COVID-19: Access to maternal health services in informal settlements of Mumbai

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COVID-19 outbreak overwhelmed the health systems; fear of infection, lockdown imposed to contain the spread of the virus and subsequent financial hardships resulted in poor uptake of health services especially among pregnant women. This article discusses the findings from a cross-sectional survey conducted to gauge the experiences of expectant and new mothers in accessing maternity care in informal settlements of Mumbai during lockdown. Findings give us a glimpse of the services available during lockdown and provide us with essential inputs to work towards maintaining an uninterrupted delivery of maternal health services.

On March 11, 2020, the World Health Organization (WHO) declared COVID-19 a pandemic.[1] Due to the alarming level of spread and severity of the disease, WHO reiterated its call to countries to take urgent aggressive actions with comprehensive strategies to save lives and minimize impact.[2] India had been proactive in its response to the pandemic by putting in place several public health, legislative, socio-economic measures and introducing travel restrictions, surveillance, quarantine and lockdowns.[3] However, despite all these measures India had the second highest number of confirmed cases of COVID-19 in the world[4] and Mumbai was one of the hotspots with highest share of COVID-19 cases in the country.[5]

In Mumbai, 42% of the population lives in slums, where lack of proper housing, water and sanitation facilities make it extremely challenging to practice suggested preventive measures.[6] Pregnant women living in slums are particularly vulnerable due to the heightened risk of COVID-19 and travel restrictions during lockdown made accessing health services difficult for them. A 2015 study conducted in a similar setting suggested that institutional maternity care is a norm in such settlements; however socio-economic inequalities limit access and choices of health care providers.[7] A recent report "The Inequality Virus" by Oxfam International highlighted the pandemic's impending effects on socio-economic, gender and racial inequalities around the world.[8] India, with its already existing inequalities, was no exception and pandemic worsened the situation of poor, marginalized sections of society.[9] Subsequent loss of jobs, financial constraints, and changing household dynamics affected women's health and nutrition.[10] Studies have estimated the potential impact of COVID-19 on the uptake of sexual, reproductive and maternal health services in low and middle-income countries.[11,12] A few studies have also notified reduction as well as delays in uptake of maternal health services which could have disastrous implications including maternal mortality.[13,14] Given the context, this study aimed to assess the uptake of maternal health services and related experiences of expectant and new mothers residing in informal settlements of Mumbai.

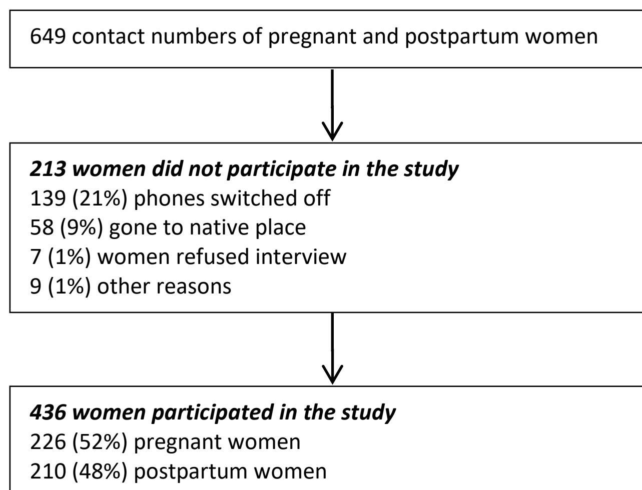
Study setting

The Society for Nutrition, Education and Health Action (SNEHA), a Mumbai-based non-profit organization, implements different projects to improve maternal, newborn, child health and nutrition in informal settlements of Mumbai. This study was conducted in project implementation areas located in different wards (P/North and M/East) of Mumbai Municipal Corporation and Bhiwandi Nizampur Municipal Corporation. During lockdown telephones and other virtual mediums were used to reach women in implementation areas to raise awareness related to available maternal health services and COVID-19.

Methods

This cross-sectional survey was conducted in July-August 2020 and the inclusion criterion for the study was women who had delivered between April-August 2020. We estimated a sample size of 382 (+/-5% confidence interval calculation from a conservative 50% prevalence estimate). Taking into account a 10% non-response rate for refusals and erroneous data, based on earlier surveys in the area, final sample size required was 422. A random sample was drawn from the list of phone numbers available with the implementation teams. From shortlisted 649 phone numbers, we were able to connect with 436 (226 pregnant and 210 postpartum) women for telephonic interviews. We used adapted Coronavirus Prenatal Experiences Impact Survey (COPE-IS) to learn about the experiences of expectant and new mothers in the time of the COVID-19 pandemic.[15] Verbal consent was taken before interviews and each interview lasted 20-25 minutes. Apart from types of maternal health services utilized, we asked women about their experiences, concerns and information required to maintain their health during the pandemic.

