

# *The Barcelona Declaration on Hyperglycemia in Pregnancy for Europe*

## The Preamble

### Whereas

- Infant and maternal mortality in Europe is generally quite low and continues to decline, with most countries registering declines in fetal, neonatal, and infant mortality rates between 2004 and 2010. The burden of mortality and morbidity in the perinatal period — pregnancy, childbirth, and the immediate postpartum, however remains a major concern.
- Preterm and very preterm birth, fetal growth restriction and congenital anomalies are also matters of concern as the incidence of these complications has increased in many countries, reflecting limited achievements in preventing high risk situations. About one-third of all fetal deaths and 40% of all neonatal deaths were among babies born before 28 weeks of gestational age. The percentage of live births with birth weight under 2500 g varies from under 4% to slightly over 9% in Europe.
- Stillbirths have also declined less rapidly and in many cases, their causes remain unknown. Increased clinical and community awareness of the risks associated with common pre-gestational and gestational medical disorders (e.g., diabetes and hypertension) and implementation of best practice guidelines might improve management and lower the associated stillbirth rates.
- Maternal mortality is quite low in Europe; but when they occur, maternal deaths are often directly due to hemorrhage, hypertension, sepsis and obstructed labor. Maternal deaths also result from indirect causes such as associated medical conditions. Some of the indirect causes such as hyperglycemia in pregnancy (HIP) also contribute to increasing the risk for the direct causes of maternal mortality
- With the already low and declining maternal deaths because of targeted interventions, efforts in Europe to further improve maternal health will have to be refocused on reduction of maternal morbidity and indirect causes of mortality
- Obesity and overweight is an escalating problem among women of reproductive age in Europe with more than 1 in 10 pregnant women being obese, and 1 in 4 being overweight, but many countries do not monitor this indicator systematically. Most European countries do not report data on pre-gestational body mass index (BMI) and gestational weight gain
- Age at childbirth continues to rise in Europe. The proportion of women bearing children later in life varies substantially, but in 40% of countries or regions, at least 20% of births are to women aged 35 years or more, and the proportion of births in this age group increased substantially between 2004-2010 in almost every country
- Diabetes mellitus is escalating worldwide and prevalence of diabetes among all age groups is increasing in Europe. It already affects about 60 million people, and is projected to increase to 71 million people by 2040. There is an equally high burden of pre-diabetes - approximately 32 million are estimated to have pre-diabetes which is likely to increase to about 37 million by 2040. Overweight and obesity increase the risk of diabetes and pre-diabetes
- More than one third of people with diabetes and a majority of people with prediabetes remain undiagnosed and unaware; particularly the young and women, as they have never been tested given that diabetes is mistakenly believed to only affect the elderly.
- The age of onset for diabetes and prediabetes is declining globally and now affects many young people in the reproductive age. At the same time, age at child birth is rising and older, overweight primi-gravida may be particularly vulnerable and yet unaware of their diabetes status.
- Hyperglycemia in pregnancy (HIP) is one of the most common medical conditions affecting women during pregnancy. According to the International Diabetes Federation, an estimated 14% of live births in Europe may be impacted by hyperglycemia during pregnancy. Nonwhite immigrant mothers that account for a significant proportion of pregnancies are even more vulnerable to hyperglycemia in pregnancy

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- The majority of women with HIP have gestational diabetes (GDM), which develops due to hormonal changes of pregnancy and is confined to the duration of pregnancy
- HIP significantly increases risk of pregnancy complications- hypertension, obstructed labor, postpartum hemorrhage, infections, still births, premature delivery, both large and small for gestational age babies, congenital anomalies, newborn deaths due to respiratory problems, hypoglycemia and birth injuries
- Without preventive care, almost half of women with GDM develop type 2 diabetes and a significant proportion develop premature cardiovascular disease, within 10 years of childbirth
- Children born to women with HIP are at very high risk of obesity, early onset type 2 diabetes and cardiovascular disease, whereby, HIP perpetuates the risk of diabetes into the next generation
- Addressing obesity and HIP helps lower maternal and newborn morbidity and mortality by lowering the risk of pregnancy complications such as preterm births still births, congenital anomalies, small and large babies which are critical problems for maternal health in Europe and provides an opportunity to break the chain of intergenerational transmission of diabetes, cardiovascular diseases and metabolic problems
- Most women diagnosed with GDM can be adequately managed through proper monitoring and practical nutrition and lifestyle counseling, some may require medical treatment and referral to specialist care
- Providing preventive lifestyle care to women post GDM pregnancy, has been shown to reduce their risk for future diabetes and cardiovascular disease
- While several risk factors such as overweight and obesity and increasing maternal age increase the risk for HIP, in practice, only slightly over half of the women with GDM have these risk factors, supporting the contention that identification of women who have GDM requires testing all pregnant women
- At present there is no consensus on the optimal approach to GDM testing in Europe. Despite some evidence of both immediate and long term benefits (health and economic) of testing, diagnosis and management of GDM and providing post-partum preventive care, concerns continue to be expressed that universal testing and (consequently) increased diagnosis of GDM would place additional logistical and economic challenges to healthcare systems, as OGTTs are time-consuming and incur more costs; and women with GDM will require care by nutritionists and diabetes nurse specialists.
- Evidence shows that improving preconception counseling of young women of reproductive age and couples, including health evaluation and lifestyle counseling such as practical advice on weight management, nutrition and exercise, helps prevent pregnancy complications and expensive interventions later on; as well as, help reduce the future risk of developing obesity, type 2 diabetes, and cardiovascular diseases
- Focusing attention on GDM is a sustainable and cost effective way of reducing maternal and newborn morbidity and rising rates of obesity, diabetes and cardiovascular diseases in Europe; as well as, offering an opportunity for addressing two important components of the sustainable development goal 3 (maternal and newborn health and NCDs) with one comprehensive intervention
- The United Nations Secretary General in his report on the Prevention and control of non-communicable diseases to the UN General Assembly on 19th May 2011 noted that “the rising prevalence of high blood pressure, diabetes and gestational diabetes is increasing adverse outcomes in