

Access to and utilization of voucher scheme for referral transport: a qualitative study in a district of West Bengal, India

Dipta K Mukhopadhyay,¹ Sujishnu Mukhopadhyay,¹ Dilip K Das,² Apurba Sinhababu,³ Kaninika Mitra,⁴ Akhil B Biswas⁵

Quick Response Code:



ABSTRACT

Background: Lack of motorized transport in remote areas and cash in resource-constrained settings are major obstacles to women accessing skilled care when giving birth. To address these issues, a cashless voucher transport scheme to enable women to give birth in a health-care institution, covering poor and marginalized women, was initiated by the National Rural Health Mission in selected districts of India in 2009.

Methods: The access to and utilization of the voucher scheme were assessed between December 2010 and February 2011 through a qualitative study in the district of Purulia, West Bengal, India. Data were collected from in-depth interviews and focus group discussions with women, front-line health-care workers, programme managers and service providers.

Results: The main factors influencing coverage and utilization of the scheme were: reliance on ill-prepared *gram panchayats* (village councils) for identification of eligible women; poor birth preparedness initiatives by health-care workers; over-reliance on telephone communication; restricted availability of vehicles, especially at night and in remote areas; no routine monitoring; drivers' demand for extra money in certain situations; and low reimbursement for drivers for long-distance travel.

Conclusion: Departure from guidelines, ritualistic implementation and little stress on preparedness of both the community and the health system were major obstacles. Increased enthusiasm among stakeholders and involvement of the community would provide opportunities for strengthening the scheme.

Key words: access, demand-side financing, India, maternal health, pregnant women, referral transport, voucher

¹College of Medicine and Sagar Dutta Hospital, Kolkata, West Bengal, India,

²North Bengal Medical College, Darjeeling, West Bengal, India,

³R G Kar Medical College, Kolkata, West Bengal, India,

⁴UNICEF, Office for West Bengal, Kolkata, West Bengal, India,

⁵Institute of Health and Family Welfare, Kolkata, West Bengal, India

Address for correspondence:

Dipta K Mukhopadhyay, Lokepur, Near NCC Office, Bankura 722102, West Bengal, India
Email: diptakanti@gmail.com

INTRODUCTION

Despite the remarkable reduction in maternal mortality in recent years, there were 50 000 maternal deaths in India in 2013.¹ It has been agreed that the majority of these deaths could have been prevented through making skilled care at birth and access to round-the-clock emergency obstetric care more universally available.² As a signatory of the Millennium Declaration, India is committed to 75% reduction in maternal mortality between 1990 and 2015.³ Institutional childbirth has become the core strategy in achieving that goal.⁴

Lack of access to transport and available cash to meet the cost of transport, combined with lack of awareness, are major challenges in accessing institutional care for childbirth.^{2,5,6} The “three delays” model (delays in seeking, reaching and receiving health care) could explain the crucial factors associated with maternal mortality.⁷ In a review of maternal deaths in the Purulia district of West Bengal, it was noted that delay in seeking care for childbirth was mostly due to lack of awareness and capacity for making decisions at appropriate times.⁸ Lack of available cash at home and transport were two major obstacles to reaching care. Delays in both seeking and

reaching care were more common among illiterate and poor women, as well as scheduled caste and tribeswomen. Studies in India have also reported a lack of preparedness of the health system and delays in receiving maternal care.^{9,10}

Demand-side financing (DSF), such as cash transfer and voucher schemes, is being used worldwide to transfer purchasing power to the intended beneficiaries.¹¹ Various DSF schemes have been found to be effective in improving consumer behaviour, although the effects have been varied depending upon the context.¹²⁻¹⁵ Several researchers have observed that DSF schemes have helped in improving the use of priority maternal care services, particularly in low- and middle-income countries such as India.^{4,12,13} Voucher schemes have been used successfully to increase the access to formal health services for antenatal, intranatal and postnatal care in Bangladesh and Cambodia.¹⁵⁻¹⁷ India's largest DSF scheme, Janani Suraksha Yojana, was able to increase the rate of institutional childbirth and reduce perinatal and neonatal mortality.¹⁸ Implementation of targeted voucher schemes, such as the Chiranjeevi scheme in Gujarat and the Sambhav voucher scheme in Uttar Pradesh, also improved the intended health behaviours of beneficiaries in India.^{4,19}