Figure 1: Study participants



Results

Of the 436 women interviewed, the majority (86%) were between 20 to 30 years of age, 83% had completed secondary or higher level of formal education and 95% of them were not working at the time of survey. Of all respondents, 52% were pregnant and 48% were postpartum women. 36% of the respondents in our sample were pregnant for the first time. Of all pregnant women, 35% were in second trimester and 65% were in third trimester of their pregnancy. (Table 1)

Table 1: Profile of study participants

	N=436	n	%
Age	<20	19	4
	20-30	373	86
	>30	44	10
Education	No schooling	63	14
	Primary	12	3
	Secondary	264	61
	Higher	97	22
Employment status	Not working	412	95
	Working	24	5
Pregnancy status	Pregnant	226	52
	Postpartum	210	48
Parity	Primipara	155	36
	Multipara	281	64
Stages of pregnancy	1st trimester	0	0
	2nd trimester	79	35
	3rd trimester	147	65

Antenatal, delivery and postnatal services utilized by women

Table 2 summarizes the antenatal, delivery and postnatal service utilization by women. Of all pregnant women in our sample, majority (92%) had received antenatal care. More than two third (68%) of them had received antenatal services from government hospitals. 8% of the pregnant women had not registered for antenatal care services (not in table). 85% of pregnant women reported regular antenatal check-ups and majority (92%) availed laboratory or diagnostic services. Of all postpartum women, majority (80%) reported their delivery as institutional. More than two thirds (64%) of them had delivered in government hospitals. 78% of the women had a normal delivery while 22% reported delivery through caesarean section.

Majority of the respondents, both pregnant and postpartum women, reported receiving good support from their healthcare providers after reaching the health facility. Nearly half of the women (43%-46%) shared that there was no change in the services

provided at the hospital from pre COVID-19 days. However, a similar proportion of women (40%-43%) reported of worsening of services received during the pandemic.

Changes experienced by women

Data indicated that majority of the respondents in our survey were able to access maternal health services during the pandemic. But they experienced some changes in the recommended antenatal care visits i.e., atleast four visits to the healthcare provider over the period of nine months. In our survey, nearly half of the pregnant women reported reduction in the number of visits to the hospital during pregnancy. A few pregnant (14%) and postpartum (21%) women reported cancellation of planned hospital visits. Almost half of the pregnant and postpartum women reported change of hospital or the service provider for antenatal, delivery or postnatal care. This can be attributed to various reasons, for instance hospitals being converted to COVID-19 care centres, lack of transportation or women seeking care from nearby health facilities and not from the one they had originally decided upon.

Frontline workers are an essential component of health systems which ensure service provision at the ground level. Both pregnant (51%) and postpartum (37%) women reported poor outreach by frontline workers for maternal and child health services. Non-availability of contraceptives and incomplete or postponed immunization of children reported by postpartum women also indicated the poor outreach by frontline workers in our study area. Change in priorities of frontline workers during COVID-19 outbreak could be the reason that impacted service provision to women and children in the community.

Concerns expressed by women

We asked pregnant women about the concerns they had related to their delivery or postpartum care. Most of the respondents expressed worries related to their financial situation. Nearly half (44%) of the pregnant women had concerns related to the absence of support people (husband and family) during delivery. 35% of pregnant women expressed the fear of getting infected with COVID-19 during delivery. 32% were worried about the hospital denying them admission or referring them to another hospital for delivery. 27% of the pregnant women reported concerns related to lack of transportation to reach hospitals and a similar proportion (26%) reported concerns related to the immunization of their child. Concerns of the pregnant women were valid as the postpartum women in our study experienced similar challenges in accessing delivery and postnatal care.

Table 2: Access to maternal health services by pregnant and postpartum women in informal settlements of Mumbai during COVID-19 outbreak

	Pregnant women		Postpartum women	
	n	%	n	%
Pregnant women who received antenatal care	209	92		
Pregnant women who received regular antenatal check-ups	179	85	-	-
Pregnant women who utilized laboratory and diagnostic services	193	92	-	-
Type of health facility				
Public	143	68	108	64
Private	52	25	59	35
Other	14	7	1	<1
Place of delivery				
Institutional birth	-	-	168	80
Home birth	-	-	42	20
Type of delivery				
Normal	-	-	163	78
Caesarean section	-	-	47	22
Changes in maternal health services				
Reduction in number of antenatal care visits	107	51	-	-
Cancellation of ANC/PNC clinic or visit	31	14	45	21
Change in hospital/provider for ANC/delivery/PNC care	95	42	101	48
No outreach by frontline workers	108	51	77	37
Support of healthcare providers				

Very well supported	204	90	197	94
Not very well supported	5	2	8	4
Not applicable	17	8	5	2
Status of antenatal care/postnatal care services				
Worsened	97	43	84	40
No change	98	43	97	46
Improved	14	6	24	11
Not applicable	17	8	5	2
Concerns and experiences related to the maternal health services				
Financial problem	153	73	112	53
Absence of support people during delivery	92	44	56	26
Lack of resources for child care	92	44	71	34
Afraid of COVID-19 infection	73	35	21	10
Hospital denying admission or referring to other facility	68	32	48	23
Lack of transport to reach hospital	57	27	52	25
Incomplete/postponed child immunization	47	21	55	26
Non-availability of healthcare providers	39	19	18	10
Need of COVID-19 status report before hospital admission	30	14	15	7
Non-availability of contraceptives	26	12	22	10

We understand that during these unprecedented times, it is crucial that women have access to the information required to maintain their health and the health of their children. When asked about the information they needed, women shared that information about COVID-19 and child health, child immunization, postpartum contraceptives and available social schemes would be helpful for them.

