



Good Health and Well-being

Foundation of Health Technologies | Month 2018

National Nutritional Anaemia Prophylaxis Programme (NNAPP)

A stepping stone to reduce the prevalence and incidence of Anaemia among women of reproductive age group



Data related to SDG-3

- ◆ In the National Family Health Survey (NFHS)-3, the under-five mortality rate was 73 for every 1000 live births among the urban poor, compared to the average of 48 among all city dwellers in India.
- ◆ A re-analysis of the third National Family Health Survey showed that one in 10 children born in the slums did not live to see their fifth birthday; only 40 percent of the slum children received all the vaccinations; of the 2.25 million births each year among the urban poor, more than half were at home; 54 percent of the children under five years were stunted; and 47 per cent were underweight.
- ◆ Over half (56 percent) of the child births occurred at home, in slums, putting the life of both the mother and new born to serious risk.

Sources of Data-

Census of India, 2011
NFHS- III
NSSO, 2011-12 report
NSS 69th Round (2012) report

Executive Summary-

Anaemia is a major public health issue of Indian subcontinent, as half of the India's women and 3/4th of India's children are suffering from this disease. According to NFHS 4 report Fifty-three percent of women and 23 percent of men age 15-49 have Anaemia and fifty-eight percent of children age 6-59 months have Anaemia. It has turned to be a national calamity or can be called as national diseases. This report depicts that causes of Anaemia include malaria, hookworm and other helminths, other nutritional deficiencies, chronic infections, and genetic conditions. Anaemia is a serious concern for children because it can impair cognitive development, stunt growth, and increase morbidity from infectious diseases. Anaemia prevalence increases with increasing birth order of children and is higher among the children of Anaemic mothers than non-Anaemic mothers. According to World Health Organization Anaemia is a condition in which the number of red blood cells or their oxygen-carrying capacity is insufficient to meet physiologic needs, which vary by age, sex, altitude, smoking, and pregnancy status. Iron deficiency is thought to be the most common cause of Anaemia globally, although other conditions, such as folate, vitamin B12 and vitamin A deficiencies, chronic inflammation, parasitic infections, and inherited disorders can all cause Anaemia's. In its severe form, it is associated with fatigue, weakness, dizziness and drowsiness. Pregnant women and children are particularly vulnerable. Miller. J. L. (2013) defines in his study that Iron deficiency Anaemia arises when the balance of iron intake, iron stores, and the body's loss of iron are insufficient to fully support

production of erythrocytes. Iron deficiency Anaemia rarely causes death, but the impact on human health is significant. He further added that Iron fortification remains the mainstay of efforts aimed toward the treatment or prevention of iron deficiency Anaemia. As a general rule, menstruating and pregnant women along with their children clearly represent the largest at-risk population for this disease. Mehrotra. M. (2018) found that increasing gravidity and parity in pregnant women was seen to be associated with an increase in the prevalence of severity of Anaemia.

This study has found that women with high education were less frequently anemic than illiterate women or women with primary or secondary education. Moreover, it has also observed in the study that the prevalence of severity of Anaemia in patient consuming omnivorous/ non-vegetarian diet was less than those consuming only vegetarian diets. It has been debated that even after a phase of implementing Anaemia control program there is a limited improvement in the prevalence and severity of Anaemia in pregnant women. . Sharma. H. (2018) found that women belonging to bottom of wealth quintile have highest prevalence of worst Anaemia status. In the other hand, women belonging to well-off household are associated with better nutrition status and were less vulnerable to get anaemic. This tells the socio-economic status became an important determinant of Anaemia in India. The nutrition status of women directly impacts the Anaemia status. Therefore, we can conclude from the above mentioned studies that the probability of slum women getting anaemic is more than the other parts of Delhi. To reduce the percentage of women getting anaemic in slum setting of Delhi we should focus on providing adequate food, treatment and supplements to every section of society. Kumar. A. (1999) describes about the program in his description he talks about implementation of the program, which is done through the Primary Health Centers and its sub centers. The health centers aims at decreasing the prevalence and incidence of anemia in women of reproductive age. It focuses on three vital strategies: promotion of regular consumption of foods rich in iron, provisions of iron and folate supplements in the form of tablets to the high risk groups, and identification and treatment of severely anemic cases. The program solicits the support of various departments in implementing the die-

modification and supplementation measures. Pregnant women are recommended to have one big tablet per day for 100 days after the first trimester of pregnancy; a similar dose applies to lactating women and IUD acceptors. Preschool children (ages 1-5 years) are recommended to take one small tablet per day for 100 days every year. Adult tablets contain 100 mg iron and 500 mg folic acid, while pediatric tablets contain 20 mg iron and 100 mg folic acid. For treatment of severe anemia, women in the reproductive age group are recommended to take three adult tablets per day for a minimum of 100 days.

Problem Statement-

The National Nutritional Anaemia Prophylaxis Programme (NNAPP) has been launched in the year 1970s. This policy has been implemented for last 50 years in India level but still 50% of the women in their reproductive age group are anaemic. This program failed to achieve its milestone of bringing down the rate of child and maternal deaths in India. Therefore, the government should conduct ground level research to find the reasons behind low outcome of the policy. The implementation of the policy should be monitored and evaluated to understand the flaws in the implementation strategy. The ground level research and modification in implementation strategy will probably help in strengthening the outcome of the policy.

