

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/279853864>

Goel S, Bali S, Singh AJ. Impact of a short term intervention on health care outreach to a marginal population in rural north India. The Internet Journal of Health. 2007. Volume 5...

Article · January 2007

CITATIONS

3

READS

27

1 author:



Surya Bali

AIIMS Bhopal All India Institute of Medical Sciences

40 PUBLICATIONS 118 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Enhancing the Reach of Health Care Through Telemedicine: Status and New Possibilities in Developing Countries [View project](#)

Impact of a Short Term Intervention on Health Care Outreach to a Marginal Population in Rural North India

S Goel, S Bali, A Singh

Citation

S Goel, S Bali, A Singh. *Impact of a Short Term Intervention on Health Care Outreach to a Marginal Population in Rural North India*. The Internet Journal of Health. 2006 Volume 5 Number 2.

Abstract

Introduction: Government health care coverage in marginal population is usually low. They are not adequately covered by routine health care services e.g. slums in urban areas and brick kiln population, and migrant/floating populations in rural areas. These often provide a potent pocket of breeding ground for communicable diseases outbreaks because of poor hygienic conditions.

Objectives:

To ascertain the socio-demographic and health profile and lifestyle of the study population

To ascertain the impact of short term interventions viz. regular visits, focus group discussions and immunization/ health checkup camps on health care coverage of the study population.

Material and Methods: Study design - Short-term operational research (before and after study)

Study Area- Three snake charmers community (Sapera basti), a marginal population of Naraingarh Block

Study Period- Six months (July- December 2004)

Study Methods- Baseline Survey of Community, Six Focus Group Discussions, Five health check-up camps, Five immunization Camps and Field Trips. Profile of the study area was also compared with another marginal community (brick kiln workers) and the native urban population of Naraingarh.

Results: Average family size in Sapera bastis was 4.6. Acute morbidity incidence (morbidity within 15 days) at Ward-1, 7 and Shazadpur were 1.3%, 3.8% and 8.3% respectively. Barring 5 children, none of the children below 5 years (n=48) and pregnant women (n=6) in Sapera basti of Ward -1 and Shazadpur were immunized for any disease except polio (given during pulse polio campaigns).

Impact of Intervention: There was no objections or hostile reactions either from the Sapera basti inmates or brick kiln population and they happily brought their children to our camps. We immunized all children (n=33 at Shazadpur, 19 at Ward-1) for various vaccine preventable diseases. Follow up visits of the residents of Sapera basti increased (from an average of five patient visits to 23 visits per month) in our clinic for medical consultations.

Conclusion: There is a need for regular contacts by health care staff with marginal un-reached population to establish a rapport with them.

INTRODUCTION

Health care planners have often highlighted the problem of poor accessibility of health services to the temporary population settlements i.e. marginal population. These people usually belong to low socioeconomic strata of the

society. Government health care coverage in this population is usually low. They are not adequately covered by routine health care services e.g. slums in urban areas and brick kiln population, banjaras in rural areas. Such migrant/floating populations often provide a potent pocket of breeding

ground for communicable diseases outbreaks because of poor hygienic conditions.

Banjaras are a nomadic group in India. They do not have a fixed abode. Banjaras literally means 'wanderers'. They usually make temporary thatched huts near villages or cities. They earn their livelihood by making iron implements of daily use in kitchen or in agriculture eg. Cauldron, tongs, tawa (a thick round iron saucer like sheet for baking chapattis- the Indian bread), spades, axes, hammer, sickle etc. After satying at a placefew weeks they move to a new location.

Similar feelings were expressed during a routine monthly meeting between faculty, senior resident (SR) of dept. of Community medicine and senior health officials of the district, when health care coverage of Naraingarh town was discussed. In the meeting, it was decided to lay more emphasis on provision of comprehensive health care to three Sapera bastis (sapera = snake charmer; basti= settlement or locality; sapera basti= snake charners locality/ settlement), two of which are located within two km. of the 50-bedded hospital at Naraingarh, where resident doctors of departments of Community Medicine, Pediatrics and Obstetric & Gynecology of the Post Graduate Institute of Medical Education and Research (PGIMER) Chandigarh regularly conduct outpatient clinics, school health check-ups and field visits during their residential training under the supervision of faculty. It was also deliberated during the meeting that poor health profile and low health care coverage in the marginal population was a cause of concern as many outbreak of communicable disease were reported from these areas. Moreover, the degree of contact of the people of Sapera bastis with government health care services was also reported to be low.

