

Status of Institutional Birth in West Bengal during Covid-19 Pandemic

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Abstract : *Institutional child-birth is an important tool to improve maternal health outcomes since health centres usually have more modern facilities and hygienic conditions. Several schemes and interventions are, therefore, being taken up in India for the purpose. But the process in our country including West Bengal has been shrinking a lot because of COVID-19 pandemic. The phenomenon is occurring both in Government and non-Government hospitals and health centres. Such COVID-19 pandemic may lead to amplification of traditional as well as unauthorized institutional birth in West Bengal, which may, in turn, swell both complicacies and death-rates during and in relation to child-birth.*

Keywords : *Neo-natal, Birth-complicacy, Maternal mortality, Sustainable Development Goal-3*

Introduction

Institutional child-birth is a pre-determinant feature in decreasing birth-complicacy, child & mother-mortality rate etc., and in overall sustainable development in gender-community. Though world-wide maternal mortality-rate has declined by almost 50% since 1990, but maternal mortality ratio (maternal deaths per 1,00,000 live births) in developing countries is still 14 times higher than the developed regions (www.undp.org/content/undp/en/ retrieved on 05/08/2020), and Sustainable Development Goal-3 is aimed to decrease global mortality-ratio to less than 70 by 2030 (UN High Commissioner for Refugees, 2017). Though a great percentage of pregnant women in developing countries breathed their last due to complications resulted during child-birth (Tadele and Lamaro, 2017). India and vis-a-vis West Bengal (WB), at the same time, are not exceptions also. In WB, institutional delivery is (75.2%) far less than the national average-percentage (78.9%) ranking 19th position among all the states and union territories in India (NSHS-4). Whatever the case may be, the COVID-19 pandemic situation has worsened the matter of institutional birth badly during the recent couples of months. But institutional birth is very much essential, since maternal death occurs mostly at labour, delivery and within one week after birth (Habte and Demissie, 2015).

Objective

The present paper aims to highlight the reduction of authorized institutional birth which is an eventual effect of COVID-19 pandemic, when the people became afraid of stepping out the door

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and maximum medical institutions were restricted only for corona infected patients. The study will help the managers, planners and administrators, both in Government and non-Government sectors, in deciding suitable measures to alleviate health-hazards and death-rates in regard to both mother and child.

Data Source and Methodology

COVID-19 pandemic has affected the existing health-system globally. But the present study is limited to authorized maternal delivery in West Bengal (India) only. The health institutions situated both in Kolkata and other than Kolkata have been considered, though all of them could not be covered. Only five institutions in Kolkata area, selected at random, have been taken into account, and they are: Calcutta National Medical College (CNMC) and Hospital, Chittaranjan Sevasadan, Calcutta Medical College (CMC) and Hospital, Nil Ratan Sirkar (NRS) Medical College and Hospital and Seth Sukhlal Karnani Memorial (SSKM) Medical College and Hospital. Whereas, Bankura Sammilani Medical College and Hospital, Murshidabad Matrima, Diamond Harbour Medical College and Hospital, Krishnanagar District Hospital, Burdwan Medical College and Hospital and Midnapore Medical College and Hospital in the districts (other than Kolkata) have been brought under the study as random choice. Only the secondary data, collected from the Department of Health, Government of West Bengal, have been used in assessing institutional child-birth during this COVID-19 pandemic. Again, data have been considered for April and May in 2019 and 2020 in case of hospitals situated in Kolkata, whereas, April-May, March-April, January-June (average) and April-May, 2019 and 2020 have been considered against the hospitals in the districts. After collecting, the data have been tabulated and processed suitably for graphical presentation.

Determinants of Institutional Birth

There are so many determinants of institutional birth which are broadly covered in socio-demographic parameters, economic solvency, cultural aspects, availability of infrastructural and transport facilities, psychological alignment and traditional practices, religious factors, educational status, ease of access to the facilities etc. Household wealth, paternal as well as maternal education, daughter's age during marriage, community and religion etc. are some important socio-demographic factors of institutional delivery (Bhattacharyya et al. 2016; Kesterton et al., 2010; Sahoo et al., 2015; Srivastava & Joseph, 2019 and Vellakkal et al., 2017). According to Bhattacharyya et al., 2016 knowledge or awareness, cultural tradition and belief, availability of health and medicinal infrastructure, quality support by the service provider, perceived health benefits for mother and child, provision of antenatal care etc are also some pivotal causes that influence making decision on choice of place of delivery. At the same time, studies claimed that timing and frequency of antenatal care contacts are intimately associated with improved maternal and child-health care outcomes (Hollowell, 2011 and Sing, 2014), though case of institutional delivery is less attributed to frequency of antenatal care contacts (Sinha et al., 2013 & Dixit et al., 2017). Distance of health

