



An observation on teenage maternal mortality in Rural West Bengal with special reference to family planning services during 2020-2022

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Objective- A longitudinal study over a span of 2 years in an initial population of 3426900 in Diamond Harbour health District with teenage EC 58967 among total EC 570898. To see the impact of family planning services on teenage maternal mortality.

I. INTRODUCTION-

Maternal mortality is one of the leading concerns in healthcare delivery system among which teenage maternal mortality is alarming. Several factors like socio-economic, illiteracy, large family etc has a huge impact in the statistics. Among which family planning being the most vital criteria in determining the teenage maternal mortality rate. My study shows how family planning measures play an important role in reducing teenage maternal mortality, which is observed over a period of 2 consecutive years with 99.9% institutional delivery in rural West Bengal, India.

Materials and methods

Study Type-Observational study

Study design-Longitudinal prospective study

Study setting- Diamond Harbour Health District, West Bengal, India

Study duration- 2 years (April2020-March2021 and April2021-March2022)

Study population- 3426900 and 3503900 in consecutive years.

Sample size- 58967 and 52018 teenage EC in consecutive years

Study tool- Statistics from HMIS data collected from all 13 blocks of Diamond Harbour health district and field study by the healthcare delivery personnel in Rural Bengal

Study Technique- Continuous surveillance of records collected from field and hospitals every month and (also) educating all staff and localities#

Data Analysis- Teenage maternal death was considered as a percentage of total population for a year, another important determinant was the eligible couple who were previously targeted for

family planning methods and results were analysed and compared between 2 consecutive years.

Rationale of study-

Teenage maternal mortality is one of the challenges faced in rural healthcare delivery system and an important parameter to assess the quality of the healthcare delivered.

Family planning can be a game changer in case of teenage maternal health and improving the health care delivery system in rural areas. Proper identification of teenage eligible couple and providing cafeteria of choice of family planning methods, can reduce the risk of deaths.





II. RESULTS-

Among a population of 3426900 the teenage EC was 58967 in the year 2020-2021 who were approached for family planning methods among which 9701(16.4%) became pregnant. In the next year the population was 3503900 and total teenage EC was 52018 among whom 7528(14.5%) became pregnant. With 99.9% institutional delivery, teenage maternal death was 19(0.03% of total teenage EC) in 2020-2021 and 7 (0.01% of teenage EC) in 2021-2022 in contrast to 0.10% and 0.07% in total maternal death (in respect to total EC) in respective years.

Table 1.1 Total head count

| Year | Population | Total EC | Teenage EC | Pie chart |
|-----------|------------|--|--|--|
| 2020-2021 | 3426900 | 570898 (16.65% of total population) | 58967 (1.72% of total population and 10.342% of total EC) | <p>2020-2021</p> <ul style="list-style-type: none"> 83% non reproductive population 16% total EC 1% Teenage EC |
| 2021-2022 | 3503900 | 615183 (17.55% of total population) | 52018 (1.48% of total population and 8.4% of total EC) | <p>2021-2022</p> <ul style="list-style-type: none"> 82% non reproductive population 17% total EC 1% teenage EC |



Table 1.2 Teenage pregnancy rate

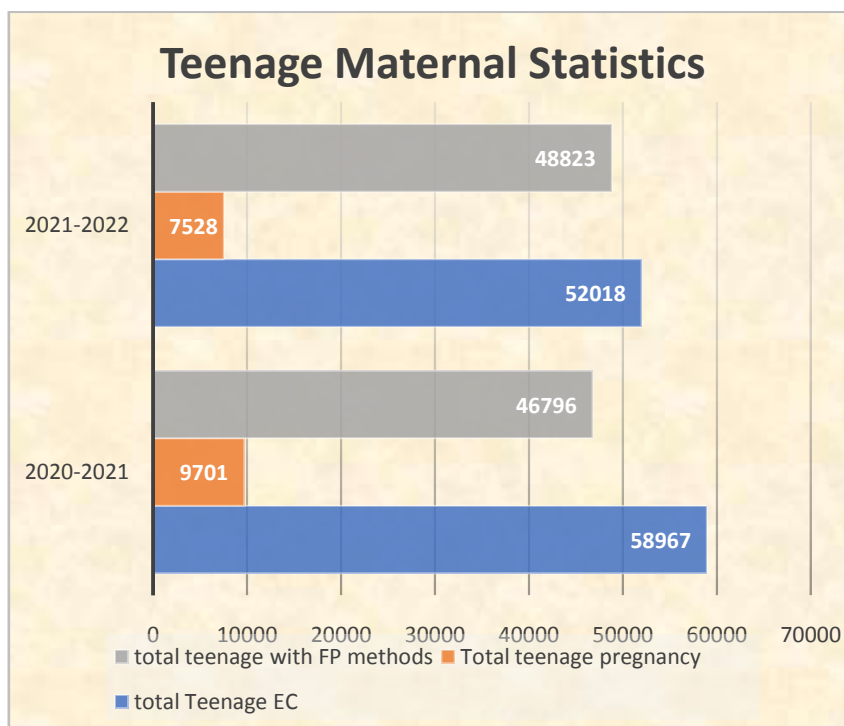
| Year | Teenage EC | Teenage Pregnancy | Percentage of teenage pregnancy |
|-----------|------------|-------------------|---------------------------------|
| 2020-2021 | 58967 | 9701 | 16.4% |
| 2021-2022 | 52018 | 7528 | 14.5% |

