Nutrition Education during the Preconception Period

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Women’s nutrition, starting from infancy through the school-age years, early adulthood, during pregnancy and lactation, and between pregnancies has the potential to affect the health and well-being of the next generation. Nutrition education and counseling (NEC) during pregnancy has been associated with significantly improved pregnancy outcomes; however, the overall quality of the evidence is low. Further, nutrition during the peri-conceptual period may play a crucial role, and practices prior to conception may influence the dietary habits. Observational studies support the importance of nutrition during the peri-conceptual period for improving maternal and child outcomes, but evidence from intervention studies is limited. The most well-known example is the benefits of preconceptional folic acid supplementation to reduce the risk of neural tube defects. The primary studies that evaluated the preconception interventions such as supplementation and/or fortification with micronutrients, cash transfers or incentives, and behavior change approaches to improve dietary intakes and maternal nutritional status prior to conception have mixed findings, and NEC is often included as part of the above approaches and/or included in health promotion packages targeted towards women of reproductive age including adolescent girls and/or young adults. A few studies have evaluated the preconception NEC primarily in developed countries, and qualitative studies from poor resource settings suggest that issues such as food insecurity/access need to be addressed along with NEC.

Adolescence is a critical period for physical and psychological growth and development, and it is advisable to track health and nutrition behaviors from adolescence to adulthood. There are examples of case studies and/or subnational programs that have been implemented as part of anemia prevention strategies targeting adolescent girls in countries such as Egypt and India. These programs typically combined NEC with the distribution of iron-folate supplements using different delivery platforms and were found to be successful in reducing the burden of
anemia. There are also examples of school-based programs from Mexico and the US that promote healthy lifestyles by delivering messages to increase physical activity, dietary diversity, and/or reduce the consumption of sugar-sweetened beverages as part of ongoing efforts to reduce the burden of overweight and obesity and other non-communicable diseases such as diabetes which is increasing worldwide and associated with poor pregnancy outcomes.

Reaching young adults is a great challenge, especially in settings where girls are out of school. Efforts to integrate NEC along with the provision of reproductive health services such as family planning and post-partum care in healthcare settings, work-site programs or other innovative platforms including social media are needed. The findings of a large, cluster-randomized controlled trial, evaluating life skills building education provided bimonthly along with the provision of twice weekly MMP supplementation to improve the health and nutritional status of adolescent and young women (15–24 years) in Matiari District, Pakistan is of great interest in this context. The primary outcome is anemia along with other measures of nutritional status and psychosocial well-being. Targeting newlywed couples is another approach that has a lot of potential for delivering NEC, which could be effective in improving preconception health and nutrition and/or delaying age at first birth. There are examples of newlywed programs in Bangladesh, Indonesia, India, and Malawi but these typically include information regarding family planning services and/or health seeking and promotional messages to reduce the risk of HIV and other sexually transmitted diseases. In summary, there is increased global awareness for the need to promote preconception care but further work is needed to carefully develop, implement, and evaluate cost-effective preconception care packages that include NEC using different approaches and delivery platforms, such as schools, health facilities, daycare centers, and/or worksites.