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Injectable Services Rollout in Public Health Facilities of MPV District in Rajasthan

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Abstract:

Evidence of contraceptive method mix clearly indicates that with the addition of a single method there is a linear increase in mCPR by 3-4%¹. The introduction of new contraceptives substantially contributes to increasing coverage of the program and most importantly addresses the unmet need for family planning. With commitment to reduce unmet need for spacing and increase modern contraceptive usage, govt of India included injectable in National family planning program in November 2016.

Rajasthan state with unmet need for family planning (12.3%) and spacing method (5.7 %) has been identified as one of the high focus state under Mission Parivar Vikas (MPV), a central family planning initiative govt of India²MPV initiative focuses on improving access to contraceptives and accelerating access to high quality family planning services in identified high focus districts having highest TFR in the country.

Rajasthan state government initiated the injectable program as part of its commitment to improve access to quality family planning services and expand contraceptive choices available in the state. This paper details in 14 MPV districts Roll out Antra injection at Public health facility in Rajasthan.

Introduction:-

India was the first country in the world to launch a family planning program, as early as 1952, with the main aim of controlling its population. India's population has already reached 1.26 billion and considering the high decadal growth rate of 17.64, the country population is slated to surpass that of China by 2028 (UNDP). The challenge now has extended beyond population stabilization to addressing sustainable development goals for maternal and child death. Post the

international conference on population and development (1994) Cairo, Family planning emerged as a vital component in reducing maternal morbidity and mortality. The London summit on family planning (2012) buttressed this further and has succeeded rightfully in bringing back the focus on family planning. Hence over the years India national family planning program too has evolved with a shift in focus from merely population control to more critical issues of saving the lives and improving the health of mothers and children through use of reversible spacing methods leading to reduction in unwanted, closely spaced and mistimed pregnancies and thus avoiding pregnancies with higher risks and chances of unsafe abortion.

Introduction and widespread provision of new contraceptive can substantially contribute to achieving this goal. Considerable scientific evidence is now available to address key concerns and accommodate injectable contraceptive DMPA in the national family planning program. The growing availability and use of DMPA in the NGO/private sectors, combined with the strengthening of the health system under the National Health mission (NHM) has resulted in the overall improvement of infrastructure including manpower in the public sector. The decision to add DMPA in the national family planning program thus has opened the way for clients to avail of safe, effective and hassle free method with full confidentiality.

Inclusion of injectable contraceptive in the basket of FP choices would not only be consistent with the GOI commitment to reduce unmet need for spacing but will also provide impetus to efforts for increasing modern contraceptive usage in addition to addressing the new sustainable development goals.

Mission Parivar Vikas (MPV):

Mission Parivar vikas is a new initiative conceived by the Ministry of Health and family welfare department with a strategic focus on improving access through provision of services promotional schemes, commodity security, capacity building ,enabling environment and intensive monitoring .Mission parivar vikas will focus on 146 high fertility districts in 7 states with high TFR . Rajasthan state 14 districts under in the MPV. Family planning is one of the most crucial interventions to address maternal and infant morbidities and mortalities. Currently there are 145 high fertility districts spanning over seven high focus states (Uttar Pradesh , Bihar , Rajasthan , Madhya Pradesh ,Chhattisgarh, Jharkhand and Assam) with TFR (Total fertility Rate) of 3 and



above . These districts further constitute approximately 28 % of India population, and contribute to around 30 % of maternal deaths and almost 50 % infant deaths. Considering this , the government has conceived “ Mission Parivar Vikas “ with a stratified approach for substantially increasing the access to contraceptives and family planning services in these districts , which will also have a positive impact on the overall development parameters of these districts and consequently the states .

A five pronged strategy has been developed, which comprises.

