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Genuineness of Statistics on Reversible Methods of Family Planning: A Field Investigation in Rural Karnataka

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Introduction

The Indian family welfare program seeks to promote the two-child norm by offering couples the opportunity to choose voluntarily the family planning method best suited to their needs [1]. Initiated in 1951, it has grown in size and structure, and now has a primary health center (PHC) for every 30,000-35,000 population, a sub-center for every 3,000-5,000 population in the rural areas of most states, and a network of family welfare centers, postpartum centers and hospitals in urban areas. Correspondingly, the estimated couple protection rate (CPR) has increased from 12 per cent in 1972 to 44 per cent in 1992: it was 30 per cent for sterilization, six per cent for the IUD, two per cent for the oral pill and five per cent for conventional contraceptives [2]. A trend analysis of the CPR estimates for India showed that the rate increased by 2.4 per cent points per year during 1981-91: 1.1 percentage points due to the acceptance of sterilization, 0.7 percentage points due to the use of the IUD, and 0.6 percentage points due to the use of other methods, mainly the condom and pill [3]. In recent years thus, the contribution of reversible methods to the overall increase in the CPR has been more than 50 per cent.

The CPR estimated from field surveys however shows a different picture. According to the National Family Health Survey (NFHS) [4] of 1992-93 that covered nearly 90

thousand households distributed all over India, the combined CPR for all modern methods was 36.3 per cent: 30.7 per cent for sterilization, 1.9 per cent for the IUD, 1.2 per cent for the pill, and 2.4 per cent for the condom. Though the NFHS included users of both government and private sector services, the CPR for reversible methods was much lower than that estimated from service statistics. These discrepancies may have come from a variety of sources. Visaria et al [5] have identified a few possible areas. Biases in survey-based CPRs may arise from the representativeness of the sample, sampling errors, selective non-response, mis-reporting and under-reporting of contraceptive use while those in service statistics-based CPRs could be the estimated number of eligible couples, estimated method-specific attrition rates, multiple counting of method switchers, and errors in reporting individuals as acceptors.

A field study of households and acceptors in two districts of Gujarat state suggested that the use of reversible methods was substantially overstated in the service statistics, and 19-27 per cent of IUD acceptors and only 3-4 per cent of condom acceptors confirmed the use of the method. A similar study conducted in a district of Karnataka state for the fiscal year 1987-88, showed that 97 per cent of the sterilization cases and only 68 per cent of the IUD cases were genuine acceptors of the method [6]. These findings were based on field verification of the cases recorded in the registers of the PHCs and of the health workers, and not on the statistics reported at the district or state levels.

Substantial differences have often been observed between the number of acceptors recorded in the registers maintained at the PHCs and by the workers, and the official statistics at the district and higher levels. For instance, in India, during 1991-92, service statistics showed that 3.96 million sterilization operations and 4.26 million IUD insertions were performed, 2.28 million women were supplied with oral pills, and 12.77 million couples were provided with conventional contraceptives, mainly the condom. If

these figures are correct, the proportion of couples of reproductive age served with a contraceptive method during 1991-92 alone would be about 16 per cent and those given a reversible method would be 13 per cent (estimated by the author). However, as mentioned earlier, the figures indicated by field surveys are far lower.

In 1994, we undertook a study in rural Karnataka to investigate some of these problems in a comprehensive way. Specially, our objective was to assess the extent of discrepancies in the reported performance of reversible methods at different levels (from the district level down to the field worker level), the number of reported acceptors (achievement statistics) from the records available at the PHCs and at sub-centers, and genuine acceptors from among the reported acceptors of the method. The study was confined to reversible methods (IUD, pill and condom) as discrepancies were expected to be greater among acceptors of reversible as compared to permanent methods (sterilization).

Study Design

The study was conducted in two PHCs in a district of Karnataka state. The PHCs were selected on the basis of their reported performance in reversible methods during the fiscal years, 1991-92 to 1993-94; one PHC representing high performance and the other representing low performance. All the Villages covered by the two PHCs, 35 in number, were included in the survey. First, the performance statistics of reversible methods reported by the two PHCs for the reference period were obtained from the District Health and Family Welfare Officer (DHO) and the respective PHCs. For field verification of acceptors, the registers maintained by the PHCs for the IUD, pill and condom during the reference period were obtained and lists of the acceptors of each of these methods were prepared. Next, the block health educators, health supervisors (male and female) and health workers (male and female) were individually requested to provide the registers maintained by them for reversible methods. They were specifically

asked to prepare and submit a list of acceptors missed or not recorded in the registers for some reason, or if the registers were not available for the entire or part of the reference period. The lists thus obtained were matched and a fresh list of acceptors was prepared, source-wise and village-wise. These lists were used by a team of investigators to verify the acceptance status of each acceptor at his/her reported address. The services of the health workers were sought to find out the contraceptive status of acceptors who could not be traced, or denied having accepted a particular method, or avoided/refused to respond.

