NARCHI BULLETIN

LHMC, Issue 1, August 2022

Quality RCH care:
Strengthening linkages, bridging gaps".

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Contents

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From The President's Pen

Dear NARCHI Members

Greetings

We at LHMC are honoured to be entrusted with holding the NARCHI office for the next two years (22-24). Despite the COVID pandemic,Team NARCHI MAMC did commendable work. We promise to take forward the objectives of NARCHI in our term.

Reproductive and child health are the core areas of NARCHI's work.Multiple stakeholders are involved in providing healthcare to adolescent girls, mothers, and their young ones. These include ASHAs, ANMs, nursing officers, doctors, and the community.Two important aspects that need attention regarding reproductive and child healthcare are quality of care and teamwork.Therefore, it is essential to strengthen linkages among various stakeholders, work as teams, identify gaps and bridge them to maximize our output and achieve our goals. These actions will align and converge the efforts of all concerned for providing quality care to our mothers and their young ones.

Our theme for years 22-24 will be Quality MCH care: Strengthening linkages bridging gaps. We plan to reach out to the frontline healthcare providers and empower them to identify the barriers in healthcare provision and effectively overcome them. We also need to reach the community and connect with them through public forums and Nukkad Nataks to make them aware of the importance of good health and nutrition.

Our focus areas will be anaemia prevention, quality antenatal and postnatal care, maternal and child nutrition, screening and early detection of breast and cervical cancers and adolescent health. I request all NARCHI members to come forward and join hands to connect with the community, frontline health care providers and other stakeholders and empower them with knowledge and skills. We look forward to increasing our member base by encouraging nursing officers, Interns and MBBS students to become members and actively participate in NARCHI outreach activities.

Best wishes

Dr Manju Puri
President NARCHI Delhi

From The Secretary's Desk

"Although no one can go back and make a brand new start, anyone can start from now and make a brand new ending."

-Carl Bard

Greetings from the secretariat of NARCHI- DELHI branch which will find its abode at LHMC for the next 2 years. Our theme is "Quality RCH care: strengthening linkages, bridging gaps". We at LHMC, believe that quality in healthcare is the most essential component to ensure optimal delivery of healthcare services to women and children. We are committed to try and improve the quality of RCH care by active participation of grassroot workers like ASHAs with the active help and guidance of enthusiastic NARCHI mambers. We also aim to organize training programmes to empower the NARCHI members to hone their skills. We look forward to active participation from all of you to make NARCHI- Delhi a vibrant and impactful society.

NARCHI bulletin is our mouthpiece which will update you all about all our forthcoming events as well as strive to enrich you with latest evidence in the field of Obstetrics and Gynaecology. The current issue is dedicated on "Novel government initiatives for promoting women and child health." Our editorial team has worked hard to bring you crisp and comprehensive coverage on the topic. We look forward to your feedback and suggestions for future issues.

Happy reading!!

From The Editorial Board

Editorial Team

Dear friends

Greeting from the editorial team!

As the editorial team for NARCHI, its our proud privilege to bring across the first bulletin of our tenure. As we all know, prevention is better than cure; with this approach, many novel initiatives have been launched by the Government of India and other stakeholders for advancement of maternal and child health. Our present issue of the Bulletin is dedicated to National programmes for promoting Women and Child heath. Recent new programmes launched and updates on already existing key programmes have been dealt in details by experts in the field.

As anaemia continues to affect more than half of women of reproductive age, the evolution of Government's initiatives spanning five decades to "Anaemia Mukt Bharat" Programme has been discussed in detail by Dr Manju Puri. Our country has third highest burden of HIV in the world, and MTCT being the most important route of transmission in paediatric population; elimination of MTCT under NACP 2021 has been updated as per latest guidelines by Dr. Rekha Bharti.. Government's commitment to quality MCH services through "LaQshya"by Dr Anshuja Singla, "MusQan" initiative by Dr. Archana Kumari and 'SUMAN" initiative by Dr. Renuka Malik have also been comprehensively reviewed. This issue is a compilation of the latest additions to the reproductive and child health program by the Ministry of Health and family Welfare, Government of India which will help in keeping all of us abreast with the available opportunities.

In addition, to make the reading interesting, we have included some regular features and activities in the bulletin. There is an article on Quality Improvement on surgical checklist; Point of Care testing in Preeclampsia. To make the journal interactive, an interesting quiz has also been included.

We hope you will find these articles interesting and valuable for your clinical practice

Happy reading!

“The greater our knowledge increases, the more our ignorance unfolds.“ John F Kennedy

Anaemia Mukt Bharat

Manju Puri
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Introduction

Anaemia continues to be a major concern globally. Anaemia has significant adverse impact on the health of people and productivity of nation. It is associated with increased maternal and child mortality and morbidity. As per global nutrition survey in 2016 India ranked 170 out of 180 countries with respect to prevalence of anaemia in women.[1] As per National Family Health Survey (NFHS 5) prevalence of anaemia in women of reproductive age group in India is 57%; 57.2% in nonpregnant and 52.2% in pregnant women.[2] Despite various initiatives by Government of India the prevalence has been static since last 2 decades.

Anaemia control programme started in India in 1970 as National Nutritional Anaemia Prophylaxis Program (NNAPP). In 2013 to combat anaemia by following a lifecycle approach in India, National Iron Plus Initiative (NIPI) was launched. [3]This further evolved into Anaemia Mukt Bharat programme in 2018 as an intensified iron plus initiative (I-NIPI).[4] Anaemia Mukt Bharat is a 6x6x6 strategy that includes six interventions targeting six groups of beneficiaries through six institutional mechanisms.

Aim of this program was to reduce the prevalence of anaemia by 3 percentage points every year among children 6-59 months of age, adolescents, and pregnant women.

Beneficiaries

The six groups of beneficiaries under this programme include

1. Children 6-59 months of age
2. Children 5-9 years of age
3. Adolescent girls and boys (10-19 years)
4. Non pregnant nonlactating women of reproductive age (15-49 years)
5. Pregnant women
6. Lactating mothers

Interventions

The six interventions under Anaemia Mukt Bharat include

1. Prophylactic Iron Folic Acid Supplementation
2. Deworming
3. Intensified year-round Behaviour Change Communication Campaign including compliance to IFA and deworming and assured delayed cord clamping
4. Testing of anaemia using digital methods and point of care treatment
5. Mandatory provision of iron folic acid fortified food in public health programmes
6. Addressing non-nutritional causes of anaemia in endemic pockets, with special focus on malaria, hemoglobinopathies and fluorosis

Institutional Mechanisms

The six institutional mechanisms under this programme include

1. Intra-ministerial coordination
2. National Centre of Excellence and Advanced Research on Anaemia Control
3. Strengthening supply chain and logistics
4. National Anaemia Mukt Bharat Unit
5. Convergence with other Ministries
6. Anaemia Mukt Bharat Dashboard and digital portal—one-stop shop for anaemia

Interventions:

Prophylactic Iron Folic Acid (IFA) Supplementation:

The dose of prophylactic IFA is age dependent. Tablets of different colours are available for different age groups. Pink tablets (45 mg elemental iron + 400 µg folic acid) once a week for children aged 5-9 yrs, blue tablets (60 mg elemental iron + 500 µg folic acid) once a week for adolescents 10-19 yrs and red tablets (60 mg elemental iron + 500 µg folic acid) once week for nonpregnant nonlactating women in the reproductive age group and for a minimum of 180 days in pregnancy starting in 4th month of pregnancy and continued for 180 days postpartum. In infants aged 6-59 months 1 ml syrup containing 20 mg elemental iron + 100 µg

folic acid is indicated biweekly.
Under this programme the prophylactic dose of elemental iron has been reduced from 100 mg per day to 60 mg per day for adolescents and pregnant women to improve compliance by reducing side effects.

Deworming:

Biannual deworming is recommended in children and adolescents aged 1 to 19 yrs. with tablet albendazole (400 mg). Half tablet is recommended for children between 1-2 years of age and 1 tablet in children > 2 years of age and adolescents on fixed days national deworming days (NDD) 10th February and 10th August every year. Same dose and schedule are recommended for nonpregnant women. In pregnant women a single dose after first trimester preferably in second trimester is recommended.

Intensified year-round behaviour change communication campaign:

This behaviour change must be focussed on four key areas including compliance to IFA tablets and deworming, delayed cord clamping (after 3 min of birth or till cord pulsations cease), increased intake of iron, protein and vitamin C rich food, food fortification and observation of hygienic practices and early initiation of breastfeeding within 1 hour of birth and age-appropriate initiation of complimentary feeding. It also includes impressing upon the fact that those with normal haemoglobin level have a smart body and sharp mind.

Repeated engagement with all concerned including beneficiaries, frontline heath care providers, health care workers, key opinion leaders through physical meetings and discussions, online platforms and media is desirable for behaviour change.

Point of care testing and treatment of anaemia focussing on adolescents and pregnant women:

This initiative emphasizes on intensive screening and treatment. It recommends replacement of the conventional SAHLI's method by newer advanced methods like digital haemoglobinometer. These newer methods are convenient, time efficient, use lesser blood and more accurate.

The treatment of anaemia is clearly defined in these guidelines as regards the dose of IFA, place of treatment, level of care provider, frequency of haemoglobin estimation and follow up after initiation of treatment, and referral for escalation of treatment depending upon the severity of anaemia and response to treatment. All these points have been defined for various groups of beneficiaries.

Adolescents

Annual assessment of haemoglobin is recommended at schools under RSBK programme and those detected as anaemics are provided treatment according to the severity of anaemia.

Mild to moderate anaemia (Hb 8-11.9g%)

- Can be treated at any level of care
- Oral IFA tablets (60 mg elemental iron + 500 µg folic acid) 2 tablets a day after meals for 3 months.
- Follow up with repeat haemoglobin after 3 months.
  If Hb> 12gm% discontinue treatment and continue with prophylactic dose.
  If no improvement, refer to higher facility (FRU/DH) *
  * FRU First referral unit, DH District hospital

Severe anaemia (Hb < 8 g%)

- Refer to appropriate facility for investigations and treatment

Pregnant women

Assessment recommended at any Antenatal contact point including Pradhan Mantri Surakshit Matritva Abhiyan. Treatment provided according to the severity of anaemia and duration of pregnancy. Mild and moderate anaemia can be treated at any level of care but moderate anaemia in late pregnancy and severe anaemia in any trimester of pregnancy needs to be treated at a higher centre (secondary level).

Mild Anaemia (Hb 10-10.9 g%)

- Oral IFA tablets (60 mg elemental iron + 500 µg folic acid) twice every day
- Injectable iron (iron sucrose or ferric carboxymaltose) may be considered in those near term or likely to be noncompliant
- Follow up every 2 months.

If Hb > 11 g% continue with prophylactic dose of IFA

If no improvement (Hb rise < 1 g%) refer to higher level of care (FRU/DH)

Moderate Anaemia (Hb 7 - 9.9 g%)

- Oral IFA tablets (60 mg elemental iron + 500 µg folic acid) twice every day
- Injectable iron (iron sucrose or ferric carboxymaltose) may be considered in those near term or likely to be noncompliant
- Follow up

Repeat Hb every month

If Hb > 11 g% continue with prophylactic dose of IFA

If no improvement (Hb rise < 1 g%) refer to higher level of care (FRU/DH)

Severe Anaemia (Hb 5 - 6.9 g%)

- Injectable iron (iron sucrose or ferric carboxymaltose) as first line*
- Immediate hospitalization for pregnant women in third trimester for treatment (FRU/DH)
- Follow up

Monthly with repeat Hb or as prescribed by medical officer

If Hb > 11 g% continue with prophylactic dose of IFA

* Management of severe anaemia with injectable iron is contraindicated in pregnant women with thalassemia major and sickle cell disease.

Severe Anaemia (Hb < 5 g%)

- Immediate hospitalization and treatment irrespective of duration of pregnancy at a secondary or higher-level hospital where round the clock specialist care is available

Mandatory provision of iron folic acid fortified food in public health programmes:

The Government of India has mandated the use of fortified food as per standards for fortification of staple foods that is salt, wheat, rice, milk, and oil prescribed and notified by Food Safety and Standard Authority of India (FSSAI, 2016) at all health facilities-based programmes providing food. This includes Integrated child development services (ICDS) and Mid-day meal (MDM) programmes. It is recommended that the salt must be double fortified with iodine and iron, wheat flour and rice with iron, folic acid and vit B12 and oil with vitamin A and D.

Addressing non-nutritional causes of anaemia in endemic pockets, with special focus on malaria, hemoglobinopathies and fluorosis:

This intervention aims to intensify the awareness, screening, and treatment of non-nutritional causes of anaemia through various dedicated national programmes.

KEY POINTS

The new features of Anaemia Mukt Bharat programme include the following points:

1. Routine testing and treating adolescent girls and boys in government and government aided schools (through RBSK) and pregnant women (ANC clinics) and additionally cover private schools.
2. Increased focus on newly-wed women 20–24 years
3. Promote the practice of delayed cord clamping
4. Reduce the prophylactic dose from 100 mg to 60 mg elemental iron for women and adolescents.
5. Mandating the use of fortified food in public health programmes
6. Promote use of double fortified salt –iodine and iron
7. Use of invasive digital methods of haemoglobin estimation and point of care treatment
8. Promote the use of Intra venous Iron Sucrose/Ferric Carboxy Maltose for management of moderate/ severe anaemia.
9. Setting up of Programme Management Units for Anaemia Mukt Bharat at National and State levels
10. Follow HMIS based quarterly progress reports and awards
11. Set up dedicated AMB dashboard and portal (www.anemiamuktbharat.info)
12. Initiate strengthening programmes to address non-nutritional causes of anaemia with special focus on linkage with malaria, fluorosis and haemoglobinopathies
13. Establish a National Centre of Excellence and Advanced Research on Anaemia Control at All India Institute of Medical Sciences (AIIMS), New Delhi and State Institutes of Excellence and Advanced Research on Anaemia Control
14. Create a Jan Andolan through intensive communication and newly developed communication material and communication activities

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HIV in Pregnancy: What has changed?