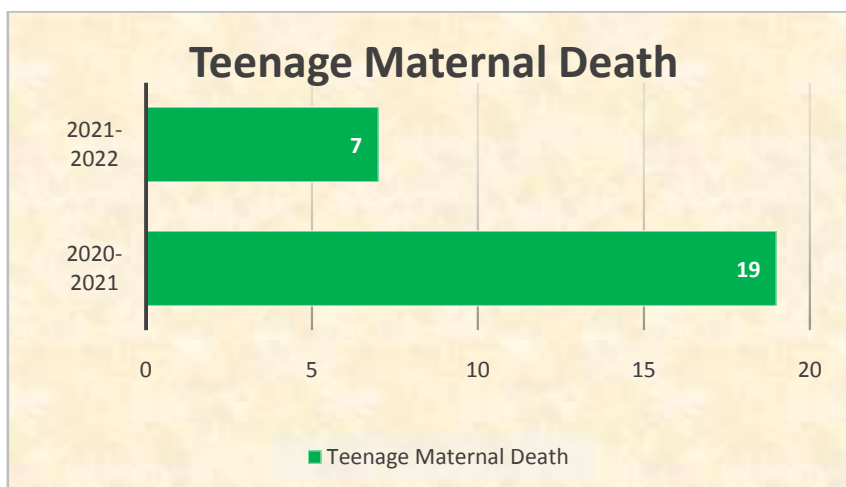
Table 1.3 Teenage EC accepting FP methods

| Year | Teenage EC | Acceptance of Family Planning Methods | Percentage of acceptance of family planning methods |
|-----------|------------|---------------------------------------|---|
| 2020-2021 | 58967 | 46796 | 79.35% |
| 2021-2022 | 52018 | 48823 | 93.85% |

Table 1.4 Teenage Maternal Death statistics

| Year | Teenage EC | Teenage maternal Death | Percentage of Teenage maternal death |
|-----------|------------|------------------------|--------------------------------------|
| 2020-2021 | 58967 | 19 | 0.03% |
| 2021-2022 | 52018 | 7 | 0.01% |





III. DISCUSSION

Teenage pregnancy is always a special concern in respect of social and healthcare system, as it is considered a high-risk pregnancy in comparison to normal one. There is increased risk of maternal or child loss due to physical prematurity, low educational level and less FP knowledge. A combined approach from Health, Administration and Education department can improve the outcome in teenage pregnancy. In our prospective study a thorough approach by the healthcare personnel with a aim of

- Reduction of child marriage
- Providing cafeteria of choice of FP methods
- A comprehensive healthcare service to improve maternal. Health
- A target of 100% institutional delivery Which will result in reduction of teenage pregnancy and teenage maternal mortality. To achieve these aims our activities were
- Delivering education to the society in the form of village camps
- Improving school health services
- Organising teenage health fairs
- Organising cultural programs in school and community
- Appointing peer groups
- Providing safe social and judicial medical termination of pregnancy in selected cases

- Increasing acceptance of family planning methods
- Providing quality health check-ups during pregnancy including immunisation
- Ensuring proper nutritional guidance
- Motivating and ensuring institutional delivery
- Providing quality intranatal and postnatal care also ensuring exclusive breastfeeding

All of the above has small but significant role in the improvement of mortality statistics during the ongoing year and the results are in front of you.

IV. CONCLUSION-

Reduction in Teenage maternal mortality is a priority of the whole world, as Indian figures show high number of teenage pregnancy (especially in West Bengal), proper guidance and supervision can be a game changer. In my study I have successfully shown that our overall effort fruitful and we have successfully reduced teenage maternal mortality in 2021-2022 in comparison to 2020-2021. The teenage EC was also lowered with proper motivation and taking necessary steps against teenage marriage*. Though the pandemic of COVID 19 was active during this period might have interfered in the functioning of healthcare delivery system, still we have succeeded in our goal.



Abbreviations-

FP- Family Planning

EC- eligible couple

*In addition, proper education for parenting and safe delivery is given with proper immunisation and nutritional guidance. Regular supervision and monitoring strictly done.

#collected by field level health staff like

- ASHA (accredited social health activist)
- ANM (auxillary nurse midwifery)
- CHA (community health assistant)
- HS(F) (health supervisor female)
- EA (executive assistant)
- BPHN (block public health nurse)
- BMOH (block medical officer of health)
- GNM (general nurse midwifery)
- GDMO (general duty medical officer) and other health related staff.

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