The Government of India initiated cash assistance for transport of rural below poverty line (BPL), scheduled caste (SC) and scheduled tribe (ST) pregnant women for institutional childbirth under the Referral Transport Scheme (RTS) in several states of India including West Bengal.^{20,21} However, researchers showed that the obstacle of non-availability of transport, especially in remote areas, was not addressed by provision of cash assistance.¹⁷ Two research studies from Uganda documented increased utilization of maternal health-care services with the provision of motor cycle ambulances through vouchers.^{22,23} In 2009, the Government of West Bengal started a cashless transportation service (voucher scheme for referral transport) for rural BPL, SC and ST pregnant women to receive institutional care at childbirth and during pregnancy-related complications, as well as for all sick neonates needing institutional care.²⁴ Purulia is one of the first few districts where the scheme was launched.

Researchers have indicated a number of limitations of DSF schemes to promote maternal health.^{4,12} It has also been noted that understanding of what works best in a given context determines the sustainability and ability to scale up DSF schemes.¹² One year after the initiation of cashless transport, the state government planned to scale up the scheme, after taking into account the shortcomings of the scheme that is running currently.²⁵ So the present qualitative study was conducted in the transitional phase, with the objectives of understanding the process of identifying beneficiaries, distribution of vouchers, availability and accessibility of vehicles, assessing the quality of service and factors pertaining thereto, as well as generating suggestions from different stakeholders to increase the efficiency and effectiveness of the scheme.

OVERVIEW OF THE VOUCHER SCHEME

Taking into consideration the limitations of giving cash assistance under the RTS, a cashless transport service using vouchers was started in West Bengal as a pilot project, in addition to continuing with the existing RTS.²⁴ The voucher scheme envisaged provision of cashless transportation to health-care facilities for BPL, SC and ST pregnant women for childbirth and all sick neonates needing care. The voucher was a coupon that guaranteed cashless transportation of targeted beneficiaries free of cost by enlisted ambulances or vehicles. The district health and family welfare *samiti*, the highest decision-making and executive body for the health system in the district, supplied the vouchers for distribution among eligible women. After a third antenatal check-up, an auxiliary nurse midwife (ANM) posted at the subcentre, with the help of an accredited social health activist (ASHA) distributed a set of three vouchers to the eligible women. Voucher-1 was for transport from home to the nearest appropriate health facility and voucher-2 was for the journey home. In cases of referral to a higher-level centre, voucher-3 could be used. After authentication by the attending doctor, the drivers of the vehicles had to submit the vouchers to the health authority of their community development (CD) block for reimbursement according to the distance: ₹ 150 for 1–10 km, ₹ 250 for 10–20 km, ₹ 350 for 20–30 km, and ₹ 450 for more than 30 km.²⁴

Ambulances operating under public–private partnerships run by nongovernmental organizations (NGOs) or private vehicles (one per CD block) were enlisted by the respective CD block health authorities in concurrence with the district health authority. Certain quality measures were taken into consideration during selection of the enlisted vehicles. One such crucial measure was to ensure that no pregnant woman was denied transport provided that the vehicle was not engaged in transporting any other pregnant woman or seriously ill patient. A memorandum of understanding was signed between the health authority and the provider. The present study analysed data obtained during this transitional phase of the scheme.^{21,24}

Subsequently in 2011, the cashless transport scheme was renamed first as Nischay Yaan and then as Matri-Yaan Prakalpa in West Bengal, and all conditionalities were removed to cover all pregnant women and ailing neonates.²⁵ At present, it is incorporated into the Janani Shishu Suraksha Karyakram (JSSK), launched by the Government of India with the objective of ensuring no out-of-pocket expenditure for institutional care for childbirth and sick neonates, including transport.²⁶

METHODS

Study design

A qualitative study using semi-structured interviews and focus group discussions was conducted in the district of Purulia during April–May 2011. The study area was Purulia, a district located in the westernmost part of West Bengal, India, covering 6258 km², and with undulating topography and rugged hilly

terrain. The district has a population of 2.5 million, more than 36% of which belong to scheduled castes and tribes. Over 90% of the population resides in 2685 villages spread across 20 CD blocks and 170 *gram panchayats*.

