



The pre-pregnancy period as an entry point for health and nutrition interventions: experience from the Philippines

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Key Messages:

The period before pregnancy is an important yet often neglected point in the lifecycle. The potential impact on pregnancy outcomes of health and nutrition interventions delivered to women during this period is unknown. Given the unplanned nature of many pregnancies, timely identification of women during this period is challenging. More information is needed about:

- a) feasible entry points for identifying women at this point in the lifecycle, particularly to ensure the most vulnerable groups are reached; and
- b) the potential added benefit to the health of the mother and child of specifically targeting this period for delivery of health and nutrition interventions.

The nutritional status of the mother plays an important role in a number of significant maternal and child health outcomes, including maternal death, low birth weight and stunting¹. Nutritional supplementation during pregnancy is widely used and has been recommended for decades as a strategy to improve the health of the mother and the infant. However, a limitation of this approach is that many women do not have contact with health services until the second or third trimester, and therefore do not receive supplementation during the critical early weeks of pregnancy.

Supplementation of all women of reproductive age (WRA) is a recognised preventive approach to anaemia, and the World Health Organization recommends weekly iron and folate supplementation

to all WRA in settings with a high prevalence of anaemia (>20%)².

Supplementation of all WRA also has the potential to reach women before pregnancy and during the first trimester. However, with increasing recognition of the importance of nutritional status at the time of conception and in early pregnancy, there is also growing interest in the feasibility and potential benefit of specifically targeting women in the period immediately prior to pregnancy³ for delivery of nutrition and other health interventions. The potential impact on maternal and child health outcomes of targeting women at this critical point in the lifecycle was recognised in two key UNICEF regional strategies in 2003^{4,5}.

In response to these strategies, UNICEF developed the Pre-Pregnancy Package (PPP), a package of preventive, diagnostic and treatment services to be provided to women in the period prior to pregnancy. PPP included multiple micronutrient supplements (MMS, weekly prior to conception then daily during pregnancy), deworming tablets, tetanus toxoid immunisation, counselling and testing for sexually transmitted infections, and a range of health education messages. PPP was introduced in Davao City in the Philippines in 2008, under the direction of the local and regional government with support from UNICEF, and a simultaneous study to evaluate the public health intervention was undertaken.

² WHO (2009). Weekly Iron-Folate Acid Supplementation (WIFS) in Women of Reproductive Age: Its Role in Promoting Optimal Maternal and Child Health. Position Statement. Geneva, WHO

³ At least 12 weeks, based on evidence of weekly supplementation to reduce anaemia¹

⁴ UNICEF EAPRO (2003) Health and Nutrition Working Paper, *Strategy to Reduce Maternal and Child Undernutrition*

⁵ UNICEF EAPRO (2003) Health and Nutrition Working Paper, *Strategy to Reduce Maternal Deaths*

¹ The Lancet (2008). Maternal and Child Undernutrition Series, Volume 371.

Pre-marital counselling (PMC), an educational activity that is offered in the Philippines to couples planning to marry, was identified as the entry point for provision of PPP. However, several factors emerged to suggest that this was not sufficient to capture the target population of pre-pregnant women. A significant proportion of women presenting for PMC were found to be already pregnant, substantially reducing the number of pre-pregnant women who could be identified through this entry point. Furthermore, not all women attend PMC, with preclusion of many of the minority populations, who are considered to have poor health outcomes and would therefore benefit from the intervention. PMC attendees were also found to represent a wealthier and better educated group of women, even as compared with a group of early attendees of prenatal clinics. As such, PMC attendees may be a population group unlikely to benefit substantially from the intervention.

The evaluation study compared birth weight and maternal haemoglobin levels between PPP recipients and a group of primigravida prenatal clinic attendees, who received daily MMS from the time of their first prenatal visit. No significant differences in biological outcomes were observed between the PPP recipients and the prenatal clinic attendees; however, socio-demographic differences between these groups or the small number of PPP recipients who went on to become pregnant⁶ could also explain this lack of effect. For these reasons we cannot conclude that there is truly no biological benefit from this strategy and further research is warranted. Furthermore, non-compliance with taking the MMS was common, both prior to pregnancy (among PPP recipients) and during pregnancy (among both groups), with forgetting/losing the MMS or side effects the main reasons reported. Significant problems were encountered with the supply of MMS, which also affected compliance.

Delivery of PPP through PMC in Davao City does not appear to have been a successful strategy for targeting pre-pregnant women, as vulnerable groups were not reached and many attendees were already pregnant. Demonstration of the specific impact of pre-pregnancy supplementation on pregnancy outcomes such as birth weight and stunting is still required.

The experience in Davao City illustrates the difficulty in identifying and targeting women in the period immediately prior to pregnancy, particularly if the most vulnerable groups are to be reached. Approaches will certainly differ across settings, and there is need for a better understanding of the relative benefits, cost and efficiency of specifically targeting pre-pregnant women compared with targeting all WRA. An alternative approach, if targeting all WRA is not feasible, could be to identify vulnerable groups and to target all WRA within those groups.

Recommendations

- Future activities that aim to specifically target women in the period immediately prior to pregnancy should undertake in depth, comprehensive assessments of the population to determine appropriate entry points to identify pre-pregnant women and to ensure that vulnerable groups will be captured
- There is a need for a full evaluation of the impact of nutritional supplementation specifically targeting the period immediately prior to pregnancy on pregnancy outcomes

Further reading

- Downing S, Temple B, La Vincente S and Lupase V (2011). The Pre-Pregnancy Package, a public health intervention targeting women prior to pregnancy - experience from the Philippines. Report prepared for UNICEF Philippines Country Office, available by request from sophie.lavincente@rch.org.au or beth.temple@menzies.edu.au.

⁶ 119 of 430 PPP recipients were followed up until they became pregnant, 39 of whom went on to deliver during the study period

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