With this background, a short-term operational research (before and after study) was conducted over a period of 6 months (July- December 2004) in three Sapera bastis, a marginal population of Naraingarh Block to answer the following research questions-

- Why government health care coverage is low in marginal population located so near to government hospitals?
- Can the situation be improved by a short-term intervention?
- If yes, what is the impact of such intervention?

Objectives-

- To ascertain the socio-demographic and health profile and lifestyle of the study population
- To ascertain the impact of short term interventions viz. regular visits, focus group discussions and immunization/ health checkup camps on health care coverage of the study population.

MATERIAL AND METHODS

Profile of study area (Sapera bastis) - their lifestyle

This study was done in snake charmers community (Sapera basti), which is a settlement of small group of marginal population routinely encountered in many parts of India. They are famous for entertainment of public at large, by roadside shows of snake charming, snake dance on the tune of 'been' (a kind of flute). Many myths and stories/legends of their mysterious skills are associated with them.

Figure 1

Figure 1: A Cobra Snake Dancing to the Tune of (Flute) Played by (Snake Charmer) from the Study Population



There are three Sapera bastis in and around Naraingarh, which is a field practice area of the department of Community Medicine, PGIMER. It is about 60 KM from the institute. Of the 18 wards in Naraingarh two Sapera basti are located in Ward-1 and Ward -7. Ward is a residential unit of urban area demarcated for electoral and census purposes. This area is within two km from Naraingarh hospital. The third sapera basti is at Shazadpur which is a small town 10 Km away from Naraingarh. Sapera bastis of Ward 1, Ward 7 and Shazadpur have 40, 15 and 50 houses respectively. Majority of houses in Sapera basti of Ward- 7 and Ward-1. are temporary thatched hutments, covered by tarpaulin,

which is partly folded up for ventilation during daytime. Huts have enough open space between them. Hand pump & tap water are used for drinking water is stored in earthen pots/closed plastic containers. Most of them go for open-air defecation. There are open drains in all the Sapera bastis.

Children of Ward-1 do not attend anganwari, whereas in Shazadpur, anganwari worker comes regularly and distributes nutrition supplements to pregnant mothers and children. In rural areas of India, there are anganwadis. (literal meaning= court yards) in every village. There is one anganwadi worker (educated upto 8th standard) per thousand population. She is not from health department. She is employed by social welfare department. She provides basic non formal education to 0-6 years old children besides providing nutrition supplement to them as well as to pregnant mothers. They also help the health workers in giving immunization. Deliveries are conducted by 'dais' (local traditional birth attendants) from neighboring chamar basti. (chamar = cobbler). In case of complications they attend private clinics. They rarely go to government hospitals. 'We have to pay even in government hospitals, so why should we go there. There is better care in private clinics on payment', a 35 years old male said.

They practice Hinduism, as well Islam, believing in all god and goddesses especially Lord Shiva and Goddess Durga. They worship peer/ paigambers (prophets) also. They keep their children names like name of children of Hindu and Muslims. They used to go 'Guga Madi' (snake charmers temple) for worship. Madi is a place like temple and mosque having features of both the institutions. They never marry in their own gotras (i.e. exogamy). After death, they generally set bodies on the pyre & burn it. If they do not find enough wood for pyre, then they bury the dead bodies. This community is also known to possess mysterious skills (and knowledge of certain herbal and indigenous medicines) for treatment of common ailments. Certain peculiar beliefs and practices are also prevalent among this community, e.g. they believe that eating of turtle meat prevents tuberculosis and pneumonia and also helps in their cure, application of 'surma' (a powder applied to the eyes) prepared by venom of snake improves eyesight and prevents blindness. They also procure & sell aphrodisiacs to gullible people (turtle meat; rhino/ deer horn etc).

A working team comprising of senior and junior residents of Community Medicine and Pediatrics, junior resident (JR) of Obstetrics and Gynecology and male health worker under the supervision of faculty was formed. The team visited each

of three Sapera bastis. During our initial visit, it was felt that they were rather wary of us and that they concealed information from us. Initially, they did not seem to be interested in our appeal to get their children immunized or come to hospital for their health problems.

