



Pre Conception Health and Counselling-Are We Doing Enough?



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Short Communication

The twentieth and twenty first centuries have witnessed remarkable advances in the field of maternal fetal medicine. Unfortunately, still the mothers are dying around the world with complications of pregnancy and most of these pregnancies are unplanned. Millennium development goal number 5 focused on reduction of maternal mortality but all countries could not achieve their targets. Now, in 2015 Sustainable Development Goals [SDGs] were finalized. The agenda recognizes non-communicable diseases [NCDs] as a major challenge for sustainable development and global community realizes that NCDs as an emerging priority to advance women's health and development. In which Goal number 3.1 deals with improving health for all ages, including women in reproductive health and the aim is to reduce maternal mortality from 196 to 17 per 100,000 maternities. One of the foremost and well recognized critical component is preconception health and care or the lack of it, still in many countries including those in middle east.

Obstetric medicine has an extreme importance in this regard and especially the pre-pregnancy care has been recognized as part of the spectrum of reproductive health care. The concept of pre-conception clinics is not new but unfortunately still not practiced in many countries especially developing countries, and it is one of the important reasons for still persisting high maternal and fetal mortality and morbidity. The importance of pre conception clinics has been proven beyond doubt to help in reducing maternal and fetal morbidity and mortality. Few of the examples are its benefit observed in Women with medical complications including hypertension, diabetes mellitus, HIV, epilepsy to name a few, Women with history of previous congenital anomalies, Women with obesity or with eating disorders, Presence of familial haemoglobinopathies, Contraception can be addressed in these clinics in case there is need to delay pregnancy in women suspected to be high risk.

The concept of pre conception care and screening is widely defined as the provision of biomedical, behavioral and social health interventions to women and couples before conception occurs in order to reduce the risks to maternal and fetal health in high risk conditions. Preconception care encompasses a range of health

promotion, risk identification and preventative measures in order to promote the health of women contemplating pregnancy and to reduce the risk of congenital anomalies [1]. It aims to improve health of the mother to be, in order to reduce the risks to the women in case she becomes pregnant. It helps women to change their behavior like stopping smoking alcohol etc. in case of obesity, which is an increasingly global problem, to reduce the medical complications associated with it if the women are in optimal weight and health before pregnancy. It helps in reducing environmental factors also including the problem of domestic violence and unplanned pregnancy which can help in improving maternal and child health in future. In familial haemoglobinopathies, partners can be screened for if not done already and the risks to the child of developing the same condition can be anticipated. Preconception clinic visit is actually screening visit for women who are contemplating pregnancy, in order to achieve optimal health before the woman conceives. It helps in reducing maternal and child health problems.

It has the benefits of identifying emerging problems that may have gone unnoticed prior to women getting pregnant. It is especially important in cases of women with cardiac diseases where the optimal cardiac status of pregnant women may help in reducing maternal morbidity and even mortality. Despite the greatest effect of this health intervention, yet little work has been done to actually define and promote health care screening of women in preconception clinics, especially in developing countries. Thus the development of preconception health initiatives must be traced back through the history of international health movements, starting with the promotion of global primary healthcare, followed by safe motherhood initiatives and culminating with the women's rights and healthcare.

What is the Impact of Pre-Conception Care on Maternal and Child Health Outcomes?

The few programs that have collected targeted multiple pre conception conditions within a wide population over an extended period of time have demonstrated promising results. For example,

