Complications during pregnancy lead to adverse maternal and child health outcomes, particularly in the newborn period. Although lack of access to prenatal care contributes to maternal and child deaths and morbidity, certain risk factors and health problems are often present before pregnancy. Providing a continuum of care for adolescent girls and women before pregnancy, that is during the preconception period, can help to identify risk factors such as poor nutritional status or partner violence, and address health problems such as chronic medical conditions or infectious diseases (fig. 1). Preconception care therefore is ‘any intervention provided to women and couples of childbearing age, regardless of pregnancy status or desire, before pregnancy, to improve health outcomes for women, newborns and children’.

Since we cannot predict exactly when conception occurs, and since many pregnancies are unplanned, it is recommended that all adolescents, women and couples of reproductive age receive preconception care. Minimizing risk before the crucial time of fetal development can prevent adverse outcomes and ensure that mothers and newborns are in the best health possible. Engaging men is also crucial because some health problems in the preconception period such as smoking, genetic diseases and sexually transmitted infections involve both men and women. It is extremely important that adolescent boys and men are included in preconception care so that they support and invest in the health of girls and women.

A systematic review was undertaken to assess the impact that preconception care could have on improving maternal and child health outcomes. In total, 516 randomized, quasi-randomized and observational studies were used in the meta-analyses.

Reproductive planning is an essential component of preconception care. Adolescent girls are especially vulnerable to coerced sex, unintended
pregnancies, sexually transmitted infections and nutritional deficiencies. These have a profoundly negative impact on their psychological well-being, pregnancy outcomes and their newborns’ health. Programs that empower girls by enabling them to complete their education, incorporate life skills, and encourage contraceptive use can prevent stillbirths through reduced rates of female genital mutilation, prevent 15% of first adolescent pregnancies, and 37% of repeat adolescent pregnancies. In contrast, women who delay childbearing past age 35 have increased odds of antepartum hemorrhage, gestational diabetes and hypertension, caesarean delivery, stillbirths, and low birthweight. Short (<6 months) and long (>60 months) intervals between pregnancies also raise the risk of prematurity and neonatal deaths. Meeting the need for family planning through effective contraceptive provision and use will decrease rates of unintended pregnancies, harmful abortions and pregnancy complications for mothers and babies.

**Fig. 1.** The gap in the continuum – preconception care aims to reach more girls and women before pregnancy. From Kerber et al. [The Lancet 2007;370:1358–1369].
A woman’s nutritional status affects her health and that of her baby throughout pregnancy. Pre-pregnancy obesity heightens the propensity for gestational hypertension and diabetes, postpartum hemorrhage, caesarean delivery, stillbirths and congenital heart defects. Underweight women have higher incidences of stillbirths and prematurity. While dietary habits are established in childhood, nutrition can be improved through intervention in the preconception period. Substantial evidence exists for preconception folic acid supplementation to more than halve the risk of neural tube defects. Multivitamin supplementation lowers the rates of preeclampsia, multiple congenital anomalies and limb reduction defects. Food fortification with micronutrients, along with intensive promotional campaigns and counseling by healthcare providers could increase the coverage of daily multivitamin supplementation.

Preconception care for diabetic women that includes diet and exercise counseling, family planning and strict glycemic control leads to 70% reduction in the two most noted adverse fetal outcomes of

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**Fig. 1. b** Preconception interventions that promote healthy pregnancies.
diabetic pregnancies, congenital malformations and perinatal mortality. Screening for and management of chronic medical conditions, particularly diabetes and hypertension, immunization and treatment of infectious diseases, and therapy for mental health problems and substance use are all integral to preconception care that promotes healthy pregnancies.