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Introduction

India has 3rd highest burden of HIV in the world with approx 2.14 million people living with HIV. This is despite a low HIV prevalence of 0.22 % as compared to global prevalence of 0.8%, estimated in 2016 (UNAIDS). The first few cases of HIV were detected in Chennai in 1986 followed by steady decline from peak of 0.38% in 2001-03 to 0.22% in 2017. Since 2000, there has been more than 60% decline in new HIV cases.

Parent to child transmission contributes to about 4% of HIV infections in India. MTCT accounts for >90% of all HIV infections in children. One third of infants with HIV die in first year of life and 50% by 2nd year of life. The Prevention of Parent to Child Transmission (PPTCT) programme is being implemented under NACP to achieve the goal of Elimination of Mother to Child Transmission (EMTCT).

National AIDS Control Programme

National AIDS Committee was set up in 1986 and National AIDS Control Organization (NACO) in 1992. In the first phase of NACP from 1992 to 1999 emphasis was on understanding the modes of HIV transmission, prevention of transmission, blood safety and IEC strategy to increase awareness about the disease. NACP-II (2000-2005) focused on decentralization of the activities to state level with formation of State AIDS Control Societies (SACS), in this phase focus was on blood safety, low-cost care of infected individuals, and management of opportunistic infections. ART was introduced in 2004 in tertiary care centres. In NACP-III (2006-2011) there was a massive scale-up of services with 50% reduction in new infections. NACP-IV (2012-2017) integrated HIV care services with general health care system.

Evolution of Prevention of Parent to Child Transmission (PPTCT) programme in India

In 2001-02, a feasibility study was done in 11 Centre of Excellence (COEs), Voluntary Counseling and Testing (VCT) services were launched for pregnant women. Infected mothers received a single oral dose of 200 mg Nevirapine at the onset of labour followed by administration of 2 mg/kg of Nevirapine syrup to the exposed baby within 72 h of birth. Major expansion of these services was done in 6 high prevalence states in 2004-05 with the support from Global Fund (Round-2), and gradually services were expanded across the country. VCT and PPTCT services merged in "Integrated Counselling and testing Centre" in 2006-07. Between 2007 and 2008 Provider Initiated Testing and Counselling (PITC) strategy was adopted for testing of Ante-Natal Cases (ANC). Pilot of Sub-Centre level HIV screening strategy through frontline health workers was launched along with the launch of "Early Infant Diagnosis" services through ICTCs in 2009-10. In 2012-13, WHO PMTCT Option-B was adopted and implemented in three high HIV prevalence states. In May/June 2013, there was a National Strategic Plan for Scale-up of PPTCT services using Multi-Drug ARV regimen (Option-B). However, in Jan 2014, ART for all HIV positive pregnant women irrespective of CD4 count or WHO clinical staging was launched.

There was a significant reduction in the annual new HIV infections among children. MTCT rate of HIV (including breastfeeding period) in 2020 was estimated at 27.4% (20.3%–33.5%), down from around 40.2% in 2010. Despite around 55% decline in the MTCT of HIV the rate is still higher than the target of 5%.

Vision of PPTCT services in India is that women and children are alive and free from HIV. And the *Goal* is to work towards elimination of paediatric HIV and improve maternal, newborn and child health and survival in the context of HIV infection.

Risk of MTCT of HIV is estimated to be upto 45% in the absence of any intervention, Table 1. The transmission can be reduced to <1% with 3 ARV (antiretroviral) ART with no breast feeding, Table 2.

Table 1: Risk of MTCT in absence of intervention

Risk of HIV Transmission	Transmission Rate
During pregnancy	5-10%
During labour and delivery	10-15%
During breastfeeding	5-20%
Overall without breastfeeding	15-25%
Overall with breastfeeding up-to six months	20-35%
Overall with breastfeeding for 18-24 months	30-45%

Source: National Guidelines on HIV care and Treatment 2021

Table 2: Risk of HIV transmission from Mother to Child with ARV interventions

ARV Intervention	Risk of HIV Transmission from mother to child
No ARV; breastfeeding	30-45%
No ARV; No breastfeeding	20-25%
Short course with one ARV; breastfeeding	15-25%
Short course with one ARV; No breastfeeding	5-15%
Short course with two ARVs; breastfeeding	5%
3 ARVs (ART) with breastfeeding	2%
3 ARVs (ART) with No breastfeeding	1%

Source: National Guidelines on HIV care and Treatment 2021

Factors affecting MTCT

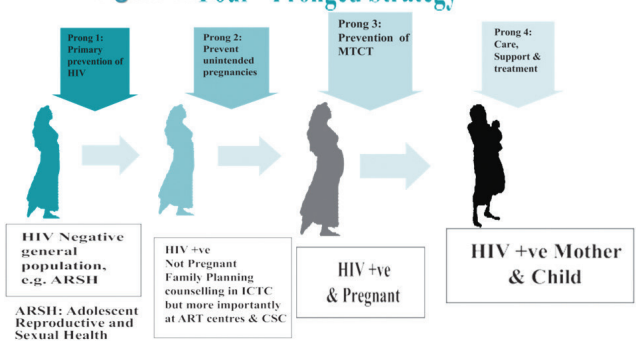
Maternal factors include maternal plasma viral load; concurrent STI & RTI; obstetric procedures; nutritional status; condition of breast (sore nipples, breast abscess, mastitis). The foetal factors contributing to increased transmission of HIV are prematurity; duration of exposure to maternal secretions (prolonged labour); breastfeeding

Requirements to reduce Transmission Risk to 1-2%

Good access to comprehensive HIV & ANC services, use of ARV drugs coupled with avoidance of breast feeding have reduced perinatal transmission of infection in resource rich countries to 1-2%. To reduce the transmission of HIV from mother to child a 4 prong strategy is adopted under PPTCT programme, Figure 1. The main objectives of PPTCT Services in India are:

1. To **detect >90% HIV infected pregnant women** in India
2. To provide access to comprehensive **PPTCT services to > 90% of detected pregnant women**
3. To provide access **to early infant diagnosis to >90 % HIV exposed infants**
4. To ensure access to **ARV prophylaxis or ART to 100 % HIV exposed infants**
5. To ensure **>95 % adherence with ART** in HIV infected pregnant women and ARV/ ART in exposed children

Figure 1: Four - Pronged Strategy



Source: National Guidelines on HIV care and Treatment 2021

ARV for Pregnant Women and Exposed Infant

All HIV-positive pregnant women including those presenting in labour and breastfeeding should be initiated on a triple-drug ART. Tenofovir + Lamivudine + Dolutegravir (TLD- TDF + 3TC + DTG) is the first line fixed drug combination (FDC) recommended by National guidelines 2021. FDC of TDF (300 mg) + 3TC (300 mg) + DTG (50 mg) is given once daily to women with HIV-1, HIV-2, HIV-1 & 2, exposed to single-dose NVP in the past and co-infected with TB or Hepatitis. Pregnant women with HIV should be educated about the benefits and risks of DTG to help informed choice.

Why Dolutegravir?- It suppresses HIV much earlier, delivers rapid and sustained efficacy, has a high barrier to resistance, generally well tolerated, also has fewer drug interactions. Also, DTG 50 mg BD is effective in TB patients treated with Rifampicin, is active against HIV 2 infection and is safe in women in reproductive age group.

Women in the reproductive age group, who are planning to conceive, should be informed of the *potential increase in the risk of neural tube defects*. If after adequate counselling, she does not want to take the risk, TLE should be initiated. Women identified to be HIV positive after the first trimester should be started on TLD. For all patients on ART, do CD4, Hb, TLC, DLC, ALT (SGPT), serum creatinine once in every six months. For Tenofovir based ART serum creatinine is done at the time of initiation and then every 6 months. While on Efavirenz based ART, lipid profile is done at the time of initiation and then annually.

International guidelines*:* suggest viral load testing for all HIV positive women and if viral load is detected, antiviral drug resistance studies are done even in ART naïve women. ART is started after drug resistance testing irrespective of immune status or clinical staging. Repeat viral load testing is suggested every 4 weeks until viral replication is suppressed and then every 3 months till delivery. Viral load is not used in pregnancy to decide for initiation of ART as transmission of infection to newborn can occur even with undetectable viral load. In women with diagnosis of HIV done late in pregnancy (after 28 weeks), ART is started while waiting for the results of drug resistance studies.

Management during labour: For women taking ART, continue same ART during labour. If women's HIV status is not known, whole blood finger prick testing should be done and if result is positive, triple drug therapy should be initiated immediately. This is the only condition where ART is started before registration with

ART center. It is the duty of the physician starting ART, to inform the PPTCT or ICTC counselor for facilitation of ELISA testing for confirmation and if the result is positive then CD4 count testing and registration with the ART center for continuation of ART. Till the woman is registered with the ART center, treatment is provided from PPTCT. To further reduce the risk of MTCT of HIV: Minimize vaginal examinations, avoid prolonged labour; consider oxytocin to shorten labour, avoid artificial rupture of membranes, use non-invasive foetal monitoring and avoid invasive procedures. Support perineum and avoid routine episiotomy. Also, avoid instrumental delivery as much as possible unless indicated Low cavity outlet forceps delivery is preferable to a ventouse delivery. Considerations in mode of delivery: In India, normal vaginal delivery is considered unless the woman has obstetric indications (like foetal distress, obstructed labour) for a Caesarean section. Avoid milking the cord and do delayed cord clamping.

International recommendations: All HIV positive women with detectable viral load near delivery and those with HIV RNA status unknown are administered IV Zidovudine during labour, regardless of the antepartum regimen or mode of delivery. ACOG recommends, option of scheduled caesarean delivery for women with viral loads greater than 1000 copies/mL, whether or not they are taking antiretroviral therapy. These patients also should receive intravenous zidovudine (ZDV), ideally 3 hours preoperatively as a 1-hour intravenous loading dose (2 mg/kg), followed by continuous infusion over 2 hours (1 mg/kg/hr) until delivery. BHIVA guidelines recommend delivery by elective caesarean section at 38 weeks to prevent labour and/or ruptured membranes, for women who have a plasma viral load >50 copies/ml. **Note-** National guidelines 2021 do not recommend caesarean section for the prevention of vertical transmission of HIV to the newborn. Also, Zidovudine transfusion for women with high or unknown viral load is not recommended.

Infant ART prophylaxis: ARV Prophylaxis is advised to the infant based on the risk of HIV transmission. *Single-drug ARV Prophylaxis* is advised in infants with low risk for HIV transmission for 6 weeks (regardless of type of feeding). *Syrup Nevirapine* (NVP) is given according to the baby weight. In following situations NVP is not effective therefore, *Syrup Zidovudine* is given. Infants, born to a mother with confirmed HIV-2 or HIV-1 and HIV-2 combined infections, born to a mother who had received single dose of NVP during earlier pregnancy or delivery, born to a mother who is on PI-based ART regimen due to treatment failure. *Dual-drug ARV Prophylaxis* is advised in infants with high risk for HIV transmission, the duration of which depends on the type of feeding (for 6 weeks if on replacement feeding and 12 weeks if on breastfeeding).

Low-risk infants- Infants born to mothers with suppressed viral load (<1000 copies/ml) done any time after 32 weeks of pregnancy up to delivery. *High-risk infants*: Infants born to HIV-positive mother not on ART, maternal viral load not done after 32 weeks of pregnancy till delivery, maternal viral load not suppressed between 32 weeks of pregnancy till delivery, or mother newly identified HIV positive within 6 weeks of delivery.

Breast Feeding

Guidelines changed from Exclusive breast feeding (EBF) for 6 months and abrupt weaning at 6 months in 2010 guidelines to EBF for 6 months, breast feeding & complimentary feeding from 6 - 12 months, and may continue to breastfeed up to 2 years, according to *National Guidelines 2021*.

Criteria for Replacement Feeding

If a woman can afford to provide sufficient and sustained replacement feeding, prepare it frequently in a clean manner so that it is safe, has supportive family, and can access health care that offers comprehensive child health services, she can give exclusive replacement feeding.

Co-trimoxazole Preventive Therapy (CPT)

CPT is initiated in all HIV-infected patients (PLHIV) who have CD4 count of <350cells/cmm and are in WHO clinical stage 3 and 4. One double-strength tablet of Co-trimoxazole (Sulfamethoxazole/Trimethoprim800 mg/160 mg is given orally, once daily. Alternative regimen for prevention of OI is Dapsone 100 mg once a day. Pregnant women, who fulfill the criteria, should be started on CPT, regardless of the stage of pregnancy. CPT should be continued throughout the pregnancy and during breastfeeding. CPT is discontinued when CD4 count increases to >350/cmm on two occasions 6 months apart with an ascending trend and woman is devoid of any WHO clinical stage 3 and 4 conditions.