Out of a total 20 CD blocks in Purulia district, data from four (20%) were used in the present study. The 20 CD blocks were grouped into four strata based on their distance from Purulia town (with a cut-off of 50 km) and reported coverage of the voucher scheme (cut-off of 50%) in the year 2010. From each stratum, one CD block was selected by random sampling. The percentage of reported coverage was calculated from the total number of women who used at least one voucher and the total number of deliveries in that CD block, as reported in the monthly report submitted by each CD block to the district health authority.

Methodology

In the selected blocks, a list of eligible pregnant women at each subcentre who delivered a baby in the reference period of 3 months (December 2010 to February 2011) and who were inducted in the voucher scheme was prepared by the respective ANMs and ASHAs. Data on utilization of vouchers were collected from the respective CD block health administration. As the exact number of the target population was not available for the four study CD blocks, an estimate of 3100 deliveries was used. This estimate was based on the birth rate of the district, as calculated from the yearly report of the Health Management Information System (HMIS) 2010 and the population of the CD blocks. Around one third ($N=1120$) of the total number of pregnant women were enrolled in the scheme and less than one quarter ($N=771$) actually utilized the scheme.

The 25 women who were eligible for vouchers and who delivered in the reference period were selected through stratified purposive sampling based on the number of vouchers they used. It was ensured that there was participation of BPL, SC and ST women in each CD block. After explaining the objectives of the study, the voluntary nature of participation, and informing them that their responses would be recorded and used, written informed consent was obtained from the women. They underwent an in-depth interview in the local language (Bengali) at their household using a predesigned semistructured interview guide giving information on the process of induction into the voucher scheme, the services they could use and their accessibility and the problems they faced, as well as being asked for suggestions to make the scheme more effective and user-friendly.

Focus group discussions were conducted separately with ANMs and ASHAs in Bengali in each identified CD block, which had been selected through two-stage random sampling. A predesigned discussion guide was used to collect the views of the focus group on the process of service provision, including its availability, accessibility and quality, and the bottlenecks they perceived, as well as their suggestions for increasing the effectiveness and efficiency of the scheme.

In-depth interviews were carried out with the following health officials: block medical officer of health (BMOH), block public health nurse (BPHN) and block accounts manager (BAM) of all four blocks; and district-level health officials, including the chief medical officer of health (CMOH), district maternal and child health officer (DMCHO), district public health nursing officer (DPHNO) and district accounts manager (DAM). These interviews were conducted at the offices of the officials, with a predesigned, semistructured interview guide in Bengali to collect their views on the process and outcomes of the scheme, its strengths and weaknesses, and opportunities and suggestions for successful implementation of the scheme. Focus group discussions with NGO representatives and in-depth interviews with drivers of enlisted vehicles/ambulances were also conducted to obtain an account of the views of the service providers. Interview and discussion guides were used to ensure that the moderator/interviewer addressed all the issues pertinent to the study. Three separate sets of interview guides were prepared for: (1) beneficiaries, (2) block-level and district-level programme managers, and (3) drivers of enlisted vehicles/ambulances. Two separate discussion guides were prepared for: (1) health-care workers (ANMs and ASHAs) and (2) NGO representatives. Interview and discussion guides were prepared in Bengali and reviewed for linguistic correctness and appropriateness by three independent public health professionals whose mother tongue was Bengali. The guides were pretested among beneficiaries, health-care workers and health managers in a CD block outside the study area to check clarity, appropriateness and flow of questions. Two investigators trained in qualitative techniques performed the role of moderator/interviewer. Another investigator took written notes. All the interviews and discussions were recorded on audiotape.

