



## IMPACT OF INCENTIVES ON INCREASING HOSPITAL DELIVERIES IN A BACKWARD DISTRICT OF TELENGANA

### Gynecology

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### ABSTRACT

**BACKGROUND:** There is constant need to improve and strengthen the services needed to decrease maternal mortality<sup>1</sup>. One strategy for reducing maternal mortality and morbidity is ensuring that every baby is delivered in an institution<sup>2</sup>. Institutional deliveries with skilled birth attendants has shown to have better health outcome and survival of mothers and neonates. It also provides easy access to skilled assistance, drugs, equipments and referral transport. In order to encourage institutional deliveries, the Government of Telengana has introduced a cash incentive to the patients who are below the poverty line to deliver in the government hospitals.

**METHODS:** A rural medical college hospital setting was selected in the newly formed state of Telengana. The number of deliveries before and after giving cash incentives to the mother and a kit to the neonate was studied.

**RESULTS:** There was an absolute increase in the number of hospital deliveries, although this was not statistically significant.

**CONCLUSION:** Giving incentives to obstetric patients increases the number of hospital deliveries.

### KEYWORDS

Incentives, Maternal Health, Maternal Mortality.

### INTRODUCTION

The MDGs (Millennium Development Goals) are eight in number to be achieved by 2015. MDG-5 aims to reduce the Maternal Mortality Rate (MMR). In India, a MMR of 108 was to be attained by 2015<sup>1</sup>. The MMR in India decreased from 167 per 100,000 in 2011-13 to 130 per 100,000 in 2014-15.

Countries like Sri Lanka, Thailand, Egypt, Honduras and Bangladesh have demonstrated a perceptible reduction in maternal mortality (by 40-70%) by making appropriate strategic choices and collective action. Even within India, states like Tamil Nadu and Kerala have made impressive efforts to reduce maternal mortality in resource poor settings. These statistics exemplify that it is possible to optimally reduce maternal mortality and reach the fifth MDG in India<sup>1</sup>.

Home deliveries increase maternal mortality due to the non availability of skilled personnel etc.. In 2005, the Indian Government implemented the Janani Suraksha Yojana (JSY) that enables women from lower socio economic strata of society to give birth in a health facility by providing them with a cash transfer upon discharge. JSY helped raise the number of institutional deliveries to 75%.

The Government of India is constantly striving to improve the maternal mortality rate. Institutional deliveries with skilled birth attendants has shown to have better health outcomes and survival of mothers and neonates<sup>2</sup>.

In the southern state of Telengana, two flagship welfare schemes 'Amma Vodi' and 'KCR Kits', both aimed at improving mother and child health, were launched on June 2, 2017 by the government of Telengana. They aim to decrease the infant and maternal mortality rates in the state. Their basic premise was to encourage more mothers to deliver in government hospitals. Under the scheme, a pregnant woman can use free service van to visit the hospital and dropped off at no cost. It can be used any number of times as necessary. After the delivery, the mother along with the new born are dropped at home after discharge from the hospital. The mother will also be provided with financial assistance of 12,000 (13,000 for a girl child) to compensate for the loss of work by the women during the pregnancy and post natal period. This amount will be provided in installments with the last two installments paid after vaccinating the child. The money is sent as direct cash transfer to individual aadhaar-lined accounts of pregnant women in the State. To ensure that the Amma Vodi scheme is effectively implemented and the cash transfer reaches eligible pregnant women, the authorities launched an Aadhar-based Mother and Child Tracking System (MCTS) software, which will enable healthcare workers to track women at every stage of pregnancy.

While the 'Amma Vodi' scheme involves direct transfer of money to individual accounts of pregnant women in the state, the 'KCR kits' provide sixteen vital items necessary to keep neonates warm and hygienic.

Mahabubnagar, a district in Telengana is a backward area surrounded by smaller districts. Patients who come to the medical college hospital are economically and socially backward. Obstetric cases that cannot be managed in the periphery are referred to this tertiary hospital.

There has been a definite increase in the number of hospital deliveries in Telengana state after the introduction of these two schemes i.e. the Amma Vodi and KCR kits. This study was undertaken to quantify this increase.

### AIMS AND OBJECTIVES

To objectively demonstrate the increase in institutional deliveries after the two schemes were launched.

### METHODOLOGY/MATERIALS AND METHODS

A cross sectional study was undertaken in the Government Medical College hospital, Mahabubnagar in the Telengana state. This hospital is in a backward area serving mainly rural folk below the poverty line. All deliveries that were conducted in the medical college hospital were included in the study and analysed during the study period from June 2016 to May 2018. The Amma Vodi scheme and the KCR kits schemes were introduced in June 2017. So the period of study included the year preceeding the schemes and the year immediately following their introduction. The data was analysed using unpaired t test.

