

## Universalization of preconception care: Need of the day

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The genesis of emphasis on preconception care was the observation that, despite focus and improvement in prenatal care, the adverse pregnancy outcomes for the mother and the child continue to remain higher than the desired level. Probably the first clear recommendation to include preconception care for preventing adverse pregnancy in the form of low birth weight dates back to 1985<sup>(1)</sup>. Even The American College of Obstetricians and Gynecologists (ACOG) has underlined the importance of preconception<sup>(2)</sup>. The United States of America (USA) was the first to provide official guidelines for implementing preconception care. A few countries like Canada, Belgium, and the Netherlands immediately followed the USA. World Health Organization (WHO) convened meetings in Geneva (2012) and Delhi (2013) to endorse the evidence and set interventions. Preconception care is defined as “the provision of biomedical, behavioral, and social health interventions to women and couples before conception occurs.” It endorses two crucial aspects; first, it is expected to improve overall health and well-being and, subsequently, the pregnancy and child outcomes. The second aspect is that interventions should be directed toward the couple and not merely the women<sup>(3)</sup>. It has been well accepted that in the continuum of care preconception period was comparatively ignored. About a decade back WHO identified 13 key areas which can be addressed by the provision of preconception care<sup>(4)</sup>. Most of them are valid in India, also. However, the role of psychoactive substance use, interpersonal violence, and female genital mutilation is not fully explored in India. Similarly, studies and facilities for genetic conditions are limited. The recommendations primarily include planning pregnancy, nutritional supplementation, and counseling about proper weight, infection prevention, and detection and management of chronic diseases but may consist of components beyond the scope of the health sector, like education to adolescent girls<sup>(5,6)</sup>.

The beneficiaries of preconception care can be grouped into two categories. Newly married couples and those in the inter-pregnancy phase. Most of the interventions are similar in both groups, except for optimizing the inter-pregnancy interval.

The government of India, through the National Institution for Transforming India (NITI) Aayog, the United Nations (UN) agencies, and the state governments, review and monitor the status towards achieving Sustainable Development Goals (SDGs). The third goal is exclusively related to health. However, all the goals, targets, and indicators are interlinked.

The first two targets under goal three are directly related to reproductive and child health. Target two has two indicators; Under-five Mortality Rate and Neonatal Mortality Rate. By 2030, the Maternal Mortality Ratio (MMR) has to be brought to less than 70 per one lakh live births, under-five mortality less than 25 per thousand live births, and neonatal mortality rate to less than 12 per thousand live births. The latest MMR for 2018-20 is 97 per lakh live births<sup>(7)</sup>. The Under-five Mortality Rate in India in 2020 is 32 per thousand live births, and the Neonatal Mortality Rate is 20 per thousand live births<sup>(8)</sup>. Midway through the duration of the achievement of SDGs, the country is far from the targeted indicators. Hence some new strategies need to be explored for timely achievement.

The government of India has prepared a New-born Action Plan (INAP) following WHO's resolution passed in the sixty-seventh assembly<sup>(9,10)</sup>. The Indian action plan mentions preconception care, but it is far from implementation. The Federation of Obstetrics and Gynecological Societies of India (FOGSI) have brought out good clinical practice recommendations on preconception care<sup>(6)</sup>. The practice is limited to private obstetricians, mostly in urban areas.

Along with the USA, Canada, and the Netherlands, a few more countries like China, Spain, Australia, Hungary, South Korea, and recently the United Kingdom (UK) have started comprehensive intervention packages. Some countries, including India, have targeted interventions like family planning, anemia prevention, folic acid supplementation, etc.

The comprehensive intervention package in the Indian context may have the following components. Planning of pregnancy not only by the couple but the family as such is necessary. The dominant role of the mother-in-law cannot be neglected<sup>(11)</sup>. The estimated proportion of unintended pregnancies may be about 50%<sup>(12)</sup>. It is known that there is a high risk of maternal death and adverse pregnancy outcomes among adolescent women. This aspect includes services/counseling targeting avoidance of teenage pregnancy, optimum inter-pregnancy interval, and achieving optimum health regarding anemia and Body Mass Index (BMI). Nutritional counseling / supplementation, including treatment and prevention of anemia, micronutrient supplementation, especially folic acid, B12, regular deworming, and overall diet, depending on BMI, is essential. Thorough medical examination and investigations to detect and manage chronic diseases like hypertension, heart diseases, diabetes, thyroid malfunctions, and Sexually


Transmitted Diseases (STDs), including Human Immunodeficiency Virus (HIV), epilepsy, etc. Consumption and addiction to tobacco in any form and alcohol should be strongly discouraged. Smokeless tobacco in the form of *Mishri* (application of roasted tobacco on teeth/gum) and *Gutkha* (oral consumption of tobacco and adding some components) is highly prevalent in India. Consumption of alcohol during pregnancy is known to result in fetal alcohol spectrum disorders and may lead to Low Birth Weight (LBW). The analysis generated through various studies suggests that almost all interventions have good or fair evidence of modifying pregnancy outcomes<sup>(13)</sup>. The risk factors don't have an exclusive association with a specific outcome. Most risk factors affect one or more adverse outcomes<sup>(14)</sup>.

Most interventions are based on lifestyle changes, implying that a robust behavioral communication change strategy is essential.

Acceptance of universal implementation of preconception care may raise specific vital points. In the background of insufficient coverage and quality of prenatal services, the recommendation of universalization may be debatable. There may be additional financial implications for the already resource-crunch health sector. But the author believes that after receiving preconception care, the woman will mostly have better compliance with advice and services during prenatal care. The health system is in place, and most of the investigations and counseling which form constituents of preconception care are already advised during prenatal care. By universal implementation, the system is preponing some aspects. There will not be an additional cost for one-time investigations, but for repetitive investigations and services, there will be an additional marginal cost. The indirect cost includes the time spent by health care workers and remuneration to Accredited Social Health Activist (ASHAs). One has to weigh the cost and benefits. The author is confident that universal implementation of preconception care will be immensely beneficial because experts have advocated it after reviewing the generated strong evidence.

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