HHS Public Access

Author manuscript

Lancet Infect Dis. Author manuscript; available in PMC 2018 January 22.

Published in final edited form as:

Lancet Infect Dis. 2013 April ; 13(4): 292. doi:10.1016/S1473-3099(13)70013-6.

Weighing for results: assessing the effect of IPTp

Julie Gutman, **Erin Eckert**, **Viviana Mangiaterra**, **Azucena Bardají**, **John J Aponte**, **Clara Menéndez**, **Bernard Nahlen**, and **Laurence Slutsker**

Division of Parasitic Disease, Center for Global Health, Centers for Disease Control and Prevention, Atlanta, GA, USA (JG, LS); President's Malaria Initiative, US Agency for International Development, Washington DC, USA (EE, BN); World Health Organization, Department of Reproductive Health and Research, Geneva, Switzerland (VM); and Barcelona Center for International Health Research (CRESIB, Hospital Clínic–Universitat de Barcelona), Barcelona, Spain (AB, JJA, CM)

Although earlier studies showed that intermittent preventive therapy in pregnancy (IPTp) with sulfadoxine–pyrimethamine provides substantial benefit to pregnant women and their infants, the spread of resistance raises questions about how long the therapy is efficient for.[1] In their meta-analysis, Thomas Eisele and colleagues[2] show that IPTp with sulfadoxine–pyrimethamine continues to provide substantial benefits, resulting in a 26% reduction in low birthweight and a 16% reduction in neonatal mortality under programme conditions. How ever, the absence of exact birthweight data in many of the surveys is an important limitation. Mothers tend to overestimate weight; therefore, the prevalence of low birthweight is underestimated.[3] The effect of IPTp with sulfadoxine–pyrimethamine and insecticide-treated nets (ITNs) on low birthweight can be underestimated when mothers' perception of weight is used as a proxy for measured birthweight. Despite this limitation, the study shows how useful birthweight data from cross-sectional surveys are to monitor effectiveness of interventions nationally, and emphasises the importance of obtaining accurate birthweight information on all infants.

The authors suggest that the effect of IPTp on neonatal mortality could be explained by increased birthweight. However, a clinical trial of IPTp with sulfadoxine–pyrimethamine found a marked reduction (61·3%) in neonatal mortality without an effect on birthweight, suggesting that the treatment affects neonatal survival through mechanisms independent of increased birthweight.[4] In the study by Eisele and colleagues, the effect of ITN use during pregnancy was probably underestimated because household ownership was used as a proxy for use and because of the overlapping definitions of full and partial coverage. Other studies have provided indisputable evidence that ITNs protect against the adverse effects of malaria in pregnancy; therefore, this intervention should not be discounted on the basis of the results of this study.[5] The uptake of IPTp with sulfadoxine–pyrimethamine has been slow in many countries and substantial improvement in IPTp coverage is needed. Collaboration between national malaria control and reproductive health programmes is needed to improve the delivery of IPTp. The recent WHO guidelines calling for administration of IPTp with

JG and EE conceived the paper. JG, EE, VM, AB, JA, CM, BN, and LS wrote the paper

We declare that we have no conflicts of interest.

sulfadoxine–pyrimethamine at each scheduled antenatal care visit starting in second trimester will hopefully improve coverage.[6]

The report by Eisele and colleagues emphasises the importance of IPTp with sulfadoxine–pyrimethamine and ITN use in pregnancy. The findings are similar to nationally representative population-based data across many settings, which represent the real world of malaria programming. These findings support the idea that prevention of malaria in pregnancy is a crucial part of both malaria and reproductive health programmes, and merit increased scale-up.

References

1. Harrington WE, Mutabingwa TK, Kabyemela E, Fried M, Duffy PE. Intermittent treatment to prevent pregnancy malaria does not confer benefit in an area of widespread drug resistance. Clin Infect Dis. 2011; 53:224–30. [PubMed: 21765070]
2. Eisele TP, Larsen DA, Anglewicz PA, et al. Malaria prevention in pregnancy, birthweight, and neonatal mortality: a meta-analysis of 32 national cross-sectional datasets in Africa. Lancet Infect Dis. 2012; 12:942–49. [PubMed: 22995852]
3. Blanc AK, Wardlaw T. Monitoring low birth weight: an evaluation of international estimates and an updated estimation procedure. Bull World Health Organ. 2005; 83:178–85. [PubMed: 15798841]
4. Menéndez C, Bardají A, Sigauque B, et al. Malaria prevention with IPTp during pregnancy reduces neonatal mortality. PLoS One. 2010; 5:e9438. [PubMed: 20195472]
5. Gamble C, Ekwaru JP, ter Kuile FO. Insecticide-treated nets for preventing malaria in pregnancy. Cochrane Database Syst Rev. 2006; 2:CD003755.
6. World Health Organization. [accessed Oct 16, 2012] Updated WHO policy recommendation (October 2012): Intermittent preventive treatment of malaria in pregnancy using sulfadoxine-pyrimethamine (IPTp-SP). http://www.who.int/malaria/iptp_sp_updated_policy_recommendation_en_102012.pdf