Data management

An independent health-care professional transcribed the audiotapes and translated the content into English. The transcripts were reviewed by three investigators separately. From the reviews, investigators summarized and coded the data, and prepared a list of key themes. These were compared and contrasted, and a final list of key themes was identified.

Ethics

The study was carried out in accordance with the ethics standards for an observational epidemiological study and ethics approval was obtained from the Institutional Ethics Committee, BS Medical College, Bankura.

Study participants

The following numbers of participants took part in the scheme: 25 beneficiaries (seven SC, eight ST, ten BPL); 81 front-line health-care workers, comprising 41 ANMs (28 first ANMs/Health Worker-Female (in-charge of the health sub-centre) and 13 second ANMs), 40 ASHAs; 12 CD block-level programme

managers (BMOHs, BPHNs and BAMs of four CD blocks); four district-level programme managers (CMOH, DMCHO, DPHNO, DAM); 13 service providers (eight NGO officials, five drivers).

RESULTS

Of the 25 participating women, 11 used voucher-1, 10 used voucher-2, five used voucher-3, two used a cash benefit for referral transport and five did not use any benefit under the voucher scheme. Except for five women who had a home delivery, another four women were unable to use any of the vouchers they were given. Out of the 25 beneficiaries, 10 were from BPL families, seven were SC and eight were ST.

Through using the qualitative survey, a number of themes related to implementation of the voucher scheme for referral transport were identified.

Access to vouchers

The majority of the beneficiaries were aware of the cash benefits for transport and/or cashless transport to health-care facilities available to pregnant women of poor families for childbirth, although the women did not know the exact nature of service available under the scheme. One beneficiary commented, “We knew that some amount of cash would be given at the health centre for transport by any means.” Another beneficiary commented, “[The ANM] gave me a few pink cards and a phone number. She told me that I would get a vehicle free of cost to go to hospital for delivery if I would call at that number.” However, no beneficiaries and few front-line health-care workers were aware of the availability of the service for ailing neonates.

ANMs and ASHAs indicated that they informed the beneficiaries about the services available under the voucher scheme during antenatal visits. Similarly, health managers of CD blocks reported that they had made efforts to involve the general administration and people’s representatives, both formally and informally.

Pradhans (heads) of the respective *gram panchayats* (rural self-governments) were delegated the authority to issue eligibility certificates to the beneficiaries. In explaining the reasons for such a relaxation in the guidelines, one block-level health official commented, “If we stick to the guidelines for documentary evidence of their SC/ST/BPL status, then I apprehend that even 5% of them would not get the benefits. It is almost impossible for poor people of scheduled castes or tribes to go to the office of the BDO (block development officer)/SDO (subdivisional officer) to collect caste certificates.”

Health-care workers and programme managers alike observed that this type of arrangement, though liable to errors of inclusion (of the non-targeted population) and exclusion (of the targeted population), had made things easier for women and other stakeholders. One programme manager observed, “In case of SC/ST, generally there is no problem in issuing certificates. However, in case of BPL, it actually depends

upon the individual discretion of the *panchayat pradhan*. Sometimes, we have to request the *pradhan* for a woman who is really poor.”

Usually, vouchers were distributed by the ANM after a third antenatal check-up at the subcentre. One public health nurse commented, “We usually distribute the vouchers after the third antenatal check-up. Sometimes, we have to distribute vouchers after one or two antenatal visits, if the woman decided to go to her parental house before delivery.”

However, many front-line health-care workers and programme managers found no reason to withhold distribution of the vouchers because of non-fulfillment of the precondition that the woman made three antenatal visits. One front-line health-care worker expressed, “We should not refrain from distributing vouchers for cashless transport for childbirth merely because of her inability to attend three antenatal visits.”

Birth preparedness and complication readiness were found to be lacking in the majority of beneficiaries. Most were unsure about the precise time (stage of labour) to call an ambulance or vehicle. One beneficiary expressed her helplessness, “I should have known the precise time to call for the ambulance. Had I called a little while earlier, I could have availed of the facility.”