The Hungarian preconception clinic model, run over a period of 10 years, realized improvements in infectious disease screening and immunization, chronic disease management, nutritional optimization, and stopping smoking and alcohol, this counselling got translated into meaningful maternal and neonatal outcomes [2]. According to WHO report held in Geneva in 2013 [3], that argues on the global consensus to reduce the maternal and childhood mortality shows that preconception care greatly delivers a positive impact on maternal and adolescent health outcomes. The report provides a foundation for implementing a package of promotive, preventive and curative health interventions shown to have been effective in improving services provided during pregnancies and child birth. It also guides non-health sectors, foundations and civil society organizations to collaborate with and support public health policy makers to maximize gains for maternal and child health through preconception care. The Millennium Development Goals MDG, number 5 deals with reducing maternal mortality. The struggle around the world continues to achieve the targets of reduction of maternal mortality and adequate pre conception care can help in achieving those targets. Adequate diabetic control, advice on alcohol and smoking, and folic acid supplementation and fortification are among the top priorities in preconception healthcare interventions, which can lead to significant reduction in congenital anomalies subsequent to poor control of these factors.

The delivery of pre conception care could be population based, clinic focused, hospital based, or by community outreach, depending on the target conditions and specific intervention [4]. Regarding diabetes, a UK based study demonstrated that in a population of 1000 women with diabetes who are planning pregnancy, pre conception health care could result in a saving of almost £ 1million and 16 averted major congenital malformations [5]. According to a study conducted by Elsinqa et al. [6], the extent to which women who have participated in preconception care counselling (PCC), increases their knowledge on pregnancy related issues, risk factors and preventive measures. Then they change their behaviors before & during pregnancy and it is also important to provide an overview of adverse pregnancy outcomes among such women in order to make them understand that pregnancy should be delayed till the optimal health level is achieved if possible. Levels of knowledge in women were not pregnant yet, after PCC, were comparable to those in women who became pregnant after PCC, indicating that even before pregnancy, PCC increased knowledge in women contemplating pregnancy. Significantly more women started using folic acid before pregnancy and reduced alcohol intake during the first 3 months of pregnancy. This greater knowledge before pregnancy lead to a changed behavior of women to reduce adverse pregnancy outcomes.

Importance of Preconception Health and Counselling

Knowing the fact that more than one-half of pregnancies are unintended, preconception care should be considered an integral part of primary care for women of reproductive age. In the majority of cases, women do not think about having a baby who has any kind of problem. Most women are not aware of their own significant

medical history which could pose a risk to a developing fetus. Likewise, they may not understand that pregnancy carries a certain number of risks as well. In Saving Mother's lives: reviewing maternal deaths to make motherhood safe: 2006-08, the most recent report from the centre for maternal and child enquiries, a lack of pre-pregnancy counselling has been highlighted as a contributory factor in maternal deaths in women with preexisting medical condition [7]. Common issues in preconception care may also include family planning, achieving a healthy bodyweight, screening and treatment for infectious diseases, updating appropriate immunizations and reviewing medications for teratogenic effects. The wider application of the core components of preconception care such as risk assessment, health promotion and intervention has the potential to enhance the health and overall wellbeing of women, infants and children around the globe. Preconception care contributes to the opportunities that prevent and control diseases that occur at multiple stages of life, from infancy through childhood and adolescence to adulthood. Although preconception care aims primarily at improving maternal and child health, it brings health benefits to the adolescents, women, men irrespective of their plans to become parents.

Singh et al. [8], summarizes the importance of preconception counselling by presenting the facts that has been affecting maternal and child health globally. According to Singh et al. [8] 4 out of 10 women report that their pregnancies are unplanned. As a result, essential health interventions provided once a woman is pregnant, will be too late in 40% of pregnancies. Maternal undernutrition and iron deficiency anaemia increase the risk of maternal death, accounting for at least 20% of maternal mortality worldwide. Up to 35% of pregnancies among women with untreated gonococcal infections result in low birth weight infants and premature deliveries, and up to 10% result in perinatal death. Estimates indicate that eliminating smoking before or during pregnancy could avoid 5-7% of preterm related deaths and 23-24% of cases of sudden infant death syndrome [SIDS]. Female genital mutilation increases the risk of neonatal death (including stillbirths) by 15 to 55%. In the absence of interventions, rates of HIV transmission from mother to child are between 15-45%.

