A Global Commitment to Prevent and Control Non-Communicable Diseases

In 2011, the United Nations General Assembly issued a Political Declaration on the Prevention and Control of Non-communicable Diseases (NCDs) agreed by all member states. To act upon this declaration, the World Health Assembly endorsed the Global Action Plan for the Prevention and Control of NCDs 2013-2020. In September 2015, the world adopted the Sustainable Development Goals, which contain ambitious targets related to NCDs, including that of reducing by one third premature mortality from NCDs through prevention and treatment, and reducing maternal mortality to less than 70 per 100,000 births. Women who face low socioeconomic, legal or political status are especially vulnerable to the combination of risks resulting from pregnancy and communicable and non-communicable disease.

To this end, the linkage of efforts to address each of these risks was also endorsed by the UN Secretary-General’s Global Strategy for Women’s and Children’s Health which recommends an approach that integrates NCDs into programmes to promote women’s and children’s health.

The Case for Action

Worldwide, NCDs are the leading cause of death for women, accounting for nearly 65% of deaths. Over 75% of these deaths are in low- and middle-income countries (LMICs), primarily from cardiovascular diseases (CVD), preventable cancers, chronic respiratory diseases and diabetes. These NCDs share the common modifiable risk factors of unhealthy diet, physical inactivity, tobacco use, and harmful use of alcohol (WHO, 2015). NCDs can have significant adverse effects on maternal health and pregnancy outcomes, and can negatively impact the health of children later in life through effects experienced in utero.

A well-balanced healthy diet with sufficient calories and nutrients is important for pregnancy outcomes. Maternal anaemia is associated with an increased risk of infant anaemia and malnutrition (Zhang, 2012), and micronutrient deficiency is associated with increased risk of gestational diabetes, pre-eclampsia and small for gestational age and low birth weight babies (Aghajafari et al., 2012; Krishnaveni et al., 2009). Obesity and being overweight during pregnancy can also result in complications for both the mother and foetus (Kapur, 2015). The number of reproductive-aged women who are overweight is now greater than the number of underweight women (Mendez, 2005). Pregnancy complications in obese or overweight women include hypertensive disorders, gestational diabetes, respiratory problems and pre-eclampsia, with significant impact on perinatal health outcomes, for which pre-pregnancy
obesity is highly predictive (Sibai et al., 1995). This emphasises the mother-baby couple. Not only are the maternal outcomes important but also the perinatal. Healthy mothers have healthy babies.

Diabetes is also a critical area for maternal health. There are 184 million women worldwide who suffer from diabetes, and 92% of cases of hyperglycaemia in pregnancy occur in LMICs. Gestational hyperglycaemia and high blood pressure are linked directly or indirectly to haemorrhage, hypertensive disorders, obstructed labour, infection and sepsis, the leading causes of maternal mortality. Women with pre-existing type 1 or 2 diabetes have these same risks, and in addition, pregnancy can worsen existing eye, kidney, heart or nerve problems caused by diabetes (CDC, 2015). Furthermore, women with gestational diabetes have an increased risk of developing type-2 diabetes later in life, a higher prevalence of metabolic syndrome, and an increased risk of cardiovascular disease (Bellamy et al., 2009).

NCDs during pregnancy can increase the risk of spontaneous abortion, stillbirth, congenital malformation, birth injuries, neonatal hypoglycaemia, infant respiratory distress syndrome, and being large for gestational age (Kapur, 2015). They may also increase risk of obesity, diabetes and cardiovascular disease later in life as well as have transgenerational effects on NCD risk (Hanson and Gluckman, 2011). There is also a strong association between maternal gestational diabetes and obesity with diabetes and obesity in youth (Dabelea et al., 2008). As, globally, obesity is on the rise, the age of onset of type 2 diabetes is decreasing, and age of initiation of childbearing is increasing, the number of women pre-disposed or entering pregnancy with pre-existing diabetes is likely to rise (Kapur, 2015). Additionally, smoking during pregnancy is increasing in LMICs, which, along with exposure to second-hand smoke and air pollution, further elevates risk of pregnancy complications (Lumley, et al., 2009).

Integration of services can improve access to care, efficiency and outcomes

Current statistics and trends demonstrate the necessity of an integrated approach to maternal health and NCDs, with prenatal and pre-pregnancy care as critical points of contact, providing co-benefits for NCD management and maternal and newborn health outcomes. Information provided to women on physical activity and nutrition during pregnancy and appropriate breastfeeding practices could emphasize benefits for NCD prevention—both for the woman and the baby. Preconception care and antenatal services can serve as an entry point for health interventions and health promotion for staying healthy later in life, improving outcomes for their babies later in life. These messages can be integrated into efforts to improve uptake and quality of antenatal services (Unicef, 2015). Similarly, including information on alcohol, tobacco use and second-hand smoke exposure can address adverse pregnancy outcomes (Lumley, et al., 2009). Preconception counselling for women with pre-existing diabetes can also help reduce risks for diabetic women and their babies (NCD Alliance, 2011). Information needs to be supplemented by supportive policies and programs that help women act on the knowledge they receive. As part of the Global Strategy
and goal of Ending Preventable Maternal Mortality, WHO is working with partners towards addressing the inequalities in access to and quality of vital antenatal and postnatal services. By addressing the burden of NCDs on women, maternal and child health outcomes can be significantly improved. For example, access to insulin, for management of diabetes, is a huge problem in LMIC. A specific opportunity for effective integration could be thinking of ways to use channels and cold-chains already in place such as vaccines and oxytocin used in maternal and child health programs to improve access to insulin.

Screening pregnant women for NCDs is essential. Relying on clinical markers alone for gestational diabetes fails to correctly identify more than half of the women with gestational diabetes (Kapur, 2015), highlighting the importance of universal screening for hyperglycaemia in pregnancy. Early detection and management of diabetes in pregnancy as part of a comprehensive antenatal package was shown to reduce stillbirths by up to 45% and also to prevent maternal and newborn deaths (Pattinson et al, 2011). Post-natal care can integrate NCD services as well, ensuring that high-risk mothers and children receive support to prevent, manage or delay NCDs. One example is the identification of a mother who is overweight or has gestational diabetes or hypertension and linking her with follow-up care that corresponds to her child’s vaccination schedule (Kapur, 2015). WHO is working to ensure accountability within maternal health systems in order to improve quality of care and equity.

A “Life Course” Approach

Traditionally, maternal health programmes have focused on short-term outcomes of maternal, neonatal and infant survival. Moving forward, there is tremendous opportunity to use these programmes as part of a comprehensive “life course” approach. Interventions related to NCDs in this period can have immediate effects on pregnancy outcomes as well as longer term impact on the health of the mother and her baby (Kapur, 2015; Lumley et al., 2009, PMNCH, 2011), and on the health of future generations.

For Key Resources and More Information

http://www.who.int/nmh/events/ncd-coordination-mechanism/en
http://www.who.int/maternal_child_adolescent/en/