1. Delivering assured services
2. Building additional capacity / HRD for enhanced service delivery
3. Ensuring commodity security
4. Implementing new promotional Schemes
5. Creating Enabling Environment

District Covered : in Rajasthan 14 Districts under Mission Parivar vikas : Badmer , Baran , Pali , Sirohi , Swai madhopur , Rajsamand , Udaipur , Karoli , Dholpur , Bhratpur, Banswara, Jalore, Jaislmer , Dungerpur

State wise number of districts segregated based on TFR

| | UP | Bihar | MP | Rajasthan | Jharkhand | Chhattisgarh | Assam | Total |
|------------------|----|-------|----|-----------|-----------|--------------|-------|-------|
| TFR>4.0 | 11 | 8 | 2 | 2 | 0 | 0 | 0 | 23 |
| TFR: 3.5-3.9 | 19 | 9 | 6 | 6 | 3 | 1 | 1 | 46 |
| TFR : 3.0-3.5 | 27 | 19 | 17 | 6 | 6 | 1 | 1 | 76 |
| Total | 57 | 36 | 25 | 14 | 9 | 2 | 2 | 145 |

Under mission Parivar vikas strategic action: - Roll out of injectable contraceptive MPA (Antra program) at one go till sub center level.

Injectable Contraceptives: -

The injectable contraceptives contain synthetic hormones resembling the natural female hormones. When administered (IM/SC) there is a slow release of hormone into the blood stream and it provides protection from pregnancy for a long duration of the client.

- Historical Background – development of a long acting reversible contraceptive was a goal of family planning researchers for many years. Long acting progestins were recognized as the steroids suitable to fulfil this criterion because they are effective, safe and their side effects are few. DMPA (depot medroxy progesterone acetate) is one such synthetic progesterone, developed in 1954 by the Upjohn Company for treatment of endometriosis and habitual or threatened abortions. In early 1960 it was noted that woman receiving DMPA for premature labour subsequently had a marked delay in return of fertility. , Upjohn got a contraceptive product licenses for marketing DMPA as a contraceptive in many countries.
- Global Experiences – DMPA is the fourth most prevalent contraceptive and is widely used as an effective, safe and acceptable method of contraception across the world. DMPA use is 31.9 % in Indonesia , 28.9% in Bhutan , 14.8% in sri lanka , 14 % in Thailand , 11.2% in Bangladesh and 9.2% Nepal (population reference Bureau 2013)
- National Experiences – DMPA was approved by the Drug controller General of India (DCGI) in June 1993 for marketing and use as an injectable contraceptive method. A post – marketing surveillance of DMPA use on 1079 Indian woman, to validate the efficacy , safety and acceptability of the drug as contraceptive was carried out by Upjohn company from 1994 to 1997 , in 10 independent , well reputed private NGO health centers across the country ,Co-ordinated by FOGSI. From 1994 onwards several operational research by population council , UNFPA, Engender Health and DKT India were carried out and DMPA service delivery in clinical setting started by some of NGOs such as Parivar sewa sanstha and FPAI. In 1999 the social marketing approach for DMPA began by social marketing organizations like DKT-India, Janani, PHSI and PSI to improve access and availability of DMPA. However the long efforts of the private sector to offer DMPA to woman has not been able to cause any significant changes in the overall contraceptive use as number of DMPA users still remain small. NFHS-3 (2005-06) showed acceptance is



only 0.1%, which has increased from 0.004% as was in 2003 (PRB survey). One of the reasons for this slow increase has been the high cost of the commodity and services which can be redressed by offering it free in the public health system.

- WHO recommends DMPA for –
 1. Woman aged 18 to 45 years of age ,there should be no restrictions on the use of DMPA, including no restrictions on the duration of its use (Medical Eligibility Criterial)
 2. Among adolescents (menarche< 18 years) and woman over 45 years , the advantages of using DMPA generally
 3. There are no restrictions on the use of DMPA for woman at high risk of HIV woman and couples at the high risk of HIV acquisition should also be informed about and have access to HIV preventive measures, including male and female condoms irrespective of the family planning method they choose.
- Types of Injectable-

| Types of Injectable | | Schedule |
|---|--|----------|
| Progestogen-only injectable (POI) | Depot Medroxy Progesterone Acetate | 3 month |
| | Norethisterone Enanthate (NET-EN) | 2 month |
| Combined Injectable Contraceptive (CIC) | Estrogen (usually Ethinylestradiol) and Progesterone | 1 month |

- Types of MPA Injections
 1. Intramuscular MPA
 2. Subcutaneous MPA
- Composition MPA
 1. MPA is Progestogen-Only Injectable (POI)
 2. Intramuscular : MPA-IM
 3. One dose = one vial of 150 mg/1 ml
 4. Subcutaneous : MPA-SC

5. One dose =104 mg/0.65 ml

- MPA and its effect on bones- Bone Mineral Density (BMD) refers to the amount of mineral matter per volume of bones and directly correlates with the bone strength.