It was felt that rapport-building measures should be undertaken before contemplating any intervention. Therefore we decided to conduct a series of focus group discussions (FGD) as ice breaking sessions. Six FGD's were also conducted (two in each Sapera basti), in which, apart from discussion on their lifestyle, reasons for non-utilization of government health care services were explored. Reasons for low immunization coverage in their area were also discussed. These FGD's formed the part of our intervention package.

Figure 2

Figure 2: An Icebreaking Session of Focus Group Discussion Being Conducted at Sapera Basti with temporary thatched hutments in background.



A demographic and health survey of 3 Sapera bastis was then undertaken for collection of baseline data. This included collection of information on socioeconomic status, educational level, day-to-day activities, occupation, dietary habits, morbidity profile and immunization status of each family. For this, one visit to Sapera basti-Ward 1 and, two visits each in Sapera basits of ward -7 and Shazadpur were made by health worker and junior residents.

Five health check-up camps (2 each in Sapera basti- Ward 7 and Shazadpur and one at Sapera basti- Ward 1) were then organized by resident doctors of Community Medicine, Pediatrics and Obstetrics & Gynecology departments. Later, free medicines were distributed to them for common ailments. They were also asked to come to our OPD for medical checkup and treatment.

Figure 3

Figure 3: Health Camp Organized by Study Team at



Later, five immunization camps (2 each in Sapera bastis of ward -7 and Shazadpur and one at Sapera basti-Ward 1) were also organized, in which children upto five years of age were immunized for various vaccine preventable diseases. Response of the basti inmates to the visits/ camps organized by us was duly noted. School bags, books and school dresses were distributed to the children of inmates of Sapera basti. The children were taken for field trips (3) to a neighboring hill station Shimla and of heritage city Kurukshetra. For this, a NGO named 'hamrahi' (literal meaning = co passenger) and other local leaders of Naraingarh was involved. Eight tubectomy operations were also done in Sapera basti. Table-1 summarizes the interventions and the resources used during the intervention package.

Figure 4

Table 1: Resources utilized in the intervention package used in the study

Resources	No. of visits	No. of visits by different category of personal/ workers						Man days used
		Health worker	Driver	Junior resident (community medicine)	Junior resident 2 (pediatrics)	Senior resident (PD)	Faculty	
Rapport visits	3	3	1	0	0	3	1	8
Collection of baseline data	5	5	4	3	2	1	0	15
Health checkup camps	5	5	4	3	2	2	1	17
Immunization camps	5	5	4	2	3	2	0	16
Focus group discussions	6	6	4	2	0	4	3	19
Total	24	24	17	10	7	12	5	75
POL of vehicle used	17 days @8 km/ visit=134 KM. average mileage of vehicle= 10 kms/ liter. 14L.Petrol used @40/litre (Rs 560)							

Consent of Senior Medical Officer (SMO) Incharge and head of the family was taken. All data was kept confidential.

RESULTS

SURVEY RESULTS-BASELINE DATA

Total population in the three-sapera bastis was 482. Average family size of Sapera bastis was 4.6 (482 persons in 105 houses). Sex ratio in Ward-7 and Shazadpur was 819 and 793/ 1000 males respectively, whereas in Ward-1, it was 1188/ 1000 males. The sex ratio was calculated by dividing number of females with number of males and multiplying by 1000. No one was literate in Ward-7 but literacy levels in Ward-1 and Shazadpur were 29% and 17% respectively. Main occupation in sapera bastis was of street vendors. Only two older people from each basti still continue to do their traditional work of snake charming and capturing snakes. There were 62% smokers in Ward-1. Among females, smoking rates in Ward-1, Ward- 7 and Shazadpur were 11%, 17% and 12% respectively. More than one third population in ward-1 was alcoholic. Acute morbidity incidence (morbidity within 15 days) at Ward-1, Ward -7 and Shazadpur were 1.3%, 3.8% and 8.3% respectively. Around 88% of residents of Ward-7 consume turtle while 13% consumes turtle in Ward-1 and Shazadpur. In Ward-7 majority (53%) consumes goh (mongoose) as their main non- vegetarian food. Table-2 compares the profile of the study area with another marginal community (brick kiln workers) and the native urban population of Naraingarh.