Scheme Detailing-

Eligibility- The scheme beneficiaries are children in 1-5 years of age, pregnant and nursing mothers, female acceptor of terminal methods of family planning and IUDs.

Roles and Responsibility-

- ◆ Promotion of regular consumption of foods rich in iron.
- ◆ Supply of iron and folate supplements in the form of tablets to the target group.
- ◆ Identification and treatment of severely anaemic cases.
- ◆ The recommended daily dosages of iron and folic acid (IFA) tablets is as follows:
 - ⇒ **Adult women: 60 mg elemental iron + 0.5 mg folic acid**
 - ⇒ **Children (1-5 years): 20 mg elemental iron + 0.1 mg folic acid**

Financial Implementation-

It is a centrally sponsored scheme.

Implementation-

- ◆ The programme is implemented through the Primary Health Centers and its sub-centers.
- ◆ The multipurpose worker female and other para-medics in the PHC's are responsible for the distribution of IFA tablets (adult and paediatric doses) to beneficiaries.

Policy Alternative-

The Policies are based on national statistical data which guides the policy makers to formulate the policies. The policy maker set a fixed milestone that they target to achieve in a fixed timeline. An effective policy starts to achieve its milestone within a year after implementation of the policy. So the national level database need to be accurate and reliable, so that policy makers and researchers will be better equipped to estimate the strategies to improve iron intake of targeted population. The implementation should be monitored on ground for achieving better outcome. The committee should conduct experimental research to understand the effectiveness of the policy. The Policy focuses on all pregnant and nursing mothers, female acceptor of terminal methods of family planning and IUDs but

there should be a separate study to understand the usefulness of iron supplementation for women who do not have iron deficiency anemia. Moreover, there is an urgent need for clinicians and public health professional to identify early in pregnancy women who are at risk for developing iron deficiency Anaemia in the 1st trimester of the pregnancy. If researchers can find a solution for bringing down the risk of Anaemia in early pregnancy that will help to bring down maternal and child mortality, as it directly risk both child and mothers health. The problems can be sorted out with SMAART approach that can be used for collecting accurate and reliable data and those data can be further used to conduct solution driven researches.

Policy Recommendation-

There are two approaches which can be applied to reduce the prevalence and incidence of Anaemia among women of reproductive age group and children below age 6 years. Iron deficiency anemia is one of the major problems in public health on the basis of prevalence estimates and health effects, the public health professional can strategize prevention and detection model of Anaemia, which has to be implemented throughout the nation. The approaches will bring positive implications for the population at risk and the general population. According to Iron Deficiency Anemia: Recommended Guidelines for the Prevention, Detection, and Management Among U.S. Children and Women of Childbearing Age report there are two approaches that can be used to prevent and detect Anaemia namely population based approach and individual based approach, the population based approach seeks to lower the population's risk by enriching and fortifying the food supply and by altering individual food choices through education and information programs. And the individual-based approach seeks to identify those at the highest risk and to treat them by providing both supplements and education to increase the iron contents of their diets. The two approaches are complementary means of achieving lower rates of iron deficiency anemia. Both the approach should be implemented in one point of time; we are already focusing more on individual based approach. Now it's a high time to implement population based approach with the help of informatics to expand the reach of the approach and for better monitoring of the program. The other ways to improve the outcome of the program is to educate

both husband and wife about iron deficiency Anaemia and the food which should be included in their diet to prevent iron deficiency Anaemia. A portable preventive model can be created and installed in anganwadi centers for Anaemia control which includes hemoglobin test and nutrition counseling for all population. The IEC, BCC and mode of media should be implemented in educating every population. A nutritionist should be included in the policy making committee review the diet which should

be included in early pregnant women for prevention of Anaemia in later stages. Iron in various forms should be used for both enrichment and fortification of food products. The implementation of the program should include medical persons and they should follow the guidelines given to them while training. The policy makers should give emphasis on monitor and evaluation of the program. There is a need to conduct ground research to reach the targeted milestone of the program.

Methodology

- ◆ The programme is implemented through the Primary Health Centers and its sub-centers.
- ◆ The multipurpose worker female and other para-medics in the PHC's are responsible for the distribution of IFA tablets (adult

Intervention

- ◆ This program failed to achieve its milestone of bringing down the rate of child and maternal deaths in India. Therefore, the government should conduct ground level research to find the reasons behind low outcome of the policy. The implementation of the policy should be monitored and evaluated to understand the flaws in the implementation strategy.

Anticipated Outcome

- ◆ The ground level research and modification in implementation strategy will probably help in strengthening the outcome of the policy.

Impact

- ◆ And detection model of Anaemia, which has to be implemented throughout the nation. The approaches will bring positive implications for the population at risk and the general population. According to Iron Deficiency Anemia: Recommended Guidelines for the Prevention, Detection, and Management Among U.S. Children and Women of Childbearing Age report there are two approaches that can be used to prevent and detect Anaemia namely population based approach and individual based approach, the population based approach seeks to lower the population's risk by enriching and fortifying the food supply and by altering individual food choices through.
- ◆ Start from the approaches will bring positive implication.

Collaboration

- ◆ No Collaboration till date

Sources of Funding

- ◆ Foundation of Healthcare Technologies Society

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