Isoniazid Preventive Therapy (IPT)

Isoniazid (INH) is given to prevent progression to active TB in individuals with latent TB infection. Those who do not report any one of the four symptoms of current cough, fever, weight loss and night sweats are unlikely

to have active TB and are eligible for IPT. Dose given is Isoniazid 300 mg + Pyridoxine 50 mg (Vitamin B6) per day for 6 months. IPT should not be provided to women with active TB disease, active hepatitis, persistent tingling, numbness and burning sensation in limbs, poor adherence to Co-trimoxazole Preventive Therapy (CPT), contact with MDR-TB case and those who have completed DR-TB treatment. IPT is safe in pregnancy, should be started irrespective of the gestation period and should be completed even if a woman becomes pregnant while taking IPT. It is safe to use IPT while breastfeeding.

Summary

Although, Prongs 1 and 2 are vital to achieve the overall results, currently, the major activities of PPTCT services are focused on prongs 3 and 4. All pregnant women attending antenatal care clinics are offered routine HIV counselling and testing with 'opt out' option. Care is also provided for management of associated conditions like STI/RTI, TB and other OIs. Emphasis is given on institutional deliveries of all HIV-infected pregnant women. Plasma viral load testing is done at 32–36 weeks of gestation to determine the risk of HIV transmission to the baby. All exposed newborns are provided ARV prophylaxis. HIV infected women are provided nutrition counselling and psychosocial support and linkages are done with ANMs, ASHAs, and community outreach workers. Women are counselled regarding for initiation of exclusive breastfeeds within an hour of delivery and continue for 6 months. After 6 months, complementary feeding is started along with breast feeds. HIV infected women are encouraged to breastfeed for at least 12 months while being fully supported for ART adherence. Breast feeding may be continued beyond 2 years. HIV-exposed infants are integrated into routine healthcare services including immunization. All infants are given CPT and early infant diagnosis (EID) is initiated using HIV-DNA PCR at 6 weeks of age.

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LaQshya: The step forward

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INTRODUCTION

Over the past few years with the launch of National Health Mission, there has been an increase in the number of institutional deliveries. But the expected decline or improvements in maternal and new born health indicators has not been reached yet. It is estimated that approximately 46% maternal deaths, over 40% stillbirths and 40% newborn deaths take place on the day of the delivery. The major cause being the lack of quality health care services during delivery and immediate postpartum.

So with the goal to reduce preventable maternal and newborn mortality, morbidity and still birth, an initiative by National Heath Mission, Ministry of Health & Family welfare, Government of India was launched on 11th December 2017.

OBJECTIVES

1. To reduce maternal and newborn mortality and morbidity due to obstetric and medical complications of pregnancy.
2. To improve Quality of care during the delivery and immediate postpartum period, management of complications and to ensure timely referrals and effective follow up.
3. To enhance satisfaction of beneficiaries visiting the health facilities and provide Respectful Maternity Care (RMC) to all pregnant women attending public health facility.

STRATEGIES

1. Reorganizing/aligning Labour Room and Maternity Operation Theatre layout as per standard guidelines issued by the MoHFW.
2. Ensuring all Government Medical College Hospitals, District Hospitals have dedicated obstetric HDUs and obstetric ICU as per guidelines to provide critical care services to high risk pregnancy cases.
3. Ensuring strict adherence to clinical protocols for management of the complications before referral to higher centres.

SCOPE

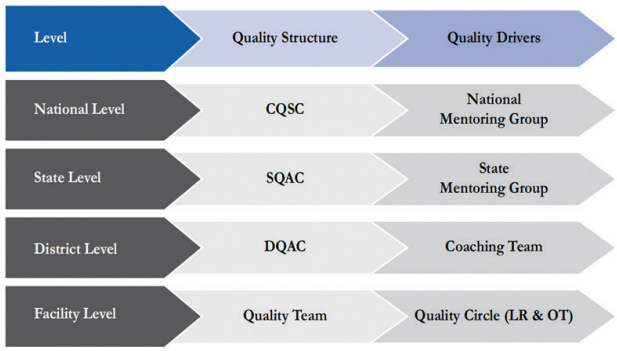
Following facilities would be taken under LaQshya initiative on priority:

1. All government medical college hospitals.
2. All District Hospitals & equivalent health facilities.
3. All designated FRUs and high case load CHCs with over 100 deliveries/60 (per month) in hills and desert areas.

INSTITUTIONAL ARRANGEMENTS

Under the National Health Mission, the States have been supported in creating Institutional framework for the Quality Assurance – State Quality Assurance Committee (SQAC), District Quality Assurance Committee (DQAC), and Quality Team at the facility level. These committees will also support implementation of LaQshya interventions. For specific technical activities and program management, special purpose groups have been suggested, and these groups will be working towards achievement of specific targets and program milestones in close coordination with relevant structures within institutional arrangement.

OUTLINE OF INSTITUTIONAL ARRANGEMENT UNDER NQAP & LaQshya



- At District level-The coaching team in districts with medical college could include one or more retired faculty members as a coach for medical college labour rooms and operation theatre. All coaching teams must be trained in skills lab/Dakshata, so that they are proficient mentors.
- At Facility Level- Quality circles are informal groups of the staff in each department that work closely to improve the Quality of Care there. The Quality Circles works in coordination with facility level quality team headed by the Medical Superintendent or facility-in-charge.

QUALITY IMPROVEMENT CYCLES

6 focused quality improvement cycles each for two months will be used to improve the quality of **care around birth**:

1. Real-time Partograph generation including shift to electronic partograph & usage of safe birth check-list & surgical safety check-list and strengthening documentation practices for generating data to guide improvement.
2. Presence of birth companion during delivery, respectful maternity care and enhancement of patients' satisfaction.
3. Assessment, triage and timely management of complications including strengthening of referral protocols.
4. Management of labour as per protocols including AMTSL & rational use of Oxytocin.
5. Essential and emergency care of newborn & pre-term babies including management of birth asphyxia and timely initiation of breast feeding as well as KMC for preterm newborn.
6. Infection Prevention including Biomedical Waste Management.

INTERVENTIONS

Key approach under this initiative is breakthrough improvement which would require substantial reorganization of labour room and processes.

Structural improvement will include the following:

1. Upgrading the infrastructure as per norm and realistic case-load.
2. Human Resource augmentation and skill upgradation.
3. Ensuring availability of adequate functional and calibrated equipment, as per need.
4. Strengthening the supply chain system of drugs & consumables for ensuring their availability in the labour room and OT as per need.

Process improvement will include:

1. Assessment and Triage.
2. Management of Labour including Active Management of Third stage of labour.
3. Management of complications and High Risk Pregnancies.
4. Management of referral services.
5. Perioperative processes for C-Section.
6. Newborn care and resuscitation.
7. Management of required support services for the labour room, maternity ot & HDU.
8. Sensitisation of the Staff on RMC and its monitoring.

CERTIFICATION, INCENTIVES & BRANDING:

Quality Certification: The external assessment and certification will be done by external assessors empanelled with NHSRC and the certification will be valid for 3 years subject to annual verification of the scores by the State Quality Assurance Committee.

Incentives: The teams in the labour rooms and maternity ot at Medical Colleges, District Hospitals and SDH/CHCs could be given incentives of Rs. 6 Lakhs, 3 Lakhs and 2 Lakhs respectively on achievement of following criteria:

- Quality Certification of Labour Room and/or OT.
- Attainment of at least of 75% of facility level targets.
- 80% of the beneficiaries are either satisfied or highly satisfied.

Branding:

The departments may be provided badges (LaQshya Medal) based on the quality score, achieved in the state level assessment:

- **Platinum Badge:** Achieving more than 90% core.
- **Gold Badge:** Achieving more than 80% Score.
- **Silver Badge:** Achieving more than 70% Score.

DIGITAL INNOVATION

- LaQshya Web portal- All LaQshya related data will be uploaded on the portal for prompt report generation as well as visualization of dashboard to monitor progress in key maternal and new born indicators at various levels (facility, District, State & National).
- Safe delivery App- Job aid as well as training tool for health workers.

SUGGESTED READINGS

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MusQan Initiative

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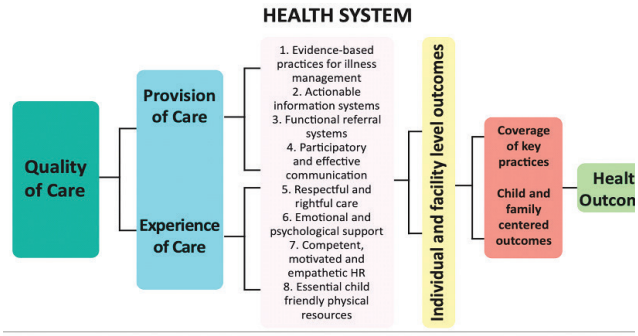
The central and state government has established many programmes for the welfare of the vulnerable sections of the population. However, the coverage of these programmes is yet inadequate which can be explained by the fact that India has a varied landscape and social diversity. Although the coverage of these programmes in certain parts of country is satisfactory yet it has not translated in a significant reduction in child mortality. Over last five years, the Under-five mortality rate (U5MR) has reduced from 49.7 per 1,000 live births in NFHS-4 (2015-16) to 41.9 in NFHS-5 (2019-21). One of the major factors for this is the quality of care provided in the health facilities.



Framework for improving child care services

There is sufficient evidence suggesting that the multi-pronged improvement in the child health services and not just increasing the coverage of these services is the key to improvement. Thus government has established many Quality improvement initiatives under the ambit of National Quality Assurance Standards (NQAS). The "LaQshya" initiative and "MusQan" initiative are the quality improvement initiatives for the mother-newborn group and children respectively.

The National Quality Assurance Standards (NQAS) for District Hospitals, Community Health Centres (CHC), Primary Health Centres (PHC) and Urban Primary Health Centres (UPHC), accredited by the International Society for Quality in Healthcare (ISQua) promote the delivery of quality care within the facilities.

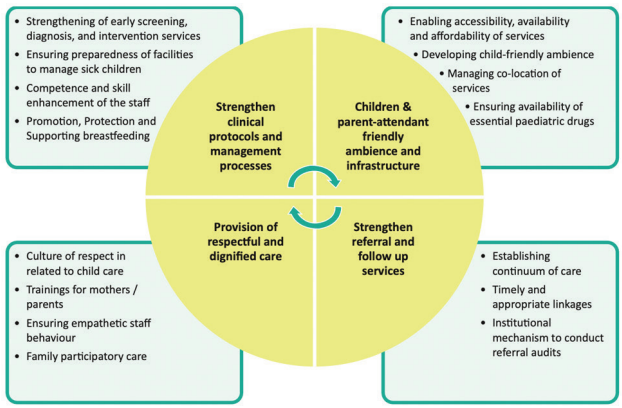
The "MusQan" initiative is the quality improvement initiative for the paediatric age group (0-12 years), with the already established National Quality Assurance Standards (NQAS) regulations. It was launched on 17 September 2021 on the occasion of World Patient Safety Day. MusQan aims to ensure timely, effective, efficient, safe, person-centred, equitable and integrated quality services in public health-care facilities.

Goal

MusQan aims to ensure provision of quality child-friendly services in public health facilities to reduce preventable newborn and child morbidity and mortality.

Objectives

1. To reduce preventable mortality and morbidity among children below 12 years of age.
2. To enhance Quality of Care (QoC) as per National Quality Assurance Standards (NQAS).
3. To promote adherence to evidence-based practices and standard treatment guidelines & protocols.
4. To provide child-friendly services to newborn and children in humane and supportive environment.
5. To enhance satisfaction of mother and family, seeking healthcare for their child.



Framework with proposed actions

Key Strategies

A framework has been developed to highlight four key strategies for rollout of 'MusQan' along with proposed actions for implementation.

Strategy 1: Strengthen clinical protocols and management processes

It is the first and foremost essential strategy for the quality improvement. The various actions which can

be taken to implement it are:

Improvements in clinical and non-clinical processes: It includes various structural changes, gap identification, rapid improvement action in clinical and nonclinical processes. Adherence to policies, guidelines and treatment protocols such as FBNC guidelines, Paediatric care guideline and MAA used to achieve the targeted results.

Strengthening of early screening, diagnosis, and intervention services: Facilities are encouraged to establish paediatric outpatient department (OPD), inpatient department (IPD) services, emergency triage services, Newborn Care Units (SNCUs, NBSUs for small and sick newborns) and dedicated District Early Intervention Centres (DEIC). The facility must ensure the screening of newborns, and children requiring interventions in term of further investigation and treatment will be referred to next higher facility. Simultaneously, it will be important for the facility to strengthen its capability to provide the standard level of mandated care.

Ensuring competency and skill enhancement: The competency of the clinical and paramedical staff will be evaluated at regular intervals. Based on the identified gaps, refresher trainings and skill stations will be provided for continuous skill enhancement. Onsite mentoring support, measurement, learning and sharing for compliance will contribute towards continued quality improvement.

Promotion, protection and supporting breastfeeding and nutritional counselling: These facilities are encouraged to ensure promotion, protection and support to breastfeeding and availability of nutritional counselling.

Strategy 2 : Ensuring Child Friendly Services

Under MusQan, the focus for ensuring child-friendly services will be on the following:

Ensuring dedicated services for newborns and children: Dedicated child- care services such as an OPD including growth, development, and immunization clinic, IYCF counselling room, District Early Intervention Centre (DEIC), breastfeeding corner, separate collection facility for laboratory investigations, registration/ admission counters, pharmacy counters, SNCU/NBSU/ MNCU, NRC, CLMC, and KMC room, etc will need to be planned together. While planning, care would be taken to co-ordinate these facilities in proximity to maternity treatment locations (labour, delivery and recovery room (LDR) complex, maternal OT/HDU, labour room, postnatal ward, etc.).

Developing a child-friendly ambience: All paediatric departments (outpatient and inpatient) should be visually attractive for the children. Soothing colours, painting the walls with themes and cartoon characters and themes to improve the ambience for the children. Child play zone with age-appropriate toys, swings and learn through play environment must be created.