Implementation Strategies

A key challenge of pre-conception healthcare is identifying how it can best be delivered at a population level. Because of the diverse and complex nature of preconception care, there is no one best-fit method of service delivery: each has its own strengths and weaknesses. Although primary care strategies may be able to access most women of child bearing age opportunistically, a hospital-based clinic model may afford a more individualized and better resourced model, with improved patient outcomes. Whereas community outreach may be best able to target high risk individuals, inter-conception care may have a more favorable reception, being delivered in a reproductive healthcare setting.

Potentially, the best model may indeed be the simultaneous delivery of a combination of all of the above depending on the condition and the individual patient. The delivery of preconception

healthcare requires a flexible approach that recognizes not only the broad scope of possible preconception conditions requiring intervention and the range of ways it can be provided, but also an approach that values the unique personal situation of the individual woman. This has been previously recognized by De Weerd et al. [9]. The Sustainable Development Goals (SDGs) are known officially as transforming our world: the 2030 Agenda for Sustainable Development. The SDGs consist of 17 goals and 169 targets to be achieved by 2030, covering a broad range of issues, including food security, nutrition, health and education. The agenda recognizes non-communicable diseases (NCDs) as a major challenge for sustainable development. And the global community has identified NCDs as an emerging priority to advance women's health and development. The proposed Ending Preventable Maternal Mortality strategic framework draws attention to chronic NCDs and social determinants that contribute to maternal mortality.

Conclusion

Global recognition of the potential benefits associated with pre-conception health promotion is not new. International policy directives and practice recommendations relate to women's health, reproductive freedom, and child survival almost always include provisions for the enhancement of women's wellness and social status as a means of reducing adverse pregnancy outcomes. However, the relative success of preconception care programs in both developed and developing countries is directly related to the availability and accessibility of health care for women. Due to this, WHO's World health report conducted in 2005, 10, "make every mother and child count" details the inherent interrelation of the needs of the mother and child, indicates that reproductive health comprises an essential element of the continuum of maternal and child health, and calls for a reformulation of interventions from vertical programs to those offering a wider range of services. Healthcare providers are increasingly being urged to provide such care by their professional organizations.

It is hoped that, with its stated goal of improving birth outcomes, preconception care could help ensure that the health status of women of reproductive age would be optimized. Hence it should not be limited to a single medical visit, rather it should be globally incorporated into every medical decision and treatment recommendation for the safety and health of women of child bearing age. Preconception care programmes may face significant barriers to implementation however the obvious population wide benefits of such programmes must not be ignored, and should form an important consideration in health-service delivery planning in the future.

Recommendations

Few recommendations can be given in order to emphasize the importance of dedicated preconception care clinics.

A. Considering the importance of preconception care in improving the outcome for mother and fetus in high risk

pregnancies, pre conception clinics should be part of antenatal clinics, not only in primary care setting but also in Tertiary and Secondary care hospitals dealing with high risk cases and women with maternal medical disorders.

B. These clinics should be used to screen women and if needed their partners if they are contemplating pregnancy in order to detect any problem which may increase maternal as well as fetal morbidity and mortality as she becomes pregnant.

C. These clinics can be used to screen and counsel women for contraception and safer sex in case pregnancy should be delayed to optimize the mother to be physical health.

D. This is an ideal opportunity to detect women who may be suffering from social or psychological issues in order to refer them appropriately and to acquire social workers to provide her the best of options for safe motherhood.

E. Obesity being a global problem, leads to many maternal and fetal; problems, it can be taken as an opportunity to advice women on diet and exercise even before she becomes pregnant

F. Health education is an extremely important but often neglected part of antenatal care, pre-conception clinics can be used to educate women and their partners on this important issue.

G. These clinics can provide data for research and audit.

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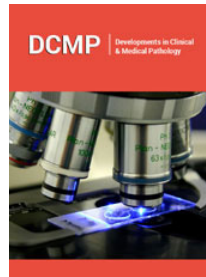
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