Results and Discussion

Maintenance of records

At the district level, proper registers were not available from which the achievements of the PHCs could be obtained. However, we were able to compile statistics relating to targets and achievements from the monthly progress reports available in the files. At the PHC level, to our surprise, we could neither get village-wise or worker-wise statistical records - the block health educator is responsible for maintaining the PHC register. Moreover, the health supervisors too did not have a list of acceptors promoted by their workers. This was true of male and female health supervisors and of both the PHCs. However, a few names given by them were added to the PHC list. Nevertheless, the medical officer of the high performance PHC (hereafter called PHC-1) compiled and supplied the service statistics for the reference period. However, the number of acceptors in his list was 862 whereas that reported by the DHO was 1561. The medical officer of the low performance PHC (hereafter called PHC-2) told us that his PHC's records had been destroyed during the previous year's heavy monsoons. It may be mentioned here that this PHC had no proper building and was functioning in an old kaccha (make shift) structure.

At the worker level too, though most female health workers produced registers for 1993-94, only a few could produce registers for 1991-92 and 1992-93. Their argument was that they were not supplied with proper registers and so they had listed the acceptors in small note books and, as their experience showed that the previous years' records were not asked for, they had discarded them after the closure of the fiscal year. It may be noted though that they did not even have a register for their follow-up activities. In the case of male health workers who are responsible for promoting condom use, none were maintaining registers even for the current year. Thus, the list prepared for the verification of acceptors, even for PHC-1, was only a partial list of reported acceptors.

Achievement of targets

Table 1 gives PHC-wise and method-wise targets, achievements, and the findings of the verification of listed acceptors.

TABLE 1: Targets and achievement, and acceptors listed, verified and found genuine by reported reversible method

Item	PHC-1			PHC-2			Combined			Total
	IUD	Pill	Condom	IUD	Pill	Condom	IUD	Pill	Condom	
Target	928	366	1019	483	207	534	1411	573	1553	3537
Achievement (DHO)	645	213	703	456	204	343	1101	417	1046	2564
Acceptors listed	358	155	205	409	162	32	767	317	237	1321
Acceptors	305	140	150	358	146	23	663	28	173	112

verified*								6		2
Genuine acceptors	193	106	25	134	39	4	327	145	29	501
% Achievement/target	69.5		69.0	94.4	98.6	64.2	78.0	72.8	67.4	72.5
% listed/achievement	55.5	72.8	29.2	89.7	79.4	9.3	69.7	76.0	22.7	51.5
% Genuine/verified	63.3	75.7	16.7	37.4	26.7	17.4	49.3	76.0	22.7	51.5
% Genuine/listed	53.9	68.4	12.2	32.8	24.1	12.5	42.6	45.7	12.2	37.9
% Genuine/achievement	29.9	49.8	3.6	29.4	19.1	1.2	29.7	34.8	2.8	19.5
% Genuine/target	20.8	29.0	2.5	27.7	18.8	0.7	23.2	25.3	1.9	14.2

* Indicates acceptors whose acceptors status could be ascertained.

As shown in Table 1, according to the statistical records of the DHO, a total of 2,564 acceptors were offered reversible methods (the IUD, pill or condom) in the two PHCs during the three-year period 1991-92 to 1993-94. Of these, 61 per cent had been served by PHC-1 and the remaining 39 per cent by PHC-2. Method-wise, 43 per cent of the total acceptors had adopted the IUD, 16 per cent had opted for the pill, and 41 per cent for the condom. The overall target achievement was 73 per cent: 78 per cent, 73 per cent

and 67 per cent for the IUD, pill and condom respectively. In PHC-1, as compared to PHC-2, though the absolute number of acceptors was higher, the target achievement was lower. For the three-year period as a whole, the target achievement for PHC-1 and PHC-2 were, respectively, 70 per cent and 94 per cent for IUD, 58 per cent and 99 per cent for pill, and 69 per cent and 64 per cent for condom. The target achievement increased for each method during 1991-92 to 1993-94 for PHC-1, but it remained constant for PHC-2 (not shown).