Ensuring availability of paediatric drugs and formulations: Availability and accessibility to all paediatric formulations and dosage of essential medicines as per the norms of the Indian Public Health Standards (IPHS) Guidelines for district hospitals (DH)/ sub-district hospital (SDH)/community health centres (CHC) need to be ensured.

Strategy 3: Strengthening of Referral and Follow-up Services

Establish clear referral criteria and dedicated centres for easy referrals. MusQan emphasises development of a referral cum follow-up mechanism that conducts a referral audit to identify the gaps and take-up further improvement actions.

Strategy 4: Ensuring Provision of Respectful and Dignified Care

Family engagement is essential in the care for both child and mother. Facilities that ensure implementation of family-centric care must include the following components: Ensure food and shelter for mothers

Regular trainings: Mother and family members need to be trained on infection prevention, feeding (breastfeeding or assisted feeding), KMC, family-participatory care, etc.

Basic amenities: A dedicated waiting area for parent and attendant ,an electronic calling system to facilitate orderliness in the OPD. Also, availability of child-friendly toilets, provision of drinking water are must have amenities in the facilities. A safe and private space for the breastfeeding is

Empathetic staff behaviour: The facility must ensure that the staff in paediatric care departments and service stations is empathetic and courteous. This will go a long way in giving confidence to the family and community to seek care at the facility, and enhancing their experience and satisfaction.

Institutional Framework

Under the NHM, States have been supported in creating an institutional framework for quality initiatives. Under the ambit of National Quality Assurance Programme, implementation of all quality initiatives are spearheaded by the Central Quality Supervisory Committee (CQSC) at the National level. There are State Quality Assurance

Committees (SQAC) which have their execution arm, namely the State Quality Assurance Units (SQAU) at the state level. At the District level, there are District Quality Assurance Committees (DQAC) along with its execution arm, namely the District Quality Assurance Units (DQAU). At the facilities' level, there are Quality Teams and at the department level, Quality circles are constituted. These committees, teams/circles support the implementation of various quality initiative viz. NQAS, Kayakalp, LaQshya, etc.

National level

The primary role of the Central Quality Supervisory Committee (CQSC) is to provide overall guidance, monitoring and mentoring of quality assurance efforts under various programmes/initiatives. The Child Health Division at the MoHFW and QI Division NHSRC have been jointly mandated to provide overall guidance and implement the roll-out of MusQan. Oversight function of the 'MusQan' implementation and its monitoring and review will be performed by the CQSC.

State Level

State Quality Assurance Committees (SQACs) are functional in all states/UTs. The SQAC comprises of ACS/ Principal Secretary, NHM Mission Director, Director of Family Welfare/Directorate of Health Services (DHS)/ Director of Public Health or Additional/Joint Director of Family Welfare or equivalent and several other representatives as elaborated in the 'Operational Guidelines for Quality Assurance in Public Health-care Facilities'. The committee's main responsibility is to oversee quality assurance activities in the state in accordance with National & State guidelines. To ensure seamless implementation of MusQan, the State Child Health Division will support the SQAU under the guidance of SQAC.

Moreover, the SQAU and State child health team will be jointly responsible for undertaking assessments, extending implementation support under the initiative including capacity building, resource allocation and state level certification of targeted facilities.

District Level

District Quality Assurance Units (DQAUs) are the functional arm of District Quality Assurance Committees in the States/UTs. The District Collector/ Deputy Commissioner, Chief Medical Officer (CMO)/ Deputy Director/ Chief District Medical Officer (CDMO)/ Civil Surgeon/Chief Medical Health Officer (CMHO) or equivalent, District Family Welfare Officer (DFWO)/ Reproductive Child Health Officer (RCHO)/ Additional Chief Medical Officer (ACMO) or equivalent and various other representatives as given in the 'Operational Guidelines for Quality Assurance in Public Health-care Facilities' are the members of the DQAU. The DQAU's main responsibility is to oversee quality assurance activities across the district in accordance with National & State guidelines.

To ensure seamless implementation of MusQan, the district level child health team and DQAU will be jointly responsible for assessments and validation of indicators.

Facility Level

Facility level Quality teams are functional in all public health-care facilities. The team comprises of Medical Superintendent or facility in-charge, Hospital Manager (wherever available), nursing in-charge and representative from other functional and related departments. The primary responsibility of the quality team is to oversee quality assurance activities across the facility.

Department level Quality Circles: To ensure implementation of the MusQan initiative at the facility/department level, Quality Circles need to be constituted in each of the targeted departments. These Quality Circles can serve as an informal group of staff designated to improve services dedicated for newborn and child health. Each Quality Circle comprises of Medical officer/Paediatrician Incharge of relevant department such Paediatric ward, SNCU, NBSU, Paediatric OPD, Immunisation clinic. Nursing professionals of such departments would also be a part of department's quality circle, which will also co-opt other staff such as lactation counsellor, lab tech., pharmacist, housekeeping supervisor, etc.

The quality circles shall undertake various rapid improvement events for improving outcome indicators leading to the achievement of defined targets

Operationalisation of MusQan

The operational framework for MusQan encompasses a systematic approach where the facilities are supported by state and district level teams. Figure 5 depicts the key activities to be undertaken by the facility. These activities are supported and validated by the district and state Quality and Child Health teams those include identification of training needs of clinical and para-clinical staff, capacity building, technical support for process improvements, availability of resources, data

collection and regular validation of QoC indicators

Suggested list of Rapid Improvement (RI) Events:

1. Ensuring timely initiation of emergency treatment of sick newborns and children and making timely referrals.
2. Improving breastfeeding, hypothermia (temperature maintenance), KMC practices in eligible neonates and developmental supportive care.
3. Ensuring improvement in infection prevention practices and reduction in Hospital Acquired Infections (HAIs)
4. Improving documentation and record management practices. This RI event must include timely recording and updation of records and data.
5. Ensuring implementation of clinical protocols such as rational use of antibiotics, oxygen, fluids, etc.
6. Providing respectful care and improving engagement of mothers and families in newborn care and enhancing parents' and families' satisfaction with the care, given in the facilities.

These RI events will support the quality circles to reach the target population. Apart from these suggested RI events, facilities are encouraged to consider and include in RI events any other critical issue pertaining to their facilities. For implementation of the suggested RI events, the facilities will undertake the following steps which will aid them to achieve MusQan certification.

Steps for Implementation of MusQan at Facility-level

1. **Constituting Quality Teams and Quality Circles at facility and department level, respectively**: A team consisting of motivated and committed staff of all cadre can contribute immensely to the efficient running of a facility. By constituting departmental quality circles, as an extension of facility quality teams , the level of operational efficiency and monitoring of progress at regular intervals will be enhanced considerably.
2. **Assessing Quality of Care**: The Quality team, will undertake the assessment of the departments utilising MusQan checklists. Simultaneously departmental quality circles will capture the indicators (departmental as well target indicators under the 'MusQan') and parent/family satisfaction (manually or through Mera Aspataal3). The team will also conduct and analyse information accumulated through audits vis-à-vis prescriptions, clinical and death audits. Quality tools will be utilised to detect bottlenecks/trends in existing parameters.
3. **Identifying critical gaps:** The MusQan quality tools (checklists) along with results of target indicators, audits (medical, death, prescription), competency evaluation, etc. will help the facility to identify gaps at the structural and process level. Each of these will be classified as critical and non-critical after due analysis.
4. **Planning interventions & Rapid Improvement Events**: Non-critical gaps are easy to manage and mostly require direct action to close them. However, critical gaps require further scoping and application of scientific methodology i.e., Plan, Do, Check, Act (PDCA) to attain the improvement(s). Facilities are encouraged to plan and undertake rapid improvement events (RI events). A suggestive list of improvement events is given in 'MusQan: Rapid Improvement events' in Section II. Apart from the suggested list, facilities can undertake other RI events pertaining to critical issues at local level.
5. **Undertaking improvement activities**: Once the facility/department identifies the critical gaps based on their assessments, the facility level quality team or departmental quality circle is expected to undertake specific steps for improvement/ closure of identified gaps. The improvements steps are outlined below:

   a. Setting-up SMART objectives

   b. Undertaking Root Cause Analysis: The team/circle will brainstorm and analyse each gap using tools like Fishbone diagram, why-why analysis, etc. The in-depth gap analysis will help the team not only to understand the problem but also develop specific change ideas.

   c. Developing change ideas: The team/circle will brainstorm and come up with specific 'change' ideas. These ideas should be implemented after assessing their effectiveness.

   d. Setting up the measuring indicators: To assess whether a change idea has impacted the main objective or not, the team must measure and analyse supportive indicators. Run Charts will be useful to analyse the effectiveness of the change idea over the selected period.

   e. Testing ideas through the PDCA cycle: When the team has certain change ideas, the testing of these ideas becomes important. This is done using the Plan- Do – Check – Act approach. Multiple change ideas are carried out through the PDCA approach to understand its impact and capability to achieve objectives. Based on its analyses, the idea will be either accepted 'as-

it-is' in the system or require certain tweaking for acceptance. The same will be discarded, if it has any negative impact or is found to be unsustainable.

f. Mentoring: The identified clinical/technical gaps should be traversed with the support of national expert or State expert team involving medical colleges, Centres of Excellence, State Resource Centres, etc.

6. **Traversing gaps in a time-bound manner**: Based on the Gap analysis, facilities will prepare a time-bound action plan (for critical and noncritical activities) which will be reviewed in Quality circle/ Quality team meetings and by the district/ state teams providing handholding support to the facility. There will be resource requirements for organising training, assessment, mobility support, and other incidental expenses. Therefore, the state may allocate budgets which may be requested in relevant financial heads through the NHM PIPs.
7. **Certification**: Once the facility has substantially improved and is able to achieve at least 70% or more in NQAS assessment tools, it can apply for the State & National certification. The criteria and process of certification are explained in Section IV.

8. Surveillance: MusQan facilities achieving the NQAS certification of selected departments shall be assessed on yearly basis to ensure sustenance and further facility improvement.

MusQan Certification Process

All the health facilities, which exhibit substantial improvement in their scores and indicators and are State level MusQan certified are eligible for the National MusQan certification. Such assessments would be undertaken by the NHSRC empanelled NQAS assessors.

Measuring, Improving and Learning

One of the key objectives of the MusQan initiative is to inculcate the practice of continuous monitoring of quality of healthcare and to make proactive efforts to assure and improve further. The initiative will enable the facility to understand methods of measurement of services and clinical quality given to patients. Also, the efforts and change ideas followed in one department will be shared with others in monthly quality team meetings.

The MusQan initiative is linked with 21 Key Performance Indicators (KPIs), which need to be measured by the facility every month. After the launch of MusQan, the state and district teams will make sure that these baseline indicators are appropriately recorded, validated and shared with the national team.

Out of 24 KPIs, the progress on 21 indicators will be recorded on monthly basis while three indicators serve as essential information for which the information can be collected and updated at least biannually.

All the indicators are monitored regularly at state, district and facility level, as required. Further, the change ideas are tested and applied for improvement. Facilities need to ensure that at least 75% of these indicators meet the target. NQAS encourages quality circles to identify indicators (apart from these 21 compulsory indicators), meeting the situational requirements and bring out the desired change

Abbreviations

AMB - Anaemia Mukt Bharat

CHC - Community Health Centre

CQSC - Central Quality Supervisory Committee

CLMC - Comprehensive Lactation Management Centre

DEIC - District Early Intervention Centre

DQAC - District Quality Assurance Committee

DQT - District Quality Team

FRU - First Referral Unit

HAI - Hospital Acquired Infection

HBNC - Home-Based Newborn Care

HBYC - Home-Based Care for Young Child

ISQua - International Society for Quality in Healthcare

IYCF - Infant and Young Child Feeding

JSSK - Janani Shishu Suraksha Karyakram

JSY - Janani Suraksha Yojana

KMC - Kangaroo Mother Care

KPI- Key Performance Indicator

LAMA - Left Against Medical Advice

MCH - Maternal and Child Health

MNCU - Mother and Newborn Care Unit

NBSU - Newborn Stabilisation Unit

NQAS - National Quality Assurance Standards

NRC - Nutrition Rehabilitation Centre

PDCA - Plan-Do-Check-Act

PMSMA - Pradhan Mantri Surakshit Matritva Abhiyan

QoC - Quality of Care

RBSK - Rashtriya Bal Swasthya Karyakram

SDH - Sub-Divisional Hospital

SNCU - Special Newborn Care Unit

SA ANS - Social Awareness & Action Plan to Neutralise Pneumonia Successfully Campaign

SOP - Standard Operating Procedure

SQAC - State Quality Assurance Committee

SQAU - State Quality Assurance Unit

SUMAN - Surakshit Matritva Aashwasan

SRS - Sample Registration System

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2. Delivering quality health services: a global imperative for universal health coverage, World Health Organization, Organisation for Economic Co-operation and Development & International Bank for Reconstruction and Development. (2018).
3. MD et al. Lancet Global Health: High-quality health systems in the Sustainable Development Goals era: time for a revolution.
4. An Introduction to Quality Assurance in Health Care, Avedis Donabedian.

Some must know information: NFHS-5

NFHS-1

- Conducted in **1992-93.**
- Information on population, health, and nutrition, with an emphasis on women and young children.