institution from the household is also a great determining factor against such delivery. Kumar et al. 2014 argued that each additional kilometre distance from the nearest health-facility contributes to a 4.40% decline in the probability of in-facility birth, while, 5-km nearing distance can increase a 10% institutional delivery in rural India. Apart from these, Dixit and Dwivedi, 2016 showed that previous utilisation of institutional delivery was an important predictor of having subsequent institutional deliveries in India. However, the usual health services that were being provided to the pregnant mothers, have badly been affected during this COVID-19 pandemic, since a major allocation of infrastructural facilities and human resources, including emergency services and intensive care, had to be made for the COVID patients. And these service-related features along with restrictions on public as well as traffic-movements, hiking of transport-costs, apprehension of being infected from the other etc. are some added phenomena during this unprecedented COVID-19 attack, which, in turn, resulted in reduction of institutional and increase of unauthorised and unhygienic child-birth.

Discussion

Almost in all the hospitals (in Kolkata and districts) in West Bengal (WB) children are given birth through both normal and caesarean processes. But this COVID pandemic situation was quite different, when major resources were dedicated to COVID-patients and the people had to maintain safe physical distance from others. Thus, many people including authoritative persons of the pregnant women, in many occasions, preferred not to go to health centres for child-delivery and the number of institutional deliveries got a drastic decrease at the advent of COVID-situation in 2020, as compared to earlier-statistics in 2019.

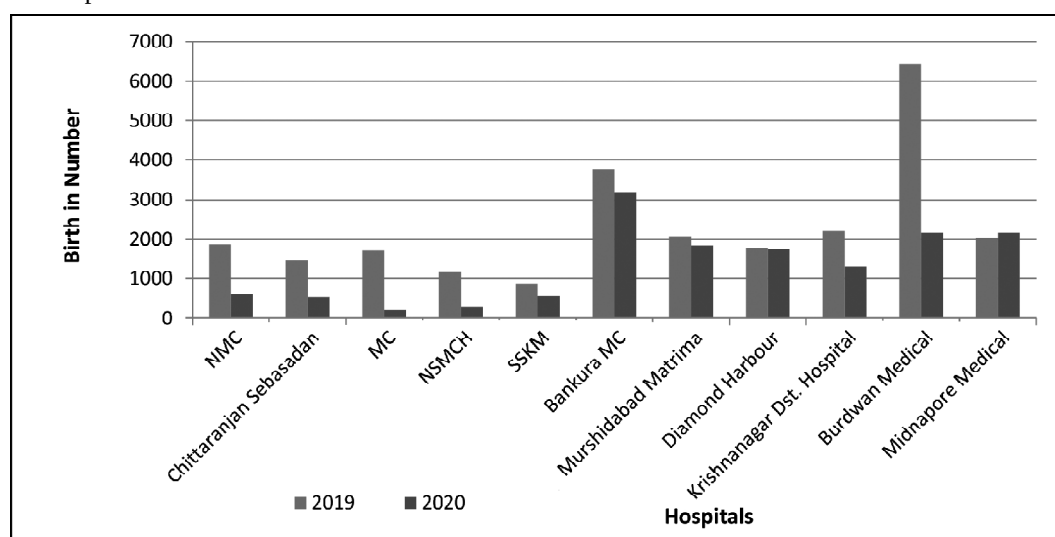


Fig.1: Normal delivery in the selected hospitals in 2019 and 2020

Source: Department of Health, Govt. of WB.

In figure-1 the number of normal deliveries for the year 2019 and 2020 have been depicted in case of hospitals both in Kolkata and other than Kolkata (districts). It is evident from the figure that in all the hospitals normal delivery has decreased in 2020, that is during COVID-19 situation as compared to that in the period of non-COVID period (2019) except in Midnapore College and Hospital, which is an exception and unexplained. Percentage decrease respectively are: 67, 63, 87, 75, 35, 15, 11, 1.5, 41, 66 and -5.88. That is, maximum percent decrease is found in Kolkata Medical College and Hospital and minimum in Diamond Harbour Medical College and Hospital. Whereas, in absolute figure maximum decrease has occurred in Burdwan Medical College and Hospital. Though, the number of births has increased in 2020 than in 2019 in Midnapore Medical College and Hospital, as an exception. In general, less availability of medical and clinical resources, facilities and conveyances, fear of being COVID-affected, cost-inflation in availing the resources and facilities, imposing various types of restrictions etc. may be attributed to such decrease in institutional child-birth; of course, the case of Midnapore Medical College and Hospital calls for further investigations.