The process of seeking vehicle services in an emergency was not made clear to the beneficiaries. Another beneficiary of a remote village said, “If [the ANM] would tell us clearly that just by calling over a phone I could get a vehicle free of cost to go to hospital, I would not have to suffer all through the night and my husband would have not to rush to another village late in the night to arrange a vehicle.”

Though the front-line health-care workers were able to enumerate the general danger signs or symptoms, they lacked the confidence to recognize true labour pains and key danger signs. When questioned, they expressed the need for hands-on training to identify these conditions.

Utilization of vouchers

The success of the entire programme was based on the availability of telephone and telecom networks in the villages. These were not available in a few villages, as reported by health-care workers. Though the majority of the beneficiaries were able to contact the drivers of the vehicles, in some instances the driver did not pick up the telephone or they communicated their inability to provide the transport. Front-line health-care workers also complained that, in some cases, there was no response from the drivers, especially during the night.

Beneficiaries had different experiences of the vehicle support, depending on the remoteness of their village and the time of the call. In the majority of occasions, the ambulances reached the houses of the beneficiaries within a reasonable time after receiving the telephone calls, with a few exceptions in hard-to-reach areas where mothers had to travel a distance to a road that was passable by doli/cycle/rickshaw to access the free ambulance service. Although there was provision in the guidelines, reimbursement of money for transport from home

to the passable road was not reported to have been claimed or known about by any of the beneficiaries.

Pregnant women from remote villages faced different problems in accessing transport, especially if they sought care at night. One ANM described her experience of the non-availability of an ambulance at night, which ultimately led to a stillbirth. Another ANM of a remote subcentre, near the Jharkhand (bordering state) border, said that on one occasion, the driver asked the woman to come to the main road from where he would transport her; however, when the woman reached the road and rang him, he refused to come. One beneficiary, who could not avail of the ambulance despite her best efforts, commented, “The whole process would be meaningless if there is an inadequate number of vehicles under the scheme or the drivers refuse to come in an emergency.” Beneficiaries who had no problems using the services felt that the number of vehicles was adequate.

Front-line health-care workers and the majority of block-level health officials thought that the number of ambulances/vehicles was inadequate. In contrast to the present practice of stationing the ambulances at block-level facilities, health-care workers and block-level health managers were of the opinion that they should be stationed at the offices of the *gram panchayats*. However, the district-level health officials and NGO partners felt that there were few problems with pregnant women accessing the vehicles. The issues of road condition and security concerns in certain areas were pointed out as impediments.

Health managers reported that the enlisted vehicles, though most had been on the road for 8–10 years, were in good general condition with adequate space. The majority of drivers were experienced. This was corroborated by NGO participants and drivers. The beneficiaries reported that the behaviour of the drivers was polite and respectful. Beneficiaries, NGO participants and drivers reported that most of the drivers helped in the admission process and waited until the attending doctor decided about the management of the case. NGO participants and drivers expressed their dissatisfaction on the reimbursement package for travel beyond 40 km. Drivers, NGO participants and health-care workers reported that in cases of false labour pain or pregnancy-related complications, there was difficulty in obtaining reimbursement for the vouchers. In such situations, some drivers had claimed money from the beneficiaries, and this created a lot of confusion and dissatisfaction among all the stakeholders. In only a few instances did drivers claim extra money from the woman or her family.

All stakeholders felt that there was a need for a skilled attendant to be present during transport of the pregnant women; however, in reality, this occurred in only a few cases.

DISCUSSION

Evidence from resource-constrained countries has indicated success in experiments with DSF in increasing the utilization of maternal health-care services.¹²⁻¹⁷ Similar results have been reported from India.^{4,18,19} However, several researchers have also emphasized the need for regular review of governance and

implementation of the schemes, along with attention to supply-side conditions.^{4,12} The present study looked into a number of issues on access to and utilization of a voucher scheme for referral transport in the study area.