Result of verification

The number of acceptors listed from all sources, as discussed earlier, was 1,321, which is just 52 per cent of the reported performance as per the DHO statistics (Table 1). The proportion of acceptors listed as against the reported performance was 70 per cent for the IUD, 76 per cent for the pill and just 23 per cent for condom. Although proper records were not available with many workers especially for 1991-92 and 1992-93, the proportion of acceptors listed was largely, the same for all years and for each method, with only a few exceptions. Though all the acceptors were verified at their reported addresses or with knowledgeable persons, only 1,122 (85 percent) could be verified to determine their acceptance status; the remaining could not be verified for various reasons discussed later.

The registration status, residential status and acceptance status of the verified acceptors (listed acceptors) is presented in Table 2. The findings show that in PHC-1 about 87 per cent of the listed IUD acceptors, and 35 to 37 per cent of the pill and condom acceptors had been recorded both in the registers of the PHC and in the registers/ lists provided by the workers. Another five per cent of IUD acceptors and 11 per cent of pill acceptors were found in the PHC registers but not in the workers' reports. For all other acceptors (8 per cent of IUD, 52 percent of pill and 65 per cent of condom acceptors), the list was obtained exclusively from the health workers. For PHC-2, as discussed earlier, the

health workers were the only source of information. It may be mentioned here that in both the PHCs there was no turnover of health workers during the reference period, and all the workers could be contacted for the lists. Therefore, the omission of acceptors due to non-availability and non-contactability of workers did not arise.

Table 2 further shows that overall, among the listed acceptors 72 per cent were 'usual residents' of the reported villages. 'Usual residents' of the IUD, pill and condom constituted 64 per cent, 85 per cent and 77 per cent respectively of the listed acceptors. Another 17 per cent of IUD acceptors and less than four per cent of pill acceptors were verified as visitors who stayed in the reported villages some time during the reported date of acceptance of the method, and three per cent each of IUD and pill acceptors and 8 per cent of condom acceptors had been residents of the village prior to the reported date of acceptance of the method.

TABLE 2: Registration, residence and acceptance status of listed acceptors and method accepted by genuine acceptors by reported method

Item	PHC-1		PHC-2			Combined			Total	
	Pill	Condom	IUD	Pill	Condom	IUD	Pill	Condom		
Registration										
PHC & worker	87.4	36.8	35.1	0.0	0.0	3.1	40.8	18.0	30.8	33.5
PHC only	4.7	11.0	0.0	4.9	0.0	0.0	4.8	5.4	0.0	4.1
Worker only	7.8	52.3	64.9	95.1	100.0	96.9	54.4	76.7	69.2	62.4

Residence										
Usual resident	64.8	82.6	75.6	63.8	87.0	84.4	64.3	84.9	76.8	71.5

Past resident	4.2	5.2	8.8	2.2	1.2	6.3	3.1	3.2	8.4	4.1
Visitor	17.9	4.5	0.0	15.9	2.5	0.0	16.8	3.5	0.0	10.6
Out-of-area	5.6	3.2	1.0	0.7	0.6	0.0	3.0	1.9	0.8	2.3
Not traceable	7.5	4.5	14.6	17.4	8.6	9.4	12.8	6.6	13.9	11.5
Acceptance										
Acceptor (interviewed)	41.9	60.0	12.2	19.3	21.6	6.3	29.9	40.4	11.4	29.1
Acceptor (not interviewed)	12.0	8.4	0.0	13.4	2.5	6.3	12.8	5.4	0.8	8.9
Acceptor (combined)	53.9	68.4	12.2	32.8	24.1	12.5	42.6	45.7	12.2	37.9
Out-of-reference period	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.8	0.2
Duplicate (date/method)	3.9	1.3	6.8	6.6	14.2	3.1	5.3	7.9	6.3	6.1
Non-acceptor (u/resident)	14.2	12.9	37.6	30.1	42.6	46.9	22.7	28.1	38.8	26.9

Status not ascertained	14.8	9.7	26.8	12.5	9.9	28.1	13.6	9.8	27.0	15.1
Not traceable*	13.1	7.7	15.6	18.1	9.3	9.4	15.8	8.5	14.8	13.9
Total	100.0									
Number of acceptors	358	155	205	409	162	32	767	317	237	1321
Accepted method										
IUD	98.7	3.2	0.0	100.0	5.7	0.0	99.1	3.9	0.0	60.4
Pill	1.3	96.8	0.0	0.0	94.3	0.0	0.9	96.1	0.0	32.6
Condom	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	7.0
Total	100.0									
Number of acceptors	150	93	25	79	35	2	229	128	27	384

*Includes out-of-area acceptors.