Factors influencing BMD loss

1. Gender , Age and Race
2. Hereditary factors
3. Body mass index
4. Physical stress on bones related to physical, nutritional factors such as dietary calcium and vitamin D, alcohol consumption
5. Smoking
6. Corticosteroid exposure
7. Sex hormones
8. Physiological conditions such as pregnancy, breastfeeding and menopause.

Facts-

- Decrease in BMD: 2-8 % during pregnancy and 3-5 % during breastfeeding
- Use of MPA reduces BMD by 5 - 6% in five years, with most loss happening in the first two years
- After stopping MPA, BMD recovers to the base line level in 30 months.

WHO recommendations

- No restriction on the use of MPA, including no restriction on duration of use, among women aged 18-45 , who are otherwise eligible to use the method
- Among adolescents (menarche to < 18 years) and women over 45 years, the advantages of using MPA generally outweigh the theoretical safety concerns regarding fracture risk

MPA for Adolescents - Adolescence (12-18) is a crucial period of skeletal development and sex hormones play a key role in bone mass accrual. There is up to 50% increase in total body bone mass between the ages of 12 and 18 years.

- Sexually active adolescents have potentially high fertility rates and unwanted pregnancy/abortion which has substantial medical, social and psychological impact



- Adolescent MPA users show a slower increase in Bone Mineral Density (BMD) values when used over 2 years period compared to non-hormonal users
- Complete recovery of BMD observed with follow up within 3-5 years and there is no effect on subsequent fertility

WHO recommendations-

- MPA can be used safely in adolescence
- Among adolescents (menarche <18 years), the advantages of using MPA generally outweigh the theoretical safety concerns regarding fracture risk (MEC Category 2)

MPA and Metabolic Effect (weight changes) –

- Weight gain of 1-2 kg after 1 year of MPA use - Other reasons could be food intake and sedentary lifestyle.
- Minor alterations of lipid metabolism, fluid/nitrogen balance, glucose tolerance, steroid metabolism and immune function have been recorded but are of no clinical significance

MPA and Cancer –

Facts:

- MPA protects against endometrial cancer and ovarian cancer
- No association between MPA use and the risk of breast or cervical cancer

MPA & Cardio Vascular Diseases –

- As MPA is a progestin only method, it does not produce the type of changes in blood clotting factors as observed with combined hormonal methods
- No significant change in systolic or diastolic blood pressure in women using MPA.

MPA for HIV Positive women- WHO recommendations

- No contraindication to the use of MPA amongst women who may have sexually transmitted infections
- Is a safe, Category 1 option for HIV infected women
- Preferable contraceptive choice for women taking any antiretroviral treatment as there is no definitive evidence on the possible interaction between MPA and anti-retroviral drugs
- *Condom use is strongly encouraged along with MPA*

Menstrual changes with MPA –

- In first 3 months, common menstrual changes are irregular bleeding / prolonged bleeding
- Then amenorrhea sets in and by one year, most women become amenorrhea

Effectiveness of MPA -

- Highly effective
- With perfect use is when the method is used correctly, first year effectiveness is 99.7%
- With typical use** effectiveness decreases to 97%
- Perfect use failure - Injectable: 0.3% , Female Sterilization: 0.5%, IUCD: 0.8% , COC: 0.3%

Contraceptive Benefits of MPA-

- Long term contraceptive benefit : acts for 3 months (with grace period of 4 weeks)
- Easy and convenient to use, does not interfere with sexual intercourse/pleasure
- Private and confidential method
- Can be used by women of any age or parity who at risk of pregnancy
- Does not affect quantity and quality of milk therefore suitable for breast feeding women (after 6 weeks postpartum)
- Can be used as immediate postpartum (non breast feeding) and post abortion contraception



- Very effective and reversible method : fertility returns 7-10 months after last injection

Non Contraceptive Benefits of MPA-

- May decrease menstrual cramps; reduce pre-menstrual syndrome/tension and menorrhagia
- Prevents/improves anemia
- Protects against endometrial & ovarian cancer
- Helps prevent uterine tumors (fibroids)
- Reduces the incidence of symptomatic pelvic inflammatory disease (PID)
- Decreases benign breast disease and ovarian cyst
- Reduces the symptoms of endometriosis
- Reduces sickle-cell crises
- Protects against ectopic pregnancy

MPA: Return to Fertility-

- One injection is effective for 3-4 months
- Return of fertility takes 7-10 months from date of last injection (average 4-6 months after 3 months effectivity of last injection is over)
- Studies have also shown that ovulation/fertility return is not affected by duration of DMPA use or woman's age.