NFHS-2

- Conducted in **1998-99.**
- Added features:
  - Quality of health and family planning services
  - **Domestic violence**
  - **Reproductive health**
  - **Anaemia**
  - The **nutrition** of women
  - The **status of women**

NFHS-3

- Carried out in **2005-2006.**
- For the **first time,** information on **men and unmarried women** was provided.
- New topics:
  - **HIV/AIDS**-related behaviour
  - Health of **slum populations**, etc.
- **Height and weight measurement** and **blood tests** for HIV and anaemia included.

NFHS-4

- For the **first time,** NFHS had provided **district-level estimates** for many important indicators.
- New topics:
  - Information on malaria prevention
  - Migration of HIV
  - Abortion
  - Violence during pregnancy etc.

Point of Care Testing in Preclampsia: A New Paradigm in Management

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Point-of-care testing (POCT or bedside testing) is defined as diagnostic testing at or near the point of care—that is, at the time and place of patient care. With changing technology , there has been constant effort to depart from historical pattern of medical testing where investigations were confined wholly or mostly to the medical laboratory, which entailed sending off specimens away from the point of care , thereby waiting for hours or days to obtain the results, causing the delay in diagnosis and management of the disease[1].

POCT has led to the simplicity of doing medical tests at the bedside thereby reducing time taken for establishing the diagnosis of the disease processes and instituting the treatment early. In many cases, this simplicity was not achievable until technology developed through constant innovations in science ,not only to make a test possible at all but then also to mask its complexity. To further emphasize portable ultrasound in current times is readily available for the diagnosis of pregnancy (intrauterine /extrauterine) but portable ultrasonography did not reach the stage of being advanced, affordable, and widespread until the 2000s and 2010s. Today, portable ultrasonography is often viewed as a «simple» test, but there was nothing simple about it until the more complex technology was available which was converted to a financially viable system to make it easily available as POCT and thereby improving the management of normal and emergent problems in early pregnancy[2].

The aim behind the POCT is to bring the test immediately and conveniently to the patient. This increases the likelihood that the patient, physician, and care team will receive the results quicker, which allows for better immediate clinical management decisions to be made. POCT in medical sciences predominantly includes: blood glucose testing, blood gas and electrolytes analysis, rapid coagulation testing, rapid cardiac markers diagnostics, drugs of abuse screening, urine strips testing for proteins, sugars and ketones, pregnancy testing, fecal occult blood analysis, food pathogens screening, haemoglobin diagnostics, infectious disease testing (such as COVID-19 rapid tests) and cholesterol screening.

POCT has been notably introduced to screen and / or diagnose important obstetrics and gynaecological conditions such as gestational diabetes, pre-eclampsia, infections, and haematological conditions. This issue will discuss the available POCT in the screening and the diagnosis of pre-eclampsia which will be a game changer in early diagnosis of this condition.

Pre-eclampsia (PE) is a major hypertensive disorder of pregnancy, complicating 2-8% of pregnancies[3]. Hypertensive disorders in pregnancy are the second-most common cause of maternal mortality, resulting in approximately 30 ,000 maternal deaths each year[4]. Although maternal mortality is much lower in high-income countries than in developing countries, 16% of maternal deaths can be attributed to hypertensive disorders. In Africa and Asia, they contribute to 9% of deaths[5]. PE is a principal cause of maternal, fetal, and neonatal mortality in low- and middle-income countries (LMIC) where management at times is challenging due to its late clinical presentation or women presenting late in seeking clinical care, which limits the efficacy of medical intervention[4-6]. Thus, early assessment of risk can potentially alleviate the burden of PE in all including LMIC settings.

Although often accompanied by new-onset proteinuria, hypertension (Systolic blood pressure of 140 mm Hg or more or diastolic blood pressure of 90 mm Hg or more on two occasions at least 4 hours apart after 20 weeks of gestation in a woman with a previously normal blood pressure), other signs or symptoms of preeclampsia may be present in some women in the absence of proteinuria [7]. To some extent, this reflected concerns with assessment of proteinuria using the gold standard of >300 mg/24 hours and the accuracy of protein/ creatinine ratio assays. This has resulted in revision of clinical criteria for PE diagnosis and proteinuria is no longer required, being replaced by a collection of maternal organ dysfunction categories, including renal insufficiency, hepatic, neurological and haematological complications, uteroplacental dysfunction or fetal growth restriction[3,7].

Rapid diagnosis of preeclampsia is necessary to ensure timely administration of appropriate care and prevent the potentially catastrophic complications of the condition affecting both mothers and babies. Application of purely clinical criteria to PE diagnosis requires accurate determination of standard clinical parameters (hypertension and various maternal organ dysfunction). Further evaluation of maternal organ

dysfunction require time for results to be available for diagnosis in absence of proteinuria. While the diagnostic superiority of angiogenic blood biomarkers such as placental growth factor has recently been demonstrated, there is an urgent need to develop point-of-care (PoC) technologies that allow rapid, quantitative, and accurate testing for these markers within local communities[8,9]. POCT available for screening and diagnosis of PE along with its limitations are given below:

1.Mean arterial pressure - Extensive research in the last decade has led to the identification of four potentially useful biomarkers at 11–13 weeks' gestation for screening for PE: mean arterial pressure (MAP), uterine artery pulsatility, serum pregnancy-associated plasma protein-A (PAPP-A), and serum placental growth factor (PlGF)[8-10]. ASPRE trial has clearly shown that high risk screen positive women using these biomarkers allows for early institution of prophylactic aspirin which reduces the rate of early PE with delivery at < 34 weeks' gestation by about 80% and that of preterm PE with delivery at < 37 weeks by 60%[11,12]. The measurements of BP should be undertaken using a standardized protocol i.e. the BP is measured in both arms simultaneously using validated automated devices with correct positioning of women and the average of the four calculated MAP measurements is used for risk assessment. Accurate determination of blood pressure requires standardised positioning of the patient and the use of specific instruments validated for PE which may not be uniform worldwide thereby is one of its limitations. PAPPA requires time for its results to be known and hence limits its role as POCT.

2. Uterine artery pulsatility index (UtA-PI)- Abnormal uteroplacental circulation seen as abnormal Doppler in the uterine arteries (increased UtA-PI) by ultrasound in the first trimester of pregnancy is POCTR for screening of PE. To achieve consistent, and accurate screening performance, standardization for the measurement of UtA-PI is required. Using sagittal section of uterus, the uterine arteries are identified with the use of color Doppler flow mapping at the level of the internal cervical os. Pulsed wave Doppler is then performed with the sampling gate set at 2mm to cover the vessel. The UtAPI and peak systolic velocity are measured when three similar consecutive waveforms are obtained. The peak systolic velocity must be >60 cm/s to ensure its correct place measurement. The average of the left and right UtA-PI is used for risk assessment. However, limitations may be non-availability of ultrasound facility and trained fetal medicine ultrasonologist especially in LMIC[13].

3. Serum Placental growth factor (PlGF)- is a protein, a vascular endothelial growth factor (VEGF) homolog, produced by cytotrophoblasts. Normally PlGF concentrations increase during pregnancy; in pre-eclampsia they can be very low. Like VEGF, it has proangiogenic activity, and thus promotes placental growth and development. It is being recommended for the early prediction of PE when values are observed to be reduced in first trimester and is measured as multiple of medians. It can be measured as a part of first trimester screening of PE. It is also recommended for use in pregnant women between 20 weeks and 34 weeks plus 6 days of gestation as a standalone test for suspected PE[10]. Commercially available tests that measure plasma levels of placental growth factor (PlGF) are the Alere Triage (Alere, Inc.) and DELFIA Xpress PlGF 1-2-3 (Perkin). These tests require blood draw and plasma separation rather than fingerstick whole blood, and a specialised reader, which limits its utility as a true POC test in low resource settings. However, in high resource settings PlGF can be measured by several commercially available platforms of automated analyzers that provide results within 20–40minutes of sampling. Study by Tan etal concluded screening depended on the racial origin of the women; on screening by a combination of maternal factors, MAP, UtA-PI and PlGF and using a risk cut-off of 1 in 100 for PE at < 37 weeks in Caucasian women, the screen-positive rate was 10% and detection rates for early, preterm and term PE were 88%, 69% and 40%, respectively[10].

4. Glycosylated fibronectin (GlyFn) levels- The association of elevated GlyFn with PE may reflect its differential glycosylation by oxidative stress in PE. Second generation Lumella™ GlyFn ((DiabetOmics, Inc.) POC test estimates the concentration of Glycosylated Fibronectin, a new pregnancy specific biomarker to accurately assess the risk of preeclampsia. Lumella system comprises of test strips like home pregnancy test kit configured with monoclonal antibodies against GlyFn labelled with gold particles for quantification using a hand-held LumellaTM reader system. The test can be done with a finger prick blood sample a in the physician's clinic. It requires dilution of 5 µl of serum to 1:350 in running buffer. The 120 µl of diluted serum is then added to the test strip and inserted into the reader. The GlyFn

concentration is displayed on the reader at the end of 10 minutes. Calibration information is supplied by the manufacturer as a lot-specific RFID tag on each test kit. The measurable range of the LumellaTM assay is 50–800 microg/ ml. The intra-/inter-assay coefficients of variation at mean concentrations of 50–800 microg/ ml are 5–10% and 6–10%, respectively. Test results are

available in 10 minutes and therefore the assessment can be completed within the same visit of the pregnant woman to consult with her obstetrician. The test being simple and easy to use enables its adoption in any setting remote, rural, or urban and is a POCT in true sense. It has been validated in a low/middle-income country setting for PE diagnosis in a recent study by Nagalla etal. and may be a useful adjunctive tool for early identification, appropriate triage, and improved outcomes[13]. One unique feature of the GlyFn biomarker is that the baseline concentrations observed do not differ based upon gestational age, in contrast to other biomarker concentrations that do vary with gestational age[14]. In Southeast Asian population several biomarkers—GlyFn, PAPPA2, PlGF and sFlt- are effective in detecting PE, with the GlyFn POC test exhibiting the best performance. GlyFn POC test meets the WHO ASSURED criteria for POC tests to be employed in low-resource settings[13].

5. Ratio of serum soluble fms-like tyrosine kinase-1 (sFlt-1) and PlGF (the sFlt-1/PlGF ratio) -Soluble fms-like tyrosine kinase 1 (sFlt1) is a circulating protein and a soluble form of the vascular endothelial growth factor 1 receptor (VEGFR1), produced by syncytiotrophoblasts[15]. It is an antiangiogenic factor that inhibits proangiogenic activity of VEGF, including its protective effect on the endothelium. Elmerthe Roche Elecsys and Thermo Fisher Scientific Tests that measure the sFlt-1/PlGF ratio, involve two different dilutions of serum and specialised automated analysis platforms which provide results within 30 minutes. In routine screening of singleton pregnancies, the performance of a sFlt-1/PlGF ratio>38 between 30-37weeks of pregnancy is modest for the prediction of delivery with PE at <1 and at<4 weeks after assessment .Before 34 weeks of gestation, an sFlt-1/PlGF ratio of ≥ 85 was found to have a sensitivity/specificity of 88%/99.5% in the diagnosis of preeclampsia . In addition, sFlt-1–to–PlGF ratio cut-off of **≤38** has been adopted to rule out preeclampsia (PE) in high-risk pregnancies due to a high negative predictive value (99.3%) [16]. NICE concluded that during weeks 20 to 35 of pregnancy a negative result from either S. PlGF or sFlt-1/PlGF ratio test could help decide whether the anxiety, inconvenience, and expense of hospital admission due to suspected PE was necessary, and if monitoring could continue in the community. These tests are costly which is a limiting factor in its uniform application and usage.

The recent revision of guidelines for diagnosis of PE reflects the variation in clinical presentation, which makes accurate diagnosis using purely clinical assessment difficult. As a result, POCT of biomarkers have been proposed to for early risk assessment and diagnosis of PE so that effective management is instituted timely to prevent maternal and fetal morbidity associated with PE.

