepting a permanent method.

**Table I**  
**Pregnancy detection in the villages and slum areas surrounding Sevagram (percentage)**

Year	Total	1 <sup>st</sup> Trimester	2 <sup>nd</sup> Trimester	3 <sup>rd</sup> Trimester
<b>Villages</b>				
1987	227	24.2	21.6	54.2
1993	250	39.2	30.4	30.4
<b>Slum Areas</b>				
1989-90	263	24.0	32.3	43.7
1993-94	133	46.6	28.6	24.8

In 1988 out of all symptomatic village women (N=102), 73.5% had some gynaecologic disorder, as did 30.9% of those (N=632) who were asymptomatic, for a total of 36.8% with such disorders revealed by community-based screening (Table VII). In 1994 the percent of village women with gynaecologic disorders was 51.24% and 41.16% respectively for asymptomatic and symptomatic women and in slums areas it was 49.02% and 36.00% respectively.



**Table II**  
**Locale of delivery (percentage)**

Year	Total	Home	KH	PHC/Others
<b>Villages</b>				
1986	1334*	74.5	14.2	11.3
1993	329	34.4	44.1	21.6
<b>Slum areas</b>				
1989-90	458*	8.6	3.6	87.8
1993-94	132	6.9	5.4	87.8

KH - Kasturba Hospital (Mahatma Gandhi Institute of Medical Sciences, Sevagram)

PHC - Primary Health Centre

\* Baseline, not of one year, recall method

**Table III**  
**Abortion and perinatal mortality in the villages and slum areas surrounding Sevagram**

Year	Total deliveries	Ab/100 pregnancies	SB/1000 births	NND/1000 live births
<b>Villages</b>				
1986	1334 *	2.9*	24.0*	60.7*
1993	329	2.8	12.1	9.2
<b>Slum areas</b>				
1989-90	458 *	16.3*	43.7*	61.6*
1993-94	132	0.8	15.2	23.0

Ab : Abortions      NND : Neonatal deaths

SB : Stillbirths    \* : Survey recall

**Table IV**  
**Contraception among women of reproductive age in village and slum areas, by parity**

Place & Period (total No.)	Users No. (%)	Parity				
		1	2	3	4	5
<b>Villages</b>						
1988-1989 (N=864)	186 (21.5)	78 (41.9)	57 (30.6)	43 (23.1)	5 (2.7)	3 (1.6)
1993-1994 (N=1059)	337 (31.8)	125 (37.1)	113 (33.5)	88 (26.1)	11 (3.3)	-
<b>Slum areas</b>						
1990-1991 (N=1325)	170 (12.8)	65 (38.2)	34 (20.0)	46 (27.1)	17 (10.0)	8 (4.7)
1993-1994 (N=1505)	199 (13.2)	83 (41.7)	54 (27.1)	57 (28.6)	5 (2.5)	-

**Table V**  
**Contraception and sterilization in the villages surrounding Sevagram by method and parity**

Method	Year	Users		Parity			
		No. (%)	1	2	3	4	5
Oral Pills	1988-89	41 (4.7)	21 (51.2)	12 (29.3)	8 (19.5)	-	-
	1993-94	60 (5.6)	31 (51.7)	19 (31.7)	10 (16.7)	-	-
Condom	1988-89	105 (12.2)	54 (51.4)	39 (37.1)	12 (11.4)	-	-
	1993-94	164 (15.5)	87 (53.0)	59 (36.0)	18 (11.0)	-	-
Intra-uterine Device (IUD)	1988-89	10 (1.2)	3 (30.0)	6 (60.0)	1 (10.0)	-	-
	1993-94	17 (1.6)	6 (35.2)	10 (58.8)	1 (5.9)	-	-
Subtotal	1988-89	156 (18.1)	78 (50.0)	57 (36.5)	21 (13.5)	-	-
	1993-94	241 (22.8)	124 (51.5)	88 (36.5)	29 (12.0)	-	-
Sterilization	1988-89	30 (3.5)	-	-	22 (73.3)	5 (16.7)	3 (10)
Male & Female	1993-94	96 (9.1)	1 (1.0)	25 (26.0)	59 (61.5)	11 (11.5)	-