In a relaxation of the guidelines, *panchayat pradhans* were delegated the power to identify beneficiaries. As a part of decentralization process, the Panchayati Raj System has been put in place in India. The *gram panchayat* is the most peripheral unit, working at village level. The *pradhan* (head) of a *gram panchayat*, as an elected representative from the same community, is better placed than a statutory authority to issue eligibility certificates to beneficiaries. In the absence of objective criteria, there was scope for exclusion (of target population) and inclusion (of non-target population) errors. It was noted that decentralization of authority to issue eligibility certificates, along with multi-item objective criteria-based identification of the target population by a group at block level, might be a viable alternative; this model has been used in Bangladesh with some success.¹⁵ The idea has also been supported by Hunter et al.⁴ An alternative might be to remove all conditionalities and target the scheme universally. Hunter et al. and de Poel et al. observed that a universal system was found to be better in changing the behaviour of beneficiaries, and that it was more effective than a targeted scheme for the poor and marginalized sections of society. A universal system also reduces the administrative cost of targeting.^{4,16}

Information sharing with beneficiaries was usually carried out during antenatal visits at subcentres. However, efforts from front-line health-care workers to maximize the coverage for utilization of the scheme through home visits were found to be infrequent. The mandatory precondition of three antenatal check-ups was not adhered to by the front-line health-care workers so that coverage could be enhanced, as it was considered to be defeating the purpose of promoting cashless transport among those who needed it most.

Under the programme implementation plan, vouchers were not issued to provide transport for sick neonates or eligible women with pregnancy-related complications. Moreover, cashless transport for sick neonates, though included in the voucher scheme, was almost unknown to both health-care workers and beneficiaries. There should be an adequate plan to cover women with pregnancy-related complications and ailing neonates through the issue of a separate set of vouchers.

The majority of front-line workers knew about pregnancy-related complications but they were unable to recognize situations when urgent referral was warranted. In addition, they were unable to distinguish between true and false labour pain. In most cases, they did not pass on their knowledge to the beneficiaries. The majority of beneficiaries did not know the precise time (with respect to stage of labour) and the correct process to call the vehicle. Building the capacity of front-line workers is therefore an urgent priority.

The concept of “focused antenatal care” should be brought in to enable front-line workers give individualized care to pregnant women and to create awareness regarding birth preparedness and complication readiness among pregnant women, their families and the community at large.^{27,28} Self-help groups,

ladies groups' and adolescent schoolgirls' groups can be used to help introduce changes. Availability of a telephone in every village should be ensured, as this was lacking in certain instances. The district-level programme managers were content with the availability and accessibility of vehicles, though they recognized that there was scope for improvement. However, beneficiaries and some health-care workers who experienced a lot of inconvenience, especially in remote areas and at night, thought otherwise. There must be a review system to address this issue. Adequate numbers of vehicles, preferably stationed at the *gram panchayat* level, and a realistic reimbursement package including other incentives might improve the availability and accessibility of vehicles/ambulances. Involvement of a social franchise, a self-help group, an NGO network or a village health and sanitation committee might play a crucial role in this endeavour. Stationing the vehicle at *gram panchayat* level, as suggested by health-care workers and block-level health managers, would address the problems of reaching households in remote areas and further reduce the delay in reaching households. Problems of road conditions and security concerns also need to be addressed. Demand for informal payments by drivers, although few, is a matter of concern. Similar findings have been reported by other DSF schemes.^{4,12} Research has indicated the need for effective regulatory mechanisms and timely reviews of the programme and its guidelines to ensure quality; this would also create an opportunity to look into informal payments.^{4,12} Availability of a cash incentive complemented the voucher scheme. In the absence of a cash incentive scheme, non-availability of enlisted vehicles means not only denial of transport to an eligible woman in an emergency but also a negative image of the health system.

CONCLUSION

Guidelines regarding the process of identification of beneficiaries, number of vouchers, preconditions and reimbursement package, particularly for travel beyond 40 km and transport for false labour pains or pregnancy-related complications need to be reviewed. Capacity building of women as well as health workers is a priority for reducing delays in making decisions. Providing the opportunity to address the constraints and limitations of the present scheme might become a strength of the system during the implementation of any new scheme.

ACKNOWLEDGEMENTS

This work was supported by the United Nations' Children Fund, Office for West Bengal [grant no. YH/813/WB]. The authors would like to acknowledge the help of Mr Sanjib Saha, Project Manager, Child Survival Cell, Purulia, for his help in organizing field visits and data collection.