Figure 5

Table 2: Socio-Demographic, Dietary and Morbidity Profile of Populations

Variable	Sapera basti			Brick kiln (Bhatta population), Naraingarh	Field practice area (2 urban wards), Naraingarh
	Ward-7	Ward-1	Shazadpur		
Total population	80	151	25 251	131	3150
Sex ratio(no of females/ 1000 males)	819	1188	793	658	928
Literacy level(% > 7 years)	Nil	29	17	25.9	67
Occupation (%)	31	52	56	90	
Main occupation (%)	Streetvendors (Feriwala) 14%	Streetvendors (Feriwala) 27%	Streetvendors (Feriwala) 47%	Brick kiln labourours 85%	
Housewife (%)	15	27	17	5	38
Smokers (%)	62	47.4	36	28.2	N.A
Alcoholic (%)	27.9	38.4	26.7	18.6	N.A
Turtle consumption (%)	88.7	13.3	12.7	0	1
Goh consumption (%)	0	53.3	0	0	0
Morbidity rate (%)	3.8	1.3	8.0	38.9	N.A

Initial survey revealed that, barring 5 children with BCG scars, none of the children below 5 years (n=48) and pregnant women (n=6) in Sapera basti of Ward -1 and Shazadpur were immunized for any disease except polio (given during pulse polio campaigns). This casual attitude towards immunization was also corroborated by findings obtained during the FGD's conducted by us. 'Injection will cause lot of pain and it ulcerates. It will harm our babies', a community member said. Another added, 'we didn't refuse for OPV drops during pulse polio campaigns as they (health staff) come to our homes for it'. On enquiry, it was revealed that their contact with General Hospital Naraingarh was minimal, if at all. Their distrust towards routine health care services was highlighted by the fact that only 5 patients on an average per month visited our clinic for medical consultations. 'Nobody listens to us when we go in the hospitals', a dweller replied. Another person remarked, 'health worker rarely visits our community'.

When asked why they lead this kind of life, their head man said, 'We have this tradition since antiquity. We are blessed by our gods/ goddesses to lead this type of life. We can not go against it this mandate'.

IMPACT OF INTERVENTION

Post intervention follow up visits to Sapera basti revealed

that the attendants of beneficiaries were quite happy and satisfied with the kind of attention given by our team of doctors. During our several visits to the Sapera bastis, some people even accompanied us in our vehicle to hospital for checkup and medication. Their faith in health care provided by us was revealed by a statement from sarpanch (headman / chief) of Sapera basti at Ward 7, 'Your doctors (Male health worker) now visit us regularly & give us medicines also'. Their enthusiastic response was also reflected by the fact that when we reached their basti for follow-up visit, a 10 year old child cried, 'Look! It is the same doctor who came that day. He has come again', and all the adults and children gathered around us eager to share their experiences with us. Similarly, during the pulse polio campaigns they come forward to us with their children to immunize them. During our other visits, we immunized all children (n=33 at Shazadpur, 19 at Ward-1) for various vaccine preventable diseases. Seven children of Ward-7 were still un-immunized (they will be covered during the subsequent camps to be organized there). Twenty-five children of brick kiln population were also immunized during health survey (table-3). There were no objections or hostile reactions either from the Sapera basti inmates or brick kiln population and they happily brought their children to our camps. After the intervention, follow up visits of the residents of Sapera basti increased in our clinic for medical consultations. Over a period of three months, their OPD attendance increased from an average of five patient-visits to 23 visits per month.

Figure 6

Table 3: Immunization Coverage Status of Under-5 populations before and after intervention in the study population

Coverage	Sapera basti							
	Ward-7 (N=17)		Ward-1 (N=19)		Shazadpur (N=33)		Brick kiln (N=29)	
Vaccine	Before n (%)	After n (%)	Before n (%)	After n (%)	Before n (%)	After n (%)	Before n (%)	After n (%)
BCG	0	10(58.8)	1	19(100)	5(15)	33(100)	0	25(86.2)
POLIO (1-3)	0	10(58.8)	0	19(100)	0	33(100)	0	25(86.2)
DPT (1-3)	0	10(58.8)	0	19(100)	0	33(100)	0	25(86.2)
Measles	0	10(58.8)	0	19(100)	0	33(100)	0	25(86.2)

DISCUSSION

Often the general health services are geared towards providing services to the native population of a particular area. Regular national health programs also cater mainly to the natives. For temporary settlers and migrants, only ad hoc approach is followed. Often such population, occupies government land on the outskirts of villages and urban area without proper authorization. This may be the factor for their

being wary of government health services. In various studies, it has been observed that there has been an overall decrease in spending on social sector especially vis a vis the marginalized section like the dalits, (literal meaning = down tradden; the untouchables; poorest section of society) adivasis (tribals), and women etc.¹. Although various strategies exist for marginal population, these are deficient in quality. In particular, the outreach program or house-to-house approach is not being regularly followed for these vulnerable groups of migrants. Health worker have a specific beat program i.e. number of houses to be visited in each month for native population. Urban slums and migrant population of the area are often not covered. Similar findings have been observed in our study i.e. within 2 km of a 50-bedded government hospital, more than 80% under 5 children were un-immunized and home visits by the health workers were rare. (This endorses an old proverb 'chirag tale andhera i.e. there is darkness beneath a lighted lamp).