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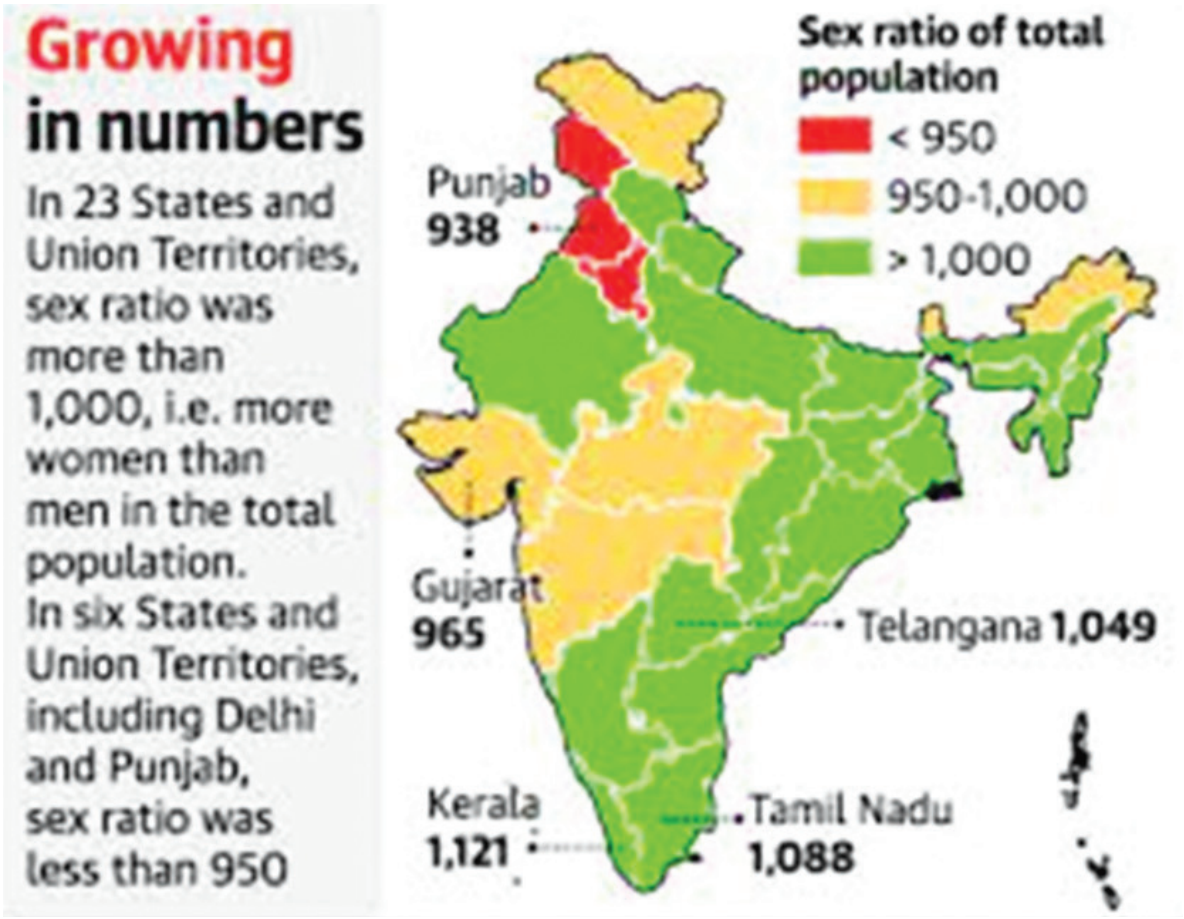
Some must know information: NFHS-5



Surakshit Matritva Aashwasan (SUMAN)

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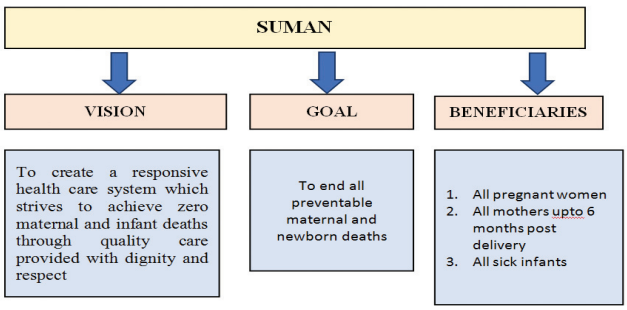
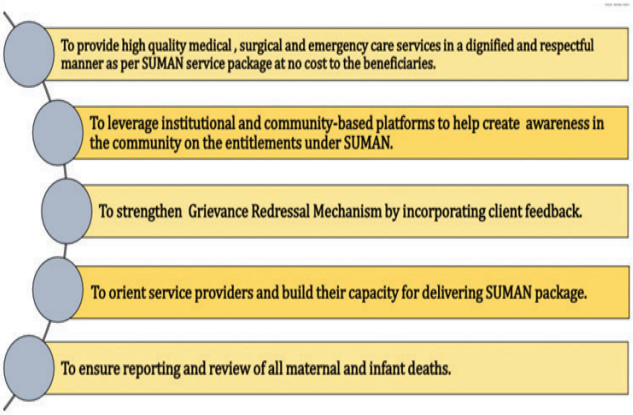
Introduction

Health of a woman is the determinant of a healthy and progressive nation. Safe pregnancy, child birth and postpartum period are important milestones in the continuum of care for women to achieve optimal maternal and neonatal outcomes that have a significant impact on the future of mothers, children and families in the long run. GOI has made stringent laws and multiple national health programmes to safeguard the health of women and newborn. Its success is reflected in the reduced maternal mortality ratio (MMR) from 555/ lakh in 1990 to 113/lakh in 2016-18 and the declined infant mortality rate from 89/1000 live births in 1990 to 32/1000 live births in 2018. In order to maintain this momentum and in an effort to achieve the Sustainable Development Goal 3 (SDG 3) i.e, to bring down MMR to below 70 by 2030, GOI introduced SUMAN – "Surakshit Matritva Aashwasan" on 10th October,2019 to integrate the existing national health programmes such as JSY, JSSK, PMMSA and various others under one umbrella to create a comprehensive initiative which goes beyond entitlements and provides a service guarantee.



Objectives



To ensure the implementation of the programme, the existing health care systems are strengthened and are reinforced as the pillars which uphold this programme.

BROAD PILLARS OF SUMAN INITIATIVE		
1.	SERVICE GUARANTEE	JSSK, JSY, PMSMA, LaQshya, MAA, care for sick & small babies, Home based care for mothers & newborn
2.	HEALTH SYSTEM STRENGTHENING	Infrastructure- LDR, OT, Obstetric HDU/ ICU,NBCC,NBSU, SNCU, Human resource, Drugs and diagnostics, Referral systems, Creating Centres of Excellence.
3.	MONITORING AND REPORTING	Service Guarantee Charter, Grievance redressal (call centre/ help desk facility level), Capturing Client Feedback ,
4.	COMMUNITY AWARENESS	Involving VHSNC and SHGs, SUMAN Volunteer (best performing volunteer can be a SUMAN champion)
5.	INCENTIVES AND AWARDS	Awards and recognition to performers First responder of maternal death to get 1000/-. Identifications and felicitation of champions
6.	IEC/BCC	Mega IEC/BCC activities promoting "zero preventable maternal & newborn deaths

Suman Service Guarantee Packages:

Under this programme, all pregnant women/ newborn visiting a public health care facility are entitled to services available at that facility with a provision to refer to a higher facility if need arises. Depending on the facilities available, the SUMAN services are grouped into packages depending on the institute into Basic package, BEmONC package and CEmONC packages. The institute prioritisation is as follows:

- All medical colleges and district hospitals- CEmONC level
- All NQAS and LaQshya certified facilities – CEmONC or BEmONC level
- All SDH - BEmONC level or CEmONC level. If BEmONC level, then definitive steps must be put in place to achieve CEmONC level.

1.BASIC PACKAGE :

- MATERNAL :
  - o Routine ANC (4+ one PMSMA)
  - o PNC
    - Identification and management of basic complications.
    - Management of breast conditions
    - Identification basic management and referral of high risk pregnancies.
    - Skilled Birth Attendance (only in subcentre designated as delivery points)
    - Pre-referral management for obstetric emergencies (Eclampsia, PPH, shock)
- NEW BORN :
  - o ENBC including resuscitation (NCC)
  - o Birth dose immunisation
  - o Identification and prompt referral of "at risk" or "sick" new-born
  - o Neonatal sepsis management
  - o For Infant, community level management of Diarrhoea and Pneumonia
- FAMILY PLANNING :
  - o Provision of Condoms, OCPs and Pregnancy testing kits.
  - o Confidential Counselling.
  - o Referral for safe abortion care services
  - o Follow-up for any complication after abortion and appropriate referral.

2. BEmONC PACKAGE : It includes all in basic package plus the following:

- MATERNAL
  - o Assisted vaginal deliveries
  - o Management of basic
  - o complications
  - o Referral after initial
  - o management if required
  - o Episiotomy and suturing
  - o Stabilization of obstetric
  - o emergencies and assured
  - o referral to CEmONC facilities.
  - o Postnatal Maternal Care
  - o Package including 48 hours stay.
- NEW BORN:
  - o Antibiotics for preterm or PROM for prevention of sepsis of newborns
  - o Newborn Stabilization Units (non- FRU CHC)
  - o Identification and Management of LBW infants >/= 1800 g with no other complications
  - o Phototherapy for newborns
  - o Stabilization and referral of sick and
  - o VLBW newborns
  - o Facility level management of sick infant
  - o Breastfeeding (Expressed) and KMC
- FAMILY PLANNING :
  - o Sterilization services (if available)
  - o CAC services for medical methods (MMA) in PHCs
  - o Both Manual Vacuum Aspiration (MVA) & MMA in CHCs as per provisions of MTP Act (Depending on the availability of trained provider/s in facility)

3. CEmONC PACKAGE : It includes all in BEmONC and the following:

- MATERNAL:
  - o Elimination of Mother to Child Transmission (EMTCT) services for HIV & Syphilis including Early Infant Diagnosis.
  - o Link ART at DH.
  - o Delivery of HIV positive women.
  - o CEmONC Services including signal functions
  - o Comprehensive management of all obstetric emergencies, eg, PIH/ eclampsia, sepsis, PPH, retained placenta, shock, obstructed labour, severe anemia
  - o Caesarean Section and other surgical interventions
  - o Blood bank/storage centre , Blood grouping and cross-matching
- NEW BORN:
  - o SNCU at DH or medical college.
  - o Management of LBW infants </=1800 g at SNCU level
  - o Managing all sick newborns (except those requiring mechanical ventilation major surgical interventions)
  - o Management of newborn sepsis
  - o Stabilization and referral of sick newborns for Level III care
  - o Follow-up of all babies.
- FAMILY PLANNING:
  - o Medical and Surgical methods of abortion upto 20 weeks as per provisions of MTP Act.
  - o Treatment of incomplete/ Spontaneous Abortions
  - o Management of all post abortion complications

(Depending on the availability of trained provider/s in facilities).

QUALITY ASSURANCES:

These are the aspects a facility must fulfil in order tho achieve NQAS certification and the benefits that accompany it. They are:

1. Assured Service Provision as per the scope of Service.
2. Safe, Hygienic and clean facility with provision of diet.
3. Process defined in SOP are implemented.
4. Quality Care with Respect and Dignity No financial barrier to access of services.
5. Facility measures, monitors and utilises the information for improvement and is able to sustain the changes.
6. Focused approach for improvement of processes improving clinical care.
7. Referral linkages (both ways) are well defined.
8. Functional grievance redressal mechanism.

Grievance Redressal Mechanisms:

This programme has a well established grievance redressal mechanism through interplay of call centres via toll free no.(104), a web portal and a help desk. It has made easier for the beneficiaries to present their grievances. It has been made sure that all the urgent grievances be addressed within 24 hours and if a facility fails to resolve a grievance, it must be escalated to the District/ state level.

Strengthening Surveillance Systems:

The maternal, perinatal and child (below 5 years) deaths are analysed by a strict surveillance and response system to support strategy and policy making. This is primarily carried out by MDSR (Maternal Death Surveillance and Response) through their primary informants (village level volunteers) in rural areas and ASHA/link workers in link settings. However, it failed to ensure 100% reporting of maternal deaths. To facilitate this, a software launched by GOI on 17th September, 2021and also providing monetary incentive of Rs.1000 to the first responders when they report through 104 call centre or state specified mechanism in non 104 states.

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Some must know information: NFHS-5

EXCERPTS FROM NFHS SURVEY

WOMEN'S EMPOWERMENT (WOMEN AGE 15-49 YEARS)

	2020-21	2015-16
Participation of married women in household decisions	92%	73.8%
Women who worked in last 12 months and paid in cash	24.9%	21.1%
Women owning a house and/or land (alone or jointly)	22.7%	34.9%
Women having a bank or savings account that they use	72.5%	64.5%
Women having a mobile phone that they themselves use	73.8%	66.6%

NUTRITIONAL STATUS OF ADULTS (AGE 15-49 YEARS)

	2020-21	2015-16
Women whose Body Mass Index (BMI) is below normal	10%	14.9%
Men whose Body Mass Index (BMI) is below normal	9.1%	17.7%
Women who are overweight or obese	41.3%	33.5%
Men who are overweight or obese	38%	24.6%
Average out-of-pocket expenditure per delivery in a public health facility (in Rs)	2,548	8,518
Women who have ever used the internet	63.8%	NA
Men who have ever used the internet	85.2%	NA
Households with any usual member covered under a health insurance/financing scheme	25%	15.7%

Implementation of Safe Surgery Checklists in Maternity OT at a Teaching Hospital in New Delhi using Quality Improvement methodology: Our Experience

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Background

The operation theatre is considered to be the most sacred place in a health care facility where the protocols need to be strictly adhered to. It is estimated that about 312 million surgeries are performed around the world each year.[1] In a study published by the International Surgical Outcomes Study Group, it was found that 16.8% of all adult patients undergoing elective surgery experienced one or more postoperative complications; and 2.8% of these patients died as a result of the complications.[2] Another recent study published in JAMA has revealed that more than 50% of the postoperative complications are a result of human error. [3] It has been suggested by various national and international organizations that use of checklists in healthcare may aid in prevention of human errors to a significant extent.

The World Health Organization (WHO) proposed the Surgical Safety Checklist (SSC) in the year 2008 as a part of the "Safe Surgery Saves Lives" campaign. It consists of 19 items to be followed in 3 critical phases:1) before the induction of anesthesia (Sign in); 2) before surgical incision (Time Out); and 3) post-procedure debriefing (Sign Out). [4]

The effectiveness of the WHO-SSC in prevention of morbidity, mortality and perioperative complications has been proven by many studies conducted globally. [5-7]

As a result, this valuable tool has been adopted by many institutions across the world. However, the implementation of the WHO-SSC remains a challenge in many facilities due to lack of education, sensitization and training leading to limited compliance.

Quality improvement(QI) is a novel strategy which aims at improving the processes involved in patient care, in order to achieve better patient outcomes.[8] It encompasses continuous and unyielding efforts of the healthcare workers, administrators and all other stakeholders to introduce and sustain changes in the health care system. It has the potential to overcome challenges in implementation of various health strategies such as the SSC.