Almost 12 per cent (IUD: 12.8 per cent; pill: 6.6 per cent; condom: 13.9 per cent) of all listed acceptors could not be traced at their reported addresses. In addition, the workers themselves admitted during the course of verification that three per cent of IUD acceptors, two per cent of pill acceptors and one per cent of condom acceptors were out-of-area cases (other than visitors). As further attempts were not made to verify the 'non traceable' and 'out-of-area' acceptors (which is rather difficult), we are not sure whether they are genuine acceptors of the method and attributable to the PHC workers'

performance. However, it is our strong belief that most of these acceptors were either not genuine or had been motivated by somebody other than the workers themselves, and therefore, should not have been included in their actual performance. If at all they were genuine, they could have been included in the performance statistics of some other institutions or workers. The proportion of acceptors not traceable (including out-of-area acceptors) was slightly higher in PHC-2 than in PHC-1; for each method, it was 8-16 per cent in PHC-1 and 9-18 per cent in PHC-2.

Genuineness of acceptors

Of the total number of listed acceptors, 38 per cent were verified as genuine acceptors of the method, 6 per cent were duplicate names and 27 per cent were non-acceptors. The extent of duplicate acceptors remained more or less the same for each method (5-8 per cent). The proportion of the acceptors verified as non-acceptors was 23 per cent for the IUD, 28 per cent for the pill, and 39 per cent for the condom. It may be noted that as temporary methods are often used without the knowledge of family elders and sometimes without the knowledge of the spouse, the acceptance status was verified as far as possible from the reported acceptor's themselves. The exceptions were visitors who had come mainly for delivery and left the village before the survey. It is expected that if these women had accepted the method, it would have been with the consent (or at least with the knowledge) of the family with whom they stayed and the information we got would therefore be fairly reliable. However, despite our best efforts, the acceptance status of 15 per cent of such acceptors could not be ascertained as they or any other responsible person could not be contacted.

The proportion of acceptors whose acceptance status could not be ascertained was 10-14 per cent in the case of the IUD and pill and as high as 27 per cent in the case of the condom. During our field survey, it came to our knowledge that male health workers who are responsible for condom distribution had often listed the names of persons who

usually do not remain at home during the day. This had made the verification of condom acceptors difficult, and we were left with a large proportion of condom acceptors whose acceptance status could not be ascertained. In all likelihood, almost all these acceptors were non-acceptors of the reported method.

As regards the correctness of the method accepted by the listed acceptors, the reported and verified methods were the same in respect of about 98 per cent of the verified genuine acceptors. Going by the assumption that the 'not-verified' acceptors were either fictitious or not recruited by the workers, the proportion of genuine acceptors to reported performance was less than 20 per cent for all the reversible methods taken together. It varied from a high of 35 per cent for the pill, to 30 per cent for the IUD, to a low of three per cent for the condom. Even if one assumes that some of the 'not-verified' acceptors are genuine and were motivated by the workers, at least three-fifths of the pill users, two-thirds of IUD users, and over 95 per cent of condom acceptors as recorded in the performance statistics would not be genuine. For PHC-1 and PHC-2, the proportion of acceptors verified as genuine were respectively 50 per cent and 20 per cent for the pill, 30 per cent each for the IUD, and four per cent and one per cent for the condom. This shows that the genuineness of reported performance was relatively better in the high performance PHC than in the low performance PHC, and that it was higher in the case of the IUD and pill than the condom.

The proportion of reported acceptors verified as genuine did not show an increasing trend during the study period, rather it showed a decrease. Thus, the proportion of genuine reported pill acceptors was 38 per cent in 1991-92 and 29 per cent in 1993-94 (not shown in the table). Further, there was no marked seasonal or month-wise difference either in the number of listed acceptors or in the proportion of genuine acceptors indicating thereby that as the target increased year after year, the workers also tended to overstate their performance to a figure closer to the target assigned to

them. Our investigation did not indicate any effort on the part of the supervisors and program managers to check the false reporting; consequently, the workers continued to practice it.

Genuineness of acceptors by registration status

An attempt was also made to compare the residential and acceptance status of the acceptors listed from the PHC registers and those reported by the workers only (excluding those found in the PHC registers). Table 3 presents the findings.