Methodology:

Prior to state level consultation, exposure visit of a team from the Government of Rajasthan was facilitated to Haryana in November 2016 to learn and observe state's experience in rolling out injectable. Based on the recommendations of the team, state government decided to introduce intramuscular Injectable contraceptive.

- State level ToT organize at Jaipur in this ToT participate one member every district. After ToT Master Trainers insure to provide service provider Training in the district.

Injectable Services Rollout in Public Health Facilities of MPV District in Rajasthan

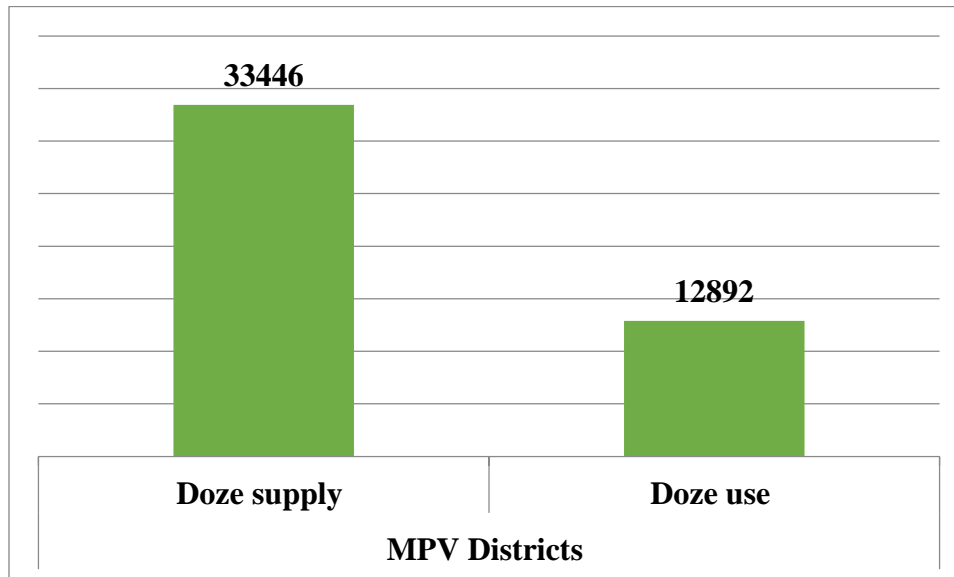
- The Government of India provides to Antra injection 43008 Dozes in the Rajasthan state. Before Lanching Rajasthan government insure to all MPV district the procurement of commodities and Training of service providers.
- Mission Director, NHM and state FP core group 11 July 2017 Launching to Antra Injection Rajasthan Became the second state in India to provide injectable contraceptives free of cost in Public health Facilities.
- Starting in Rajasthan Two Phase – one phase start in 11 July 2017 in this phase start to 115 facilities in 14 MPV districts, facility chosen criteria – high delivery load in this facility & high OPD load.
- Second phase start on 2nd October 2017 in this phase add on 43 new facility FY year 2017-18 new contraceptive “ Antra “ starting in total 158 public Health facility .