Table 3: Information required by pregnant and postpartum women in informal settlements of Mumbai during COVID-19 outbreak

Information required by women	**Pregnant women**		**Postpartum women**	
	N	%	n	%
COVID-19 infection and child health	97	46	62	30
Immunization	64	30	54	26
Contraceptives	64	30	55	26
Social schemes	57	25	41	20
Outreach activities by health systems	43	20	44	21
Other	20	9	15	7

Conclusion and recommendations

Our findings indicated that during COVID-19 outbreak, the health systems in Mumbai were able to cater to the maternal health related needs of women residing in informal settlements. Women did face some challenges during lockdown, but it did not deter them from seeking hospital-based maternity care. Based on our findings we recommend that during emergencies such as COVID-19 it is essential to make people aware about the health facilities which will provide maternity care. Any change in protocols should be publicized and shared with expectant parents through different mediums.

Fear of infection in hospitals may discourage families seeking institutional maternity care. This can be addressed by providing correct information and counseling by frontline workers through their outreach in the community. We feel that complete resumption of outreach services may not be possible in the near future, especially with public health facilities tackling dual responsibility of managing COVID-19 cases and implementing vaccination drive. We suggest that frontline workforce of the community-based or non-governmental organizations can be reached for this purpose along with the use of different social media platforms. Additionally, COVID-19 has exposed the vulnerability of the informal economy workers and their families; social schemes providing any form of protection should be publicized for maximum utilization.

References

[1] World Health Organization. COVID-19 Public Health Emergency of International Concern (PHEIC) Global research and innovation forum. [Internet]. Available from: https://www.who.int/publications/m/item/covid-19-public-health-emergency-of-international-concern-(pheic)-global-research-and-innovation-forum

[2]World Health Organization. Timeline of WHO's response to COVID-19. [Internet]. Available from: https://www.who.int/news-room/detail/29-06-2020-covidtimeline

[3] Centre for Policy Impact in Global Health. India's Policy Response to COVID-19. [Internet]. Available from: http://centerforpolicyimpact.org/wp-content/uploads/sites/18/2020/06/India-National-Response-to-COVID-19.pdf

[4] World Health Organization. WHO Coronavirus Disease (COVID-19) Dashboard. [Internet] Available from: https://covid19.who.int/ Accessed on August 21, 2020

[5] The Economic Times. 2020, May 10. Five cities that contribute nearly 50% of total cases key to India's Covid success. [Internet] Available from: https://economictimes.indiatimes.com/news/politics-and-nation/five-cities-that-contribute-nearly-50-of-total-cases-key-to-indias-covid-success/articleshow/75654952.cms?from=mdr

[6] Mishra SV, Gayen A, Haque SM. COVID-19 and urban vulnerability in India. *Habitat Int*. 2020;103:102230. doi:10.1016/j.habitatint.2020.102230

[7] Alcock G, Das S, More NS. Examining inequalities in uptake of maternal health care and choice of provider in underserved urban areas of Mumbai, India: a mixed methods study. *BMC Pregnancy and Childbirth*. 2015 15:231 DOI 10.1186/s12884-015-0661-6

[8] OXFAM International. The Inequality Virus. OXFAM Briefing Paper January 2021. [Internet] Available from: https://oxfamilibrary.openrepository.com/bitstream/handle/10546/621149/bp-the-inequality-virus-250121-en.pdf

[9] OXFAM International. Public Good or Private Wealth? Oxfam Inequality Report- The India Story. [Internet] Available from: https://www.oxfamindia.org/sites/default/files/Davos-India_Supplement.pdf

[10] The Indian Express. 2020, May 17. How COVID-19 is amplifying gender inequality in India. [Internet]. Available from: https://indianexpress.com/article/opinion/coronavirus-gender-inequality-india-6414659/

[11] Biddlecom A, Riley T, Sully E, Ahmed Z. Estimates of the Potential Impact of the COVID-19 Pandemic on Sexual and Reproductive Health In Low- and Middle-Income Countries. *Int Perspect Sex Reprod Health*. 2020;46:73-76.

[12] Roberton T, Carter ED, Chou VB. Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study. *Lancet Glob Heal*. 2020;8(7): e901-e908. doi:10.1016/S2214-109X(20)30229-1

[13] Pant S, Koirala S, Subedi M. Access to Maternal Health Services during COVID-19. *Eur J Med Sci*. 2020;2(2):48-52. doi:10.46405/ejms.v2i2.110

[14] KC A, Gurung R, Kinney MV. Effect of the COVID-19 pandemic response on intrapartum care, stillbirth, and neonatal mortality outcomes in Nepal: a prospective observational study. *Lancet Glob Heal*. 2020;8(10):e1273-e1281. doi:10.1016/S2214-109X(20)30345-4

[15]Thomason ME, Graham A, VanTiegemh MR. The COPE-IS: Coronavirus Perinatal Experiences – Impact Survey. 2020. University Langone Health, New York