Table 3 indicates that the residential status was almost the same for both sets of acceptors, though the registers/lists of the health workers were more likely to have names that were not genuine than were the PHC registers. For example, the proportion of acceptors verified as 'usual residents' was 70 per cent according to the PHC registers and 73 per cent according to the workers' reports; acceptors who could not be traced were 10 and 13 per cent respectively. The corresponding figures for genuine acceptors were 48 per cent and just 32 per cent respectively. Method-wise, the corresponding figures of genuine acceptors were 52 per cent and 35 per cent for IUD users, 68 per cent and 39 per cent for pill users, but much lower - six per cent and 16 per cent for condom users. Further, while the proportion of verified acceptors confirmed as non-acceptors was lower (20 per cent) according to the PHC registers as compared to the workers' reports (31 per cent). However, the proportion of acceptors for whom status could not be ascertained and the proportion of acceptors not traceable were largely the same in both the lists.

TABLE 3: Acceptors status by residence and reported method of users as listed in PHC registers and reported only by workers

	Registered at PHC				Registered by worker only			
	IUD	Pill	Condom	Total	IUD	Pill	Condom	Total
Resident status								
Usual resident	66.0	87.8	68.5	69.6	62.8	84.0	80.5	72.6
Past resident	3.4	5.4	9.6	4.6	2.9	2.5	7.9	3.8
Visitor	18.0	0	0	12.7	15.8	4.5	0	9.3
Out-of-area case	4.3	1.4	0	3.2	1.9	2.1	1.2	1.8
Not traceable	8.3	5.4	21.9	9.9	16.5	7.0	10.4	12.5
Acceptance status								
Acceptor (interviewed)	39.1	59.5	5.5	37.2	22.1	34.6	14.0	24.2
Acceptor (not interviewed)	12.9	8.1	0	10.3	12.7	4.5	1.2	8.0
Acceptors (combined)	52.0	67.6	5.5	47.5	34.8	39.1	15.2	32.2
Out-of-reference period	0	0	0	0	0	0	1.2	0.2
Duplicate (date/method)	4.9	1.4	2.7	4	5.8	9.9	7.9	7.4
Non-acceptor (u/resident)	14.9	18.9	43.8	19.7	29.3	30.9	36.6	31.2
Status not ascertained	15.7	5.4	26.0	15.7	11.8	11.1	27.4	14.7
Not traceable	12.6	6.8	21.9	13.1	18.5	9.1	11.6	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of acceptors	350	74	73	497	417	243	164	824

Summary and Conclusions

The paper has tried to assess the extent of discrepancies in the reporting of reversible family planning methods from the district to field worker level in a high and a low performance PHC in a district of Karnataka state, and to estimate to what extent the reported acceptors are genuine acceptors of the method and therefore, can be attributed to the workers' performance. The achievement statistics obtained from the District Health and Family Welfare Officer for the period 1991-92 to 1993-94 showed that the target achievement was 60 to 70 per cent for each method in the high performance PHC and 95-100 per cent for the IUD and pill and about 65 per cent for the condom in the low performance PHC. However, listing of acceptors from the registers of PHCs and workers could be made for only 52 per cent of the reported acceptors: 70-75 per cent for the IUD and pill and below 25 per cent for the condom. That is, for nearly half of the reported achievement particularly of condoms, neither the PHCs nor the workers could provide a list of acceptors. In fact, our field observations showed that many workers, particularly male workers, did not possess proper registers for recording their family planning work.

Field verification of the listed acceptors indicated that less than 75 per cent of the acceptors were 'usual residents' of the villages, around 15 per cent were not traceable at their reported addresses or were out-of-area cases, and the remaining were visitors and past residents. Further, of the total listed acceptors, just 38 per cent were found to be genuine acceptors of the method and could be attributed to the workers' performance. Method-wise, this figures was 43 per cent for the IUD, 46 per cent for the pill and only 12 per cent for the condom. The proportion of genuine acceptors was slightly higher when the PHC records were used for verification than when the workers' reports were used. The proportion of genuine acceptors to the total reported performance was

however just 20 per cent: 35 per cent in the case of the pill, 30 per cent in the case of the IUD and a mere three per cent for the condom.

The findings of this study compare closely with those of a recent study conducted in Gujarat by Visaria et al [5]. In general, our findings suggest that of the reported performance, more than three-fifths of IUD, two-thirds of pill and over 95 per cent of condom acceptors were either fictitious or could not be attributed to the PHCs' performance. This suggests that the workers had just stated a figure close to the target assigned to them for each method as their achievement, but their actual performance was far less or negligible especially in the case of the condom. The findings thus indicate an urgent need for strict monitoring and evaluation of the activities of the health workers including recording and reporting to ensure correct reporting leading to a realistic assessment of the progress made in the use of reversible methods.

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