| S.No. | Name of District | Total Facilities to be operationalized | MCH | DH | SDH | CHC | PHC | Total Number of Clients |
|-------|--------------------|--|-----|----|-----|-----|-----|-------------------------|
| 1 | Bharatpur | 10 | 0 | 1 | 0 | 9 | 0 | 1000 |
| 2 | Dholpur | 8 | 0 | 1 | 1 | 6 | 0 | 740 |
| 3 | Karauli | 5 | 0 | 1 | 1 | 3 | 0 | 530 |
| 4 | Sawai madhopur | 9 | 0 | 1 | 1 | 7 | 0 | 780 |
| 5 | Jaisalmer | 5 | 0 | 1 | 0 | 4 | 0 | 410 |
| 6 | Jalore | 8 | 0 | 1 | 0 | 7 | 0 | 650 |
| 7 | Barmer | 30 | 0 | 1 | 1 | 20 | 8 | 2295 |
| 8 | Pali | 10 | 0 | 1 | 1 | 8 | 0 | 910 |
| 9 | Sirohi | 14 | 0 | 1 | 0 | 8 | 5 | 1090 |
| 10 | Banswara | 8 | 0 | 1 | 0 | 7 | 0 | 550 |
| 11 | Dungarpur | 6 | 0 | 1 | 1 | 4 | 0 | 445 |
| 12 | Rajsamand | 10 | 0 | 1 | 1 | 8 | 0 | 860 |
| 13 | Udaipur | 21 | 1 | 1 | 2 | 17 | 0 | 1730 |
| 14 | Baran | 14 | 0 | 1 | 0 | 12 | 1 | 1180 |
| | Total to Districts | 158 | 1 | 14 | 9 | 120 | 14 | 13170 |



Results/key findings:

After Launching Injectable contraceptives surprise became the resulted in Rajasthan state till March 2018 have been roll out Injectable contraceptives all MPV district with around 8448 Injectable new users.



Against 43008 doses, MPV district utilization of Antara doses is 38.52%

- In The Rajasthan state total Antra doze supply in MPV district (14 districts) 33446 Injectable contraceptives. Ending FY years 2017-18 total doze use against to supply in MPV districts 12892 (38.52 %)
- Become to new users in MPV districts new users 8448.
- Rajasthan state became Frist position in India of The Injectable contraceptives Dozes utilization.
- Successfully Launching web based client follow up software (Antra Raj) for tracking injectable Users.
- Rajasthan Became the Frist state in India to prepare web based client follow up software.

Injectable Services Rollout in Public Health Facilities of MPV District in Rajasthan

| S.No | Name of District | Total Supply | Total Doze given to up to march 18 | | | | Total Doze utilize | Utilization % |
|------|------------------|--------------|------------------------------------|----------------------|----------------------|----------------------|--------------------|---------------|
| | | | 1 st Doze | 2 nd Doze | 3 rd Doze | 4 th Doze | | |
| 1 | BARMER | 4590 | 481 | 158 | 54 | 9 | 702 | 15.29 |
| 2 | JALORE | 1400 | 291 | 98 | 20 | 38 | 447 | 31.93 |
| 3 | PALI | 3700 | 828 | 365 | 57 | 7 | 1257 | 33.97 |
| 4 | SIROHI | 2760 | 793 | 264 | 74 | 302 | 1433 | 51.92 |
| 5 | BHARTPUR | 2336 | 481 | 188 | 63 | 2 | 734 | 31.42 |
| 6 | RAJSAMAND | 1920 | 264 | 168 | 80 | 55 | 567 | 29.53 |
| 7 | UDAIPUR | 3800 | 1108 | 373 | 98 | 30 | 1609 | 42.34 |
| 8 | DHOLPUR | 2536 | 1009 | 288 | 41 | 0 | 1338 | 52.76 |
| 9 | KARALI | 1400 | 407 | 161 | 18 | 147 | 733 | 52.36 |
| 10 | BANSWARA | 1200 | 280 | 63 | 12 | 2 | 357 | 29.75 |
| 11 | SAWAI MADHOPUR | 1660 | 658 | 161 | 49 | 9 | 877 | 52.83 |
| 12 | DUNGARPUR | 1936 | 510 | 140 | 33 | 0 | 683 | 35.28 |
| 13 | JAISALMER | 1728 | 513 | 189 | 74 | 6 | 782 | 45.25 |
| 14 | BARAN | 2500 | 825 | 379 | 145 | 24 | 1373 | 54.92 |
| | Total | 33466 | 8448 | 2995 | 818 | 631 | 12892 | 38.52 |

Policy or program implications:

Moving forward, there is a need to advocate for roll out of injectable services till peripheral health units (Sub Centers) for improving access of injectable services. Evidence based advocacy efforts through cross learnings from Haryana state resulted in better advocacy and roll out of injectable services in the state of Rajasthan.



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