REFERENCES

- World Health Organization. Trends in maternal mortality: 1990 to 2013: estimates by WHO, UNICEF, UNFPA, the World Bank and the United Nations Population Division. Geneva: WHO; 2014. http://apps.who.int/iris/bitstream/10665/112682/2/9789241507226_eng.pdf - accessed 29 November 2014.
- Johns Hopkins Bloomberg School of Public Health. Monitoring birth preparedness and complication readiness: tools and indicators for maternal and newborn health. Baltimore: JHPIEGO; 2004. <http://www.jhpiego.org/files/BPCRtoolkit.pdf> - accessed 29 November 2014.
- United Nations General Assembly. Road map towards the implementation of the United Nations Millennium Declaration: report of the Secretary General. Document No. A/56/326. New York: UN; 2001. <http://www.un.org/documents/ga/docs/56/a56326.pdf> - accessed 29 November 2014.
- Hunter BM, Bisht R, Chakravarthi I, Murray SF. Demand-side financing and promotion of maternal health: what has India learnt? *Economic & Political. Weekly.* 2014;49(2):66-73.
- World Health Organization. Birth and emergency preparedness in antenatal care: integrated management of pregnancy and childbirth (IMPAC). Geneva: Department of Making Pregnancy Safer; 2006. http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/emergency_preparedness_antenatal_care.pdf - accessed 29 November 2014.
- CHANGE. Maternal survival toolkit: birth preparedness: summary: a community-developed birth preparedness intervention in Western Kenya. 2000. http://www.manoffgroup.com/ms_toolkit/bp_kenya/overview_bp.html - accessed 29 November 2014.
- Thaddeus S, Maine D. Too far to walk: maternal mortality in context. *Social Science and Medicine.* 1994;38:1091-1110.
- United Nations Children's Fund. Maternal deaths in Purulia, West Bengal: trends: 2005-2009. Kolkata: UNICEF Office for West Bengal; 2010. pp. 1-44.
- Biswas AB, Das DK, Misra R, Roy RN, Ghosh D, Mitra K. Availability and use of emergency obstetric care services in four districts of West Bengal, India. *Journal of Health, Population and Nutrition.* 2005;23(3):266-74.
- Paul B, Mohapatra B, Kar K. Maternal deaths in a tertiary health care centre of Odisha: an in-depth study supplemented by verbal autopsy. *Indian Journal of Community Medicine.* 2011;36(3):213-16.
- Ensor T. Consumer-led Demand-side financing in health and education and its relevance for low and middle income countries. *International Journal of Health Planning and Management.* 2004;19(3):267-85.
- Murray SF, Hunter BM, Bisht R, Ensor T, Bick D. Effects of demand-side financing on utilisation, experience and outcomes of maternity care in low and middle-income countries: a systematic review. *BMC Pregnancy and Childbirth.* 2014;14:30. doi:10.1186/1471-2393-14-30. <http://www.biomedcentral.com/1471-2393/14/30> - accessed 29 November 2014.
- Gopalan SS, Mutasa R, Friedman J, Das A. Health sector demand-side financial incentives in low-and middle income countries: a systematic review on demand-and supply-side effects. *Social Science and Medicine.* 2014;100:72-83.
- Bellows NM, Bellows BW, Warren C. The use of vouchers in developing countries: systematic review. *Tropical Medicine and International Health.* 2011;16(1):84-96.
- Ahmed S, Khan MM. A maternal health voucher scheme: what have we learned from the demand-side financing scheme in Bangladesh? *Health Policy and Planning.* 2010;26:25-32.
- De Poel EV, Flores G, Ir P, O'Donnell O, Doorslaer EV. Can vouchers deliver? An evaluation of subsidies for maternal health care in Cambodia. *Bulletin of World Health Organization.* 2014; 92(5):331-39. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4007125/> - accessed 29 November 2014.
- Ir P, Horemans D, Souk N, VanDamme W. Using targeted vouchers and health equity funds to improve access to skilled birth attendances for poor women: a case study in three rural health districts in Cambodia. *BMC Pregnancy and Childbirth.* 2010;10:1. <http://www.biomedcentral.com/1471-2393/10/1> on 9th October 2014 - accessed 29 November 2014.
- Lim SS, Dandona L, Hoisington JA, James SL, Hogan MC, Gakidou E. India's janani surakshayojana, a conditional cash transfer programme to increase births in health facilities: an impact evaluation. *Lancet.* 2010;375:2009-23.