Problem

Lady Hardinge Medical College & SSK Hospital is a tertiary care health facility situated at the heart of the capital city of Delhi. It has a busy Obstetrics and Gynecology department where approximately 300 caesarean sections (CS) are performed every month. With the roll out of the labor room quality improvement initiative of the Government of India (LaQshya), it was realized that the SSC was not being used for any of the CS being performed in the department. In this context, it was proposed that a quality improvement project may be undertaken to implement the use of SSC in at least 40% of Caesarean sections performed in the department in 4 weeks time.

Measurement

An assessment of the baseline use of the SSC in caesarean sections was conducted in the department of Obstetrics & Gynecology and it revealed that SSC was not used in any of the CS performed. We decided to use the percentage of CS covered by the application of SSC out of the total CS conducted in a month as the process indicator for the project. Our aim was to increase the percentage of CS conducted with the use of SSC from 0% to 50% in 4 weeks time. The nursing officers posted in maternity OTs were requested to enter the details about the use of SSC in CS as a yes or no in their existing record keeping register. The task of data collection was entrusted to one of the residents posted in the department of Obstetrics & Gynecology from the maternity OT registers maintained by the nursing officers. The frequency of data collection was initially every week followed by every fortnight and then every month due to operational constraints.

Design

A QI team was constituted with representatives of faculty members from the department of Obstetrics & Gynaecology as well the department of Anesthesia, residents, nursing officers and OT technicians. The problem of non use of the SSC during CS was analyzed using Fish-Bone analysis (Fig 1). The main causes

identified were non-availability of SSC, no existing policy or procedure for the use of SSC during CS and non- sensitization of the staff posted in maternity OTs about the use of SSC. The main interventions aimed at ensuring availability of the SSC and engaging the OT staff to create awareness about the importance of SSC. This was brought about by the following change ideas:

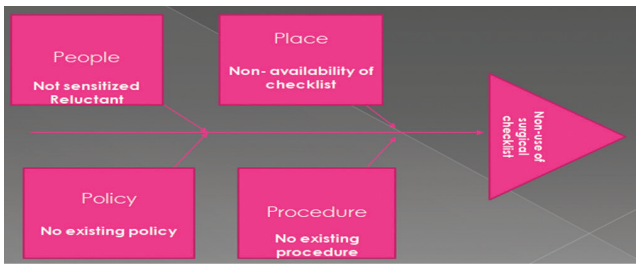

Figure 1: Fish Bone Analysis

a) Adapting the WHO SSC according to the local needs by a joint committee involving the Obstetricians and Anesthetists.

b) Making the SSC available in the department in consultation with the store officer of the institution.

c) Training and sensitization of the resident doctors and faculty members in the department to the importance and components of SSC. The scientific evidence backing the use of SSC during CS was presented to them and they were encouraged to have open discussions on the topic of patient safety.

d) Education, training and empowerment of the nursing officers posted in maternity OTs by role plays. They were encouraged to conduct the various phases of the SSC proactively and report problems faced, if any, so that a prompt solution may be devised by the QI team.

Strategy

The improvement process was dynamic where the team made various interventions via multiple PDSA cycles. The Point of Care Quality Improvement (POCQI) methodology was followed. [9] The team members met weekly to investigate the progress made and identified the issues that needed to be addressed in order to achieve the desired results. The data was tabulated using the standards for Quality Improvement Reporting Excellence Guidelines. [10] A total of 4 Plan-Do-Study-Act (PDSA) cycles were conducted (Table 1).

Results

Our main outcome measure was the percentage of CS conducted with the use of SSC which gradually increased from 0% to 85% in 4 weeks' time. The above statistics was later included in the monthly presentation of departmental statistics meeting to ensure sustenance. After the initial teething problems which were resolved by first 2 PDSA cycles. The project progressed smoothly later problems like changeover of OT staff and stockout of SSC surfaced. Two additional PDSA cycles were undertaken to rectify the above bottle necks and changes like induction training of OT staff and maintenance of buffer stock were initiated and incorporated in the standard operating procedures of maternity OTs.

The current use of SSC in caesarean sections in our facility is above 90% which is as per the requirements of the LaQshya initiative of the Government of India. (Fig.2)

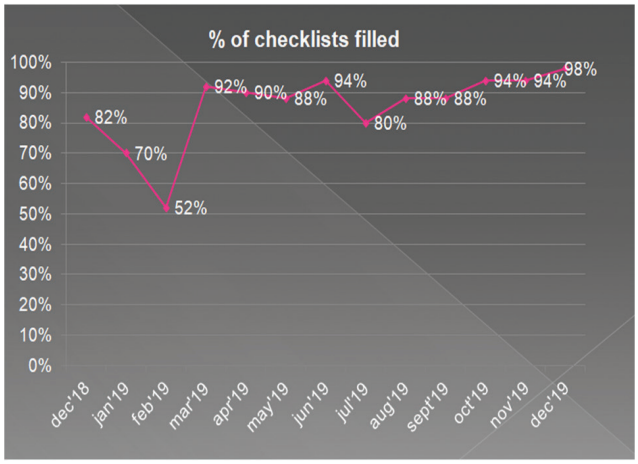

Figure 2: Time series chart

Discussion

The aim of the initiative was to ensure the use of SSC during CS in our facility with the aim to increase the safety of caesarean sections and decrease human errors. Gradually the use of SSC has been extended to other gynecological surgeries conducted in the department. There was an initial hesitation in the nursing officers to implement the checklist loudly asking the operating surgeons and anesthetists to introduce themselves but was overcome by role plays and persistent encouragement.

The key focus of all the interventions in this initiative was effective and continued communication between the team members and prompt resolution of problems encountered by providing administrative support. The team members ensured participation of all concerned by making frequent visits to the maternity OTs and interacting with them. The team members also made silent observations regarding the execution of SSC which allowed them to analyze and improve upon the shortcomings by interactive discussions and repeated

reinforcements. Similar strategies have been adopted by QI enthusiasts around the world to enhance compliance with the SSC.[11] A recent systematic review has analyzed 24 peer reviewed articles and has suggested various interventions which may be adopted by health care facilities to improve SSC compliance. These interventions include modifying the method of implementation of SSC; tailoring the SSC as per the local needs; enhancing involvement of surgeons; and favorable administrative policies.[12]

Conclusion

Quality improvement methods are immensely useful tools to implement changes in the healthcare system. The authors hope that the above success story of the use of QI methodology to bridge a significant gap in healthcare will motivate others to embrace this novel technique and enhance their practices. At the same time, the authors wish to emphasize the fact that quality improvement is a continuous process and a keen eye on the statistics is instrumental for long term sustainment of the improvement.

Table 1: PDSA cycles

	Plan	Do	Study	Act
PDSA 1	1. Create awareness among OT staff and doctors about importance of SSC. 2. Training of OT staff about conduct of SSC 3. Empowerment of nursing officers	1. Meeting organized with residents of department of Obstetrics & Anaesthesia as well as nursing officers to create awareness. 2. Information about SSC circulated on Whatsapp groups 3. A role play video made demonstrating the use of SSC during CS and circulated on whatsapp groups of OT staff.	A rise in the use of SSC during CS was observed at the end of the 1st week from 0% to 70% but it was observed that there was still confusion about correct use of SSC especially about the roles and responsibilities. The nursing officer would not was were hesitant in implementing the checklist loudly and fill up various columns on their own	Adapt A need was felt to have a uniform set of instructions for implementation of SSC.
PDSA 2	Clear and uniform instructions for the use of SSC in OT to be conveyed to all members of the OT staff	Written instructions defining the roles and responsibility of various staff members and the exact procedure of use of SSC were generated and displayed prominently in maternity OT.	At the end of the 2nd week, the percentage of use of SSC increased from 70 to 86%	Adopt The same interventions were continued and data collection was done weekly. The use of the SSC was found to be above 80%. However in week 7, there was a steep fall in the use of SSC from 80% to 41%. The reasons of the fall were analyzed and it was found that there was a change in the nursing officers posted in maternity OT and the new staff was not well oriented or sensitized to the use of SSC.
PDSA 3	There was a need to take everyone on board including the new members.	The new nursing officers were sensitized about the importance and method of conducting the SSC by the Nursing Officer Incharges.	At the end of the 8th week, the use of the SSC increased to 75%.	Adapt. The Nursing Officer incharges of the maternity OTs were requested to take an induction class of all nursing officers newly posted in the OT on regular basis. However, at the end of week 9 there was again a steep fall in the use of SSC to 10%. The reason behind the fall was found to be a stockout of the SSC in the hospital store.
PDSA 4	A steady supply of the SSC had to be ensured.	The nursing officers were asked to maintain a buffer stock of atleast 100 SSC at all times and inform the store officer well in advance.	The use of SSC increased from 10 to 63% at the end of 10th week.	Adopt The use of SSC has been steadily increasing since then and is maintained to more than 90% currently.

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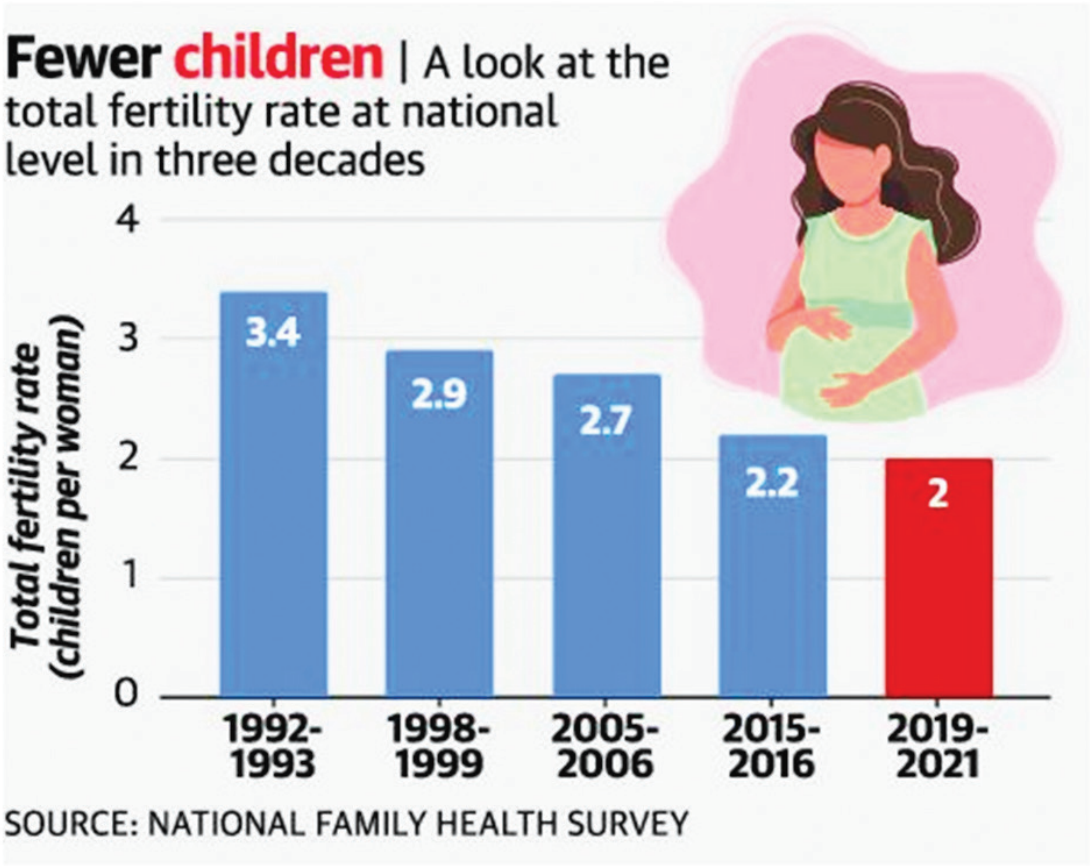
Quiz

1. Name the recently launched National programme targeting sickle cell anaemia.
2. Pradhan Mantri Bhartiya Janaushadhi Pariyojna (PMBJP) is implemented under which Union ministry?
3. "Thallesemia Bal Sewa Yojna" is a part of Hematopoietic Stem Cell Transplantation project, funded by which PSU?
4. What is the goal of SUMAN initiative under National health Mission?
5. Under which national programme, Mission Sampark and 90-90-90 strategy being followed?
6. Revised National Tuberculosis Control Program (RNTCP) was renamed in 2019. What is the new name?
7. What is the cash incentive for Laqshya certification for Government medical colleges?

Some must know information: NFHS-5



Please text the correct answers to Ms Manisha : 8368454415 with your complete name, mentioning the heading as "NARCHI BULLETIN QUIZ". We names of first five correct entries write published in the next issue.