### RESULTS

TABLE 1

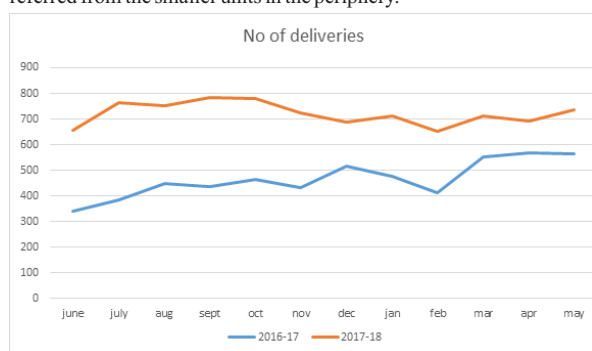
| Sl no | Month     | Normal | LSCS | Total | % LSCS |
|-------|-----------|--------|------|-------|--------|
| 1     | Jun-2016  | 206    | 133  | 339   | 39     |
| 2     | Jul-2016  | 230    | 154  | 384   | 40     |
| 3     | Aug-2016  | 292    | 157  | 449   | 35     |
| 4     | Sept-2016 | 265    | 173  | 438   | 40     |
| 5     | Oct-2016  | 303    | 163  | 466   | 35     |
| 6     | Nov-2016  | 258    | 174  | 432   | 40     |
| 7     | Dec-2016  | 303    | 214  | 517   | 41     |
| 8     | Jan-2017  | 289    | 187  | 476   | 39     |
| 9     | Feb-2017  | 266    | 147  | 413   | 35     |
| 10    | Mar-2017  | 341    | 210  | 551   | 38     |
| 11    | Apr-2017  | 357    | 210  | 567   | 37     |
| 12    | May-2017  | 354    | 209  | 563   | 37     |
|       |           | 3464   | 2131 | 5595  | 38     |

TABLE 2

| Sl no | Month     | Normal | LSCS | Total | % LSCS |
|-------|-----------|--------|------|-------|--------|
| 1     | June - 17 | 383    | 272  | 655   | 42     |
| 2     | July- 17  | 437    | 326  | 763   | 43     |
| 3     | Aug - 17  | 454    | 298  | 752   | 40     |
| 4     | Sept-17   | 448    | 334  | 782   | 43     |
| 5     | Oct - 17  | 468    | 310  | 778   | 40     |
| 6     | Nov - 17  | 423    | 299  | 722   | 41     |
| 7     | Dec - 17  | 429    | 260  | 689   | 38     |
| 8     | Jan- 18   | 455    | 257  | 712   | 36     |
| 9     | Feb - 18  | 380    | 272  | 652   | 42     |
| 10    | Mar - 18  | 365    | 348  | 713   | 49     |
| 11    | Apr-18    | 373    | 320  | 693   | 46     |
| 12    | May-18    | 420    | 314  | 734   | 43     |
|       |           | 5035   | 3610 | 8645  | 42     |

It is quite clear that there has been a definite increase in the number of deliveries after the introduction of the scheme from 5595 to 8645 after the schemes were launched.( 55%).

Ideal Cesarean section rates according to the WHO, for any centre should be between 10-15%<sup>6</sup>. The Cesarean rate is high at this centre (around 40%) as it is a referral centre, where complicated cases are referred from the smaller units in the periphery.



As seen above, there is an absolute increase in the number of deliveries after the schemes were introduced. This was not found to be statistically significant (p value State the exact p value)

### LIMITATIONS

The study was done in a referral centre and may not reflect the actual figures in the more rural areas in the state.

### DISCUSSION

In a study conducted in Punjab by Monica Munjal et al<sup>5</sup>, the higher income group always went to hospitals or health facilities for delivery, but the lower income group preferred non institutional deliveries based on their convenience or cultural factors.

Not only are obstetric facilities to be maintained, they are to be constantly monitored and assessed<sup>7</sup>. If a case develops complications, referral to a higher centre is aided by a good support system in Telengana with the GVK EMRI (Emergency Management and Research Institute). Today, the 108 Ambulance services is synonymous with the best-in-class emergency service and has been acknowledged as the most efficient, speedy, reliable, and caring service provider in its category.

In our study, there was an increase in the number of hospital deliveries after the incentives were given. Drivers of this shift include social pressure from the Accredited Social Health Activist (ASHA) to deliver in a health facility, and a growing individual perception of the importance for 'safe' and 'easy' delivery<sup>4</sup>. The incentives exerted an important influence on the women's choice to deliver in an institution. These monetary benefits are directly paid into the beneficiary's bank account, and there are no middle men who can profit by these transactions.

We have still have a long way to go in order to achieve the universalization of institutional deliveries to ensure that the best obstetric care is accessible to both the mother and the child. The quality of care must not be compromised<sup>7</sup>. This study was in a tertiary care level hospital giving excellent care to its patients. This only reinforces the public trust in it, hence the large increase in institutional deliveries.

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