The figure-2 shows that caesarean delivery of child has decreased in all the five selected hospitals in Kolkata and the percentages respectively are 70, 63, 89, 85 and 43. That is, in percentage, maximum decrease has occurred in Kolkata Medical College and minimum in SSKM. And in absolute figure maximum and minimum delivery has occurred in Kolkata Medical College and SSKM respectively. Here, one interesting phenomenon is that, in case of Kolkata percentage of decrease is much more than that in the districts. That is, in Kolkata the would be mother approached less

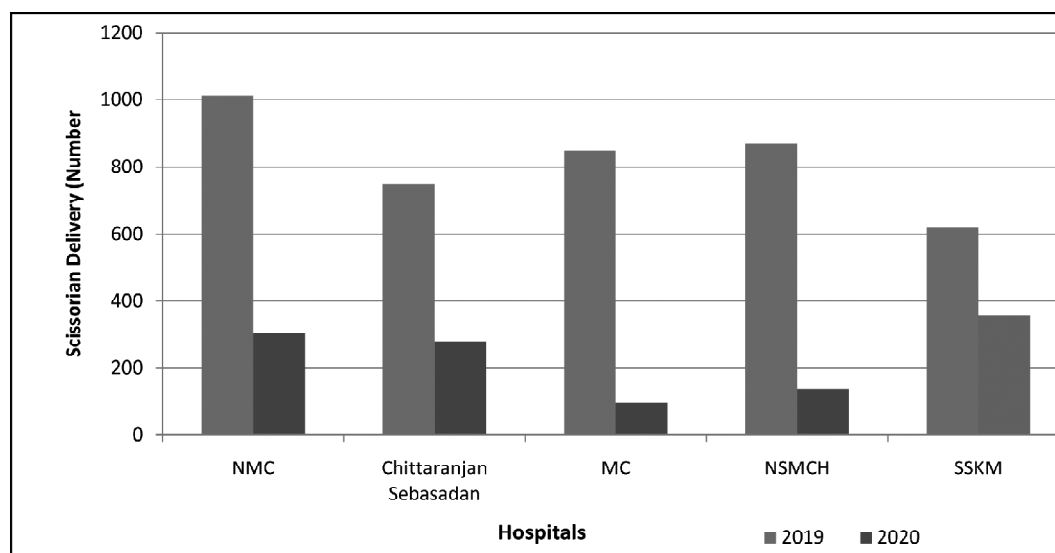


Fig.2: Caesarean delivery in the selected hospitals in 2019 and 2020

Source: Department of Health, Govt. of WB.

toward institutions for caesarean delivery as compared to the districts, in spite of having better infrastructural facilities and service resources in Kolkata. Comparatively more possibility of getting infection in Kolkata due to its cosmopolitan nature, higher population density, more probability of people-people physical nearness, less availability of sky-clearance etc. could be deemed to be the causes of such lesser caesarean cases in Kolkata city.

In general, the average delivery rate in each hospital does not vary too much, which has occurred in Midnapore Hospital. But all the other hospitals are showing exceptional trends which may be accredited to COVID-19 pandemic situation. To combat covid-19 attack lockdown was imposed all over the country and transport system was very poorly organized to carry the pregnant and upcoming mother to hospitals. Not only that, the rate of transport for the purpose was also a determining factor. That may be the reason of such low number delivery in those hospitals. Another reason might be the corona phobia. When anyone goes to the hospital, he may have a chance to be infected with corona virus – this perception may lead to refraining the pregnant women from going to the medical and clinical institutes, and that is why the upcoming mother would have been reluctant to go to hospitals for delivery. Here will be mentioned another two reasons behind such lesser institutional child-birth. One, a significant portion of front-line human and infrastructural resources and facilities had to engage in COVID-related issues, which, in turn, left lesser resource and facility-availability for the pregnant women. Not only that, but such scarcity also made them more priceable and valuable and hence, hardly accessible. And the second one is– a huge hit in Integrated Child Development Services (ICDS), nutrition and immunisation services etc., and the community health-workers had to stop visiting homes to immunise the children to a great extent, because they also had to engage themselves to corona-virus related works. Again, these two may be further aggravated by the reluctance of any service providers, even of the neighbours and relatives (because of fear of being infected due to critical and acute nature of severity of the virus), that were voluntarily and easily available to the pregnant mothers prior to the COVID-19 epoch.