Events Held

	ASHA sensitization program for Anaemia Mukt Dilli was organised in different districts of Delhi
20th April 2022	Venue: Lady Hardinge Medical College Attendees: 49 ASHA workers from New Delhi District of Delhi State Resource person Dr Manju Puri, Dr. Aparna Sharma, District Coordinator Dr. Manoj Gupta ASHA Coordinator Mr. Sukant
27th April 2022	Venue; Guru Gobind Singh Hospital Attendees: 39 ASHA workers from West Delhi District of Delhi State Resource person Dr Manju Puri, Dr. Aparna Sharma (Addl. Professor, AIIMS) and Dr Mrinalini Mani (HOD, GGS, Hospital) District Coordinator Dr. Manoj Gupta ASHA Coordinator Mr. Prashant
26th May2022	Venue; Sanjay Gandhi Hospital Attendees: 53 ASHA workers Northwest Delhi District of Delhi State Resource person Dr Manju Puri, Dr Poonam Joon, Dr Anjali, (Sanjay Gandhi Hospital) and Dr Monika Rana (Director H & FW NCT) District Coordinator Dr. Manoj Gupta ASHA Coordinator Ms. Meena
25th April 2022	E-CME on Induction of Labour: Optimizing Outcomes organised by the Safe Motherhood Committee of AOGD and NARCHI It was an online webinar attended by 359 participants
4th May 2022	CME-cum-Workshop on Surgical Site Infections organised by the Department of Obstetrics and Gynaecology, LHMC and SSK Hospital under the aegis of NARCHI (Delhi). Attended by 75 delegates
6th June 2022	E- Symposium on Hyperglycaemia in Pregnancy organized by DIPSI with AOGD & NARCHI. Program was attended by 150 delegates.
13th July 2022	Workshop on ''Prenatal screening –Strengthening linkages and bridging gaps ''on 13th July 2022 organized jointly in the department of Obstetrics & Gynaecology, Acharya Bhikshu Hospital Delhi
23rd July 2022	CME on Spotlight on Family Planning - Requiring Momentum on occasion of 'World Population Day' on 23rd July 2022
24th - 27th July 2022	World population day celebration from June 27th-24th July 2022 in Department of Obstetrics & Gynaecology, LHMC and other Hospitals with community awareness drive on Family planning

Forthcoming Activities

Workshop on ''Prenatal screening –Strengthening linkages and bridging gaps on **1st August 2022** in the Department of Obstetrics & Gynaecology, DDU Hospital

Breast Feeding awareness week from **1st-7th August 2022**, Department of Obstetrics & Gynaecology, LHMC

Virtual CME on hyperglycemia in pregnancy - Interventions for glycemic control on **6th August 2022**

15th World Congress, 23rd Indian Conference and 28th Annual Conference on **23rd- 25th September 2022**, at Hotel LALIT, New Delhi

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Welcome Message

Greetings from the Organising Committee of NARCHICON 2022,

Theme: Quality RCH Care: Strengthening Linkages Bridging Gaps.

We are delighted to welcome each one of you to Delhi to be a part of the prestigious **Narchi World Congress 2022** to be held from **23rd - 25th September.**

The conference aims to ideate, analyse and share inventive, feasible and implementable ways to encourage and disseminate knowledge, education and research to make high-level of care available to women. The Organizing Committee is working hard to put together an educational and scientific program for what will be an academic extravaganza.

We look forward to meeting and greeting you physically at the conference and exchanging ideas, experiences and skills. Stay tuned for all updates.

Regards,

Dr. SN Mukherjee
Patron

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General Secretary, Narchi

Dr. K K Roy
National President, Narchi

Dr. Veena Acharya
Dean ICMCH , Narchi

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- International & National Faculty
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- Dedicated & Hands On Skill Workshops
- Poster Competition for ASHA , ANM, Nurses Interns
- Quiz Competition for Post Graduates
- Health Camp on Nutrition & Anemia
- Free Paper & Poster Presentations (< 40yr/> 40yr Categories)

PRIZES FOR
Quiz & Free Paper/Poster Competition

Workshops

Hands On Workshops | 22nd September, 2022

- Honing Skills in Colposcopy & Onestop Management of CIN (Venue:SJH)
- Hands on Fetal Medicine Procedures (Venue: LHMC)

WHO Workshop | 23rd September, 2022

- Safe Abortion Values, Evidence & Respect

Skills Workshops - 23rd September, 2022

- Recent Concepts in New born Care
- Essential Labour Room Care: Nursing Officers
- Basic Obstetric Care : ASHA & ANM
- Screening for Cancer in Women ASHA & ANM

Paid Workshops - 23rd September, 2022

- Caesarean Section: Evidence Based Technique & Audit
- Medicolegal Issues in OBGYN practice
- Workshop on Maternal Collapse

Conference Program Highlights

Invited Orations:
1. Haematological Disorders in Pregnancy
2. Operative Hysteroscopy: Addressing Challenges
3. Conundrum of Rising CS Rate: Indian Perspective
4. Acute Liver Failure in Pregnancy
5. Challanges Faced in Prevention of Cervical Cancer
6. RPL

Keynote Addresses:
1. Fertility Preserving Surgeries in UV Prolapse
2. Decoding Surgical Site Infections
3. Positive Birthing Experience

Interesting Panel Discussions:
1. Vexations of The Breast : What a Gynaecologist Must Know
2. Miseries of Prementrual Syndrome and Peripartum Mood Disorders
3. Critical Care Cases : Imperative Skills for a Safe Practice
4. Interconception Care : Missed Opportunity
5. Contraceptive Prescriptions: Challenges & Solutions
6. Litigation and Violence Free Obstetric Practice

Exciting Video Sessions of Obstetric & Surgical Skills
1. Maternal Collapse **2.** Shoulder Dystocia **3.** Assisted Breech Delivery **4.** Forceps Application
5. Vacuum Application **6.** External Cephalic Version **7.** Befriending the Internal Iliac Artery Ligation
8. Scar Ectopic **9.** Cervical Ectopic **10.** Abdominal Cerclage **11.** Hysteroscopic Management of RPOCs

Recent Advances
1. ERAS: Key to Successful Post-Op Recovery **2.** ART & Surrogacy Act- an Update
3. Cosmetic Gynaecology- New Kid on The Block **4.** Dealing With The Transgender Patient
5. New WHO ANC Model **6.** Labour Care Guidelines **7.** Vaginal Microbiome and The Fetus
8. New MTP Act

Tackling the Siblings- Endometriosis & Adenomyosis
1. Enhancing skills in fertility sparing surgeries for adenomyosis (Video session)
2. Intercepting deep infiltrating endometriosis (Video session)
3. Recurrent endometriosis: the way forward
4. Managing The Woes of Adolescent Endometriosis

Perineum Preservation
1. Prevention of Perineal Trauma **2.** Postpartum Perineal Strengthening
3. Revisiting Complications of Episiotomy
4. Dealing with Complete Perineal Tear (Video session)

Addressing the Needs of Cancer Survivors
1. HRT : What ,When, How and How Long **2.** Fertility Concerns **3.** Care During Pregnancy
4. Enhancing The Quality of Life

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- Honing Skills in Colposcopy & Onestop Management of CIN (Venue: SJH) — INR 1500/- ☐
- Hands on Fetal Medicine Procedures (Venue: LHMC) — INR 1500/- ☐

Pre-Conference Workshops | 23rd September, 2022

Safe Abortion Values, Evidence & Respect: WHO Workshop ☐ Please Choose

*Conference Registration is Mandatory to Attend Dedicated & WHO Workshops

Free Skills Workshops - Pre Lunch

Please Choose Any One

- Recent Concepts in New born Care ☐
- Essential Labour Room Care: Nursing Officers ☐
- Basic Obstetric Care : ASHA & ANM ☐
- Screening for Cancer in Women ASHA & ANM ☐

Paid Workshops - Post Lunch

Please Choose Any One

Caesarean Section: Evidence Based Technique & Audit	INR 1500/-	☐
Medicolegal Issues in OBGYN practice	INR 1500/-	☐
Workshop on Maternal Collapse	INR 1500/-	☐

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For More Information Please Contact: Ms. Bhavna Manral +917042999783

Event Picture

ASHA contact program for Anemia Mukt Dilli was organised in different districts of Delhi
Date : 20.4.2022, Venue : Lady Hardinge Medical College
Attendees: 49 ASHA workers from New Delhi District of Delhi State
Resource person Dr Manju Puri , Dr. Aparna Sharma
ASHA co-ordinator Mr. Sukant and Dr. Manoj Gupta, District Co-ordinator.

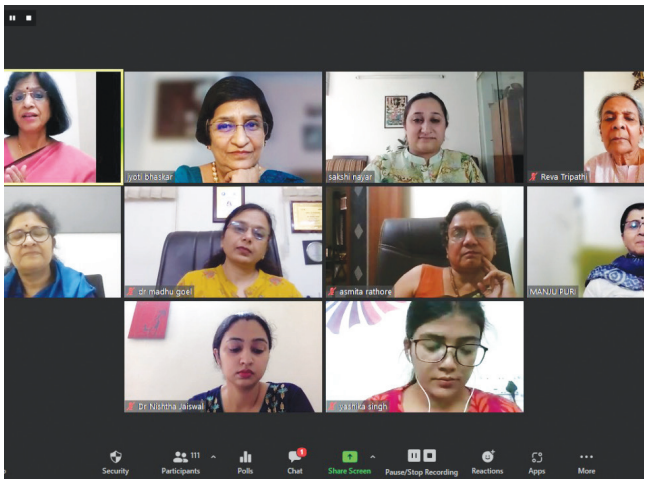
Attendees: 39 ASHA workers from West Delhi District of Delhi State
Date 27.04.2022, Venue ; Guru Gobind Singh Hospital
Resource person Dr Manju Puri , Dr. Aparna Sharma (Addl Professor, AIIMS)
and Dr Mrinalini Mani (HOD, GGS, Hospital)
ASHA co- ordinator Mr. Prashant and Dr. Manoj Gupta, District Coordinator.

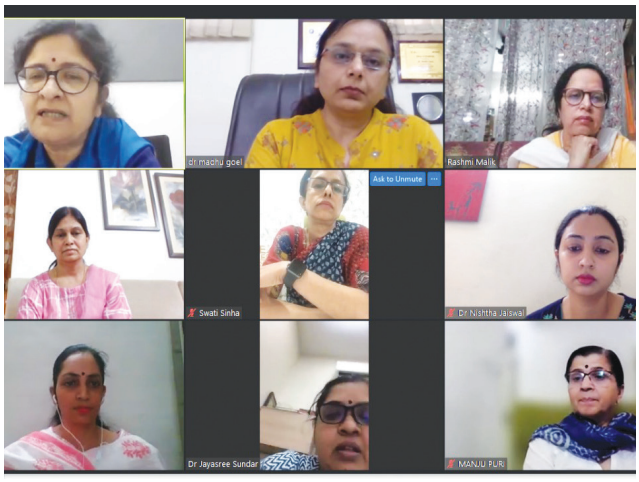
Attendees: 53 ASHA workers Northwest Delhi District of Delhi State
Date: 26.5.22 Venue ; Sanjay Gandhi Hospital
Resource person Dr Manju Puri , Dr Poonam Joon, Dr Anjali, (Sanjay Gandhi Hospital)
and Dr Monika Rana (Director H ; FW NCT)
ASHA co-ordinator Ms.Meena and Dr. Manoj Gupta, District Coordinator

ASHA contact program for Anemia Mukt Dilli
Date: 15.06.2022, Venue : Deen Dayal Upadhaya Hospital
Attendees: 25 ASHA
workers Resource person Dr Shashi Lata Kabra

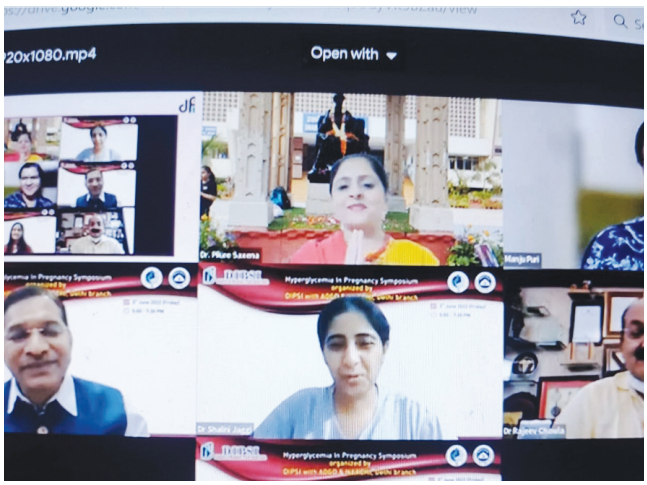
ASHA contact program for Anemia Mukt Dilli
Date: 15.06.2022, Venue : Deen Dayal Upadhaya Hospital
Attendees: 25 ASHA workers
Resource person Dr Mrinalini Mani

CME-cum-Workshop on Surgical Site Infections organised by the department of obstetrics and gynaecology, LHMC and SSK Hospital under the aegis of NARCHI (Delhi)
on 4th May 2022 from 2 PM to 5 PM. ttended by 75 delegates





E-CME on Induction of Labour- Optimizing Outcomes on 25th April 2022, 4-6pm, Organised by the Safe Motherhood Committee of AOGD and NARCHI.. It was an online webinar attended by 359 participants



E- Symposium on Hyperglycaemia in Pregnancy
organized by DIPSI with AOGD & NARCHI. Program was attended by 150 delegates

Asha contact programme at UPHC at kalayanpuri jointly with PSM dept LHMC for anaemia mukt dilli and promotion of contraception- Dr Manju Puri

Workshop on "Prenatal screening –Strengthening linkages and bridging gaps"
13.07.2022: In the Department of Obstetrics & Gynaecology ,Acharya Bhikshu Hospital led By Dr Manisha

ASHA contact programme led by Dr Anita Rajoria and team on 21.07.22 at Hedgewar Hospital


Activities on occasion of World population day celebrated by NARCHI, LHMC in collaboration with Directorate of Health & Family welfare, New Delhi District from 27th June 2022-24th July 2022
CME On Spotlight on Family planning Services and Quiz for Postgraduates


Activities on occasion of World population day celebrated by NARCHI , LHMC in collaboration with Directorate of Health &Family welfare , New Delhi District from 27th June 2022-24th July 2022
Public awareness program in the GOPD , LHMC 6th July 2022


Activities on occasion of World population day celebrated by NARCHI, LHMC in collaboration with Directorate of Health & Family welfare, New Delhi District from 27th June 2022-24th July 2022
Public awareness Program in Motibagh dispensary 16th July 2022

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