Contrary to the popular belief, pockets of un-immunized children in the heart of the cities/towns have bothered the health care providers since inception of Expanded Programme on Immunization (EPI), where they admitted their failure to reach an acceptable level of immunization coverage in rapidly growing urban area.² Similar findings were also observed in a study conducted by Kiros et al among migrant population of Ethiopia, where it was observed that children born to rural-rural migrant mothers have significant lesser chance of receiving full immunization coverage than children borne to non-migrant mothers. The social mechanisms cited to explain this huge disparity were that migrant women had limited social network in host community. Mother education, poor socioeconomic status of family and poor rapport of health worker of area were other reasons cited by the authors to explain their findings.³

Migratory marginal population poses several problems to the native community e.g. spread of communicable diseases. Low coverage rate of immunization among such population and poor hygiene in their routine lives are the reasons for this risk. In our study also, sapera basti people did not even come to seek routine health care in the General Hospital. Among the various reasons cited were the perceived non-caring attitudes of doctors/ paramedical staff, insufficient medicines in government hospitals, better care/facilities in private hospitals, loss of daily wages when they seek care during daytime in government hospitals. They also felt that they were not given adequate priority or attention by government hospitals. This was the prime reason for not

seeking health care from these hospitals. Our study also identified that a sense of distrust and fear towards health care services/ providers existed among people of marginal population. Further, there was a lack of dialogue between public health functionaries and inmates of Sapera basti. Apparently, these factors were primarily responsible for low health care coverage by government health agencies by the study population. Repeated visits helped us to establish rapport with the inmates of Sapera basti.

Focus group discussions and organization of health/ immunization camps helped us in establishing rapport with the marginal community. Consultation of Sapera basti with General Hospital Naraingarh also improved. Immunization coverage improved from an initial low rate of 10% to 85% in under-5 population within six months. Similar findings were observed in a study among marginal gypsy community of Alicante where health care actions by means of home visits increased the vaccine coverage by 17% for DPT, Polio, Pertussis, and MMR.⁴

Our approach thus shows that the solution to such problems is not difficult. Only confidence building measures (CBM) are needed. Initiation of dialogue with such marginal populations will certainly help in expanding the outreach of government health care services. This also has implication in control of (and prevention of spread of) communicable diseases.

CONCLUSION

There is a need for regular contacts by health care staff with marginal un-reached population to establish a rapport with them. Such population, because of their unstable nature of settlement and lifestyle harbor a sense of distrust towards the government health services. For ensuring their full cooperation regarding enhancement of government health care outreach, faith needs to be generated among them towards government health care delivery system. Community medicine departments of medical colleges can certainly play a role of catalysts in such situations.

CORRESPONDENCE TO

Amarjeet Singh Professor Department of community medicine, PGIMER, Chandigarh, India. Tel-09814472226
Email- amarminhas56@rediffmail.com

References

1. Kunhu B. India -Neglected by the States. National Social Watch Coalition. Social Watch: 162-63
2. Brown J, Djogdom P, Murphy K. Identifying the Reasons for Low Immunization Coverage. A Case Study of Yaounde

(United Republic of Cameroon). Rev Epidemiol Sante Publique. 1982; 30: 35-47.

3. Kiros GE, White MJ. Migration, Community Context, and Child Immunization in Ethiopia. Social Sci Med. 2004; 59:

2603-16

4. Martinez GF, Maura A, Santiago J. Vaccine coverage study and intervention with health community agents in a marginal gypsy community of Alicante. Aten Primaria. 2003; 31: 234-8.

Author Information

Sonu Goel, M.D.

Consultant UNICEF, UNICEF

Surya Bali, M.D.

Senior Resident, Community Medicine, Post Graduate Institute of Medical Education and Research

Amarjeet Singh

Professor, School of Public Health, Community Medicine, Post Graduate Institute of Medical Education and Research