Conclusion

Lesser number of institutional child-births in WB is evidently related to corona virus related problems and complications, though the case of Midnapore Medical College and Hospital is remaining unexplained. Such decrease in institutional births means increase in non-institutional or unauthorized institutional births and decline of total recorded timely birth in the state. The systems and procedures usually adopted in caesarean and normal delivery in our country are not proper and hygienic. Hence, this may also lead to increasing incidence of health hazards of both mother and baby, even upsurge of higher fatality-rates. And all of them may worsen the future of the nation at a massive pace.

References

- Bhattacharyya S., Srivastava A., Roy R., and Avan B. I., (2016). Factors influencing women's preference for health facility deliveries in Jharkhand state, India: a cross sectional analysis. *BMC Pregnancy and Childbirth*, 16(1), 1–9.
- Dixit P., and Dwivedi L. K., (2016). Utilization of institutional delivery services across successive births in India. *International Journal of Population Studies*, 2(2), 123-138.
- Dixit P., Khan J., Dwivedi L. K., and Gupta A. (2017), Dimensions of antenatal care service and the alacrity of mothers towards institutional delivery in South and South East Asia. *PloS one*, 12(7), 1-16.
- Habte F., and Demissie M., (2015), Magnitude and factors associated with institutional delivery service utilization among childbearing mothers in Cheha district, Gurage zone, SNNPR, Ethiopia: A community based cross sectional study. *BMC Pregnancy and Childbirth*, 15(1), 1-12.
- Hollowell J., Oakley L., Kurinczuk J. J., Brocklehurst P., and Gray R., (2011), The effectiveness of antenatal care programmes to reduce infant mortality and preterm birth in socially disadvantaged and vulnerable women in high-income countries: a systematic review. *BMC Pregnancy and Childbirth*, 11(1), 1-20. <https://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-3-good-health-and-well-being/targets.html>, retrieved on 05/08/2020.
- Kesterton A. J., Cleland J., Sloggett A., and Ronsmans C., (2010), Institutional delivery in rural India: the relative importance of accessibility and economic status. *BMC Pregnancy and Childbirth*, 10(1), 1-9.
- Kumar S., Dansereau E. A., and Murray C. J. L., (2014), Does distance matter for institutional delivery in rural India? *Applied Economics*, 46(33), 4091-4103.
- National Sample Health Survey-4 (NSHS-4), [https://National Family Health Survey \(rchiips.org\)](https://National Family Health Survey (rchiips.org)), retrieved on 05/08/2020.
- Sahoo J., Singh S.V., Gupta V. K., Garg S. and Kishore J. (2015), Do socio-demographic factors still predict the choice of place of delivery: A cross-sectional study in rural North India. *Journal of Epidemiology and Global Health*, 5(4), S27–S34.
- Singh A., Pallikadavath S., Ram F., and Alagarajan M. (2014), Do antenatal care interventions improve neonatal survival in India? *Health policy and planning*, 29(7), 842-848.
- Sinha S., Upadhyay R. P., Tripathy J. P., and Patro B. K., (2013), Does utilization of antenatal care result in an institutional delivery? Findings of a record-based study in urban Chandigarh. *Journal of Tropical Paediatrics*, 59(3), 220-222.
- Srivastava J. and Joseph A. (2019), Why institutional deliveries are low in Balrampur District, Uttar Pradesh: a cross-sectional quantitative and qualitative exploration. *The Journal of Obstetrics and Gynaecology of India*, 69(3), 225–231.
- Tadele N., and Lamaro T., (2017). Utilization of institutional delivery service and associated factors in Bench Maji zone, Southwest Ethiopia: Community based, cross sectional study. *BMC Health Services Research*, 17(1), 1-10.

UN High Commissioner for Refugees, (2017), [https:// sustainabledevelopment.un.org/SDG3](https://sustainabledevelopment.un.org/SDG3), retrieved on 05/08/2020.

Vellakkal S., Reddy H., Gupta A., Chandran A., Fledderjohann J., and Stuckler D., (2017), A qualitative study of factors impacting accessing of institutional delivery care in the context of India's cash incentive program. *Social Science & Medicine*, 178, 55–65.