19. Bhat R, Mavalanakar DV, Singh PV, Singh N. Maternal health care financing: Gujarat's Chiranjeevi Scheme and its beneficiaries. *Journal of Health, Population and Nutrition*. 2009;27(2):249–58.
20. Government of India, Planning Commission. Eleventh five year plan 2007-12: volume-II: social sector: chapter-3. New Delhi: Health and Family Welfare and AYUSH. 2008:57–127.
21. United Nations' Children Fund. Tool kit: operating perinatal referral transport services in rural India. New Delhi: UNICEF; 2010. http://www.unicef.org/india/Referral_Transport_book-Final_PDF.pdf - accessed 29 November 2014.
22. Pariyo GW, Mayora C, Okui O, Ssengooba F, Peters DH, Serwadda D, Lucas H, Bloom G, Rahman MH, Ekirapa-Kiracho E. Exploring new health markets: experiences from informal providers of transport for maternal health services in eastern Uganda. *BMC International Health and Human Rights*. 2011;11(Suppl 1):S10. - accessed 29 November 2014.
23. Ekirapa-Kiracho E, Waiswa P, Rahman MH, Makumbi F, Kiwanuka N, Okui O, Rutebemberwa E, Bua J, Mutebi A, NalwaddaG, Serwadda D, Pariyo GW, Peters DH. Increasing access to institutional deliveries using demand and supply side incentives: early results from a quasi-experimental study. *BMC International Health and Human Rights*. 2011;11(Suppl 1):S11. <http://www.biomedcentral.com/1472-698X/11/S1/S11> – accessed 29 November 2014.
24. Government of West Bengal, Health and Family Welfare Department. Subsidised emergency transportation service for the pregnant women under BPL/SC/ST and sick neonatal children in West Bengal (Voucher Scheme). Kolkata: NRHM, 2010.
25. Government of West Bengal, Health and Family Welfare Department. Nischay yan: toll free tele-helpline (102) for ambulance-on-call: guideline. Kolkata: H&FWD; 2010.
26. Government of India, Ministry of Health and Family Welfare. Guidelines for janani shishu suraksha karyakram (JSSK). New Delhi: National Rural Health Mission, Maternal Health Division; 2011.
27. Birungi H. Adapting focused antenatal care: lessons three African countries. *Frontiers in Reproductive Health Program Brief No.11*. Washington, DC: Population Council; 2008. <http://www.popcouncil.org/uploads/pdfs/frontiers/pbriefs/PB11.pdf> - accessed 30 November 2014.
28. USAID. ACCESS. Focused antenatal care: providing integrated, individualized care during pregnancy. Washington, DC. pp 1-4. www.accessohealth.org – accessed 30 November 2014.

How to cite this article: Mukhopadhyay DK, Mukhopadhyay S, Das DK, Sinhababu A, Mitra K, Biswas AB. Access to and utilization of voucher scheme for referral transport: a qualitative study in a district of West Bengal, India. *WHO South-East Asia J Public Health* 2014; 3(3-4): 247–253.

Source of Support: United Nations' Children Fund, Office for West Bengal [grant no. YH/813/WB]. **Conflict of Interest:** None declared. **Contributorship:** DKM, ABB and KM conceived the study, DKM, ABB, SM, DKD, AS and KM participated in designing the study. DKM, SM and AS participated in data collection. DKM, DKD and ABB analysed the data and all other authors participated in interpreting the results and with intellectual input. DKM, SM and AS prepared the draft, which was read, revised and approved by all the authors. The manuscript has been read and approved by all the authors and the requirement of authorship fulfilled by all the authors.