Eligible couples : 1988-89 - N=864, 1993-94 - N=1059

### Discussion

In 1994, the Registrar General of India reported that 1.1% of all deaths in India in 1992 were due to maternal mortality (MM) with a ratio of 340/100,000 deliveries. Causes of MM were anaemia (20%), eclampsia (9%), haemorrhage (20%), abortions (11%), sepsis (13%), obstructed labour (12%) and others (15%) (CSSM review, 1994). It is clear we have a long way to go for safe motherhood. The improvement noted in our experience cannot be related to specific interventions in what was an evaluated

service program rather than research.

We suspect that increased awareness, institutional deliveries for our rural mothers and a little improved contraceptive prevalence were the most important.

Bang and her colleagues (1989) in their study of rural women found 92.2% to be suffering from gynaecologic or sexual disease, 55% of them symptomatic and 44% asymptomatic. In our area 51.2% symptomatic and 41.2% asymptomatic rural women had gynaecologic disorders

**Table VI**  
**Contraception and sterilization in the slum areas surrounding sevagram by method and parity**

Method	Year	Users No. (%)	Parity				
			1	2	3	4	5
Oral Pills	1990-91	28 (2.1)	13 (46.4)	8 (28.6)	7 (25.0)	-	-
	1993-94	34 (2.2)	18 (52.9)	12 (35.3)	4 (11.8)	-	-
Condom	1990-91	65 (4.1)	41 (63.1)	16 (24.6)	8 (12.3)	-	-
	1993-94	76 (5.1)	51 (67.1)	17 (22.4)	8 (10.5)	-	-
IUD	1990-91	20 (1.5)	11 (55.0)	5 (25.0)	4 (20.0)	-	-
	1993-94	24 (1.6)	14 (58.3)	6 (25.0)	4 (16.7)	-	-
Subtotal	1990-91	113 (8.5)	65 (57.5)	29 (25.7)	19 (16.8)	-	-
	1993-94	134 (8.9)	83 (61.9)	35 (26.1)	16 (11.9)	-	-
Sterilization Male and female	1990-91	57 (4.0)	-	5 (8.8)	27 (47.4)	17 (29.8)	8 (14.0)
	1993-94	65 (4.3)	-	19 (29.2)	41 (63.1)	5 (7.7)	-

Eligible couples : 1990-91 - N=1325, 1993-94 - N=1505

in 1994. The prevalence of these conditions in our two screening studies is of concern. This was also associated with a marked increase in reported asymptomatic disorders.

During our activities in a rural facility, we attempted to use a holistic approach both within and outside of the institution. We are encouraged by our preliminary results

suggesting an improvement in reproductive events. More careful research is needed to determine the most cost effective continuation of services for safe motherhood.

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**Table VII**

**Gynaecologic disorders in community screening in villages and slum areas surrounding Sevagram.**

Year	No.	Presence of symptoms among women screened			Disorder	
		No.	%	Absent %	Present %	
<u>Villages</u>						
1988	734	Yes	102	13.9	26.5	73.5
		No	632	86.1	69.2	30.9
1994	1071	Yes	607	56.7	48.8	51.2
		No	464	43.3	58.8	41.2
<u>Slum Areas</u>						
1994	127	Yes	102	80.3	51.0	49.0
		No	25	19.7	64.0	36.0

**Various gynaecological disorders found among screened women (percentage)**

Year	No.	Inflammatory	Neoplasms	Genital prolapse	Miscellaneous	Clinically normal
<u>Villages</u>						
1988	734	26.2	4.4	5.2	1.1	63.2
1994	1071	22.7	4.3	4.3	15.6*	53.1
<u>Slum Areas</u>						
1994	127	28.3	5.5	4.7	7.9	53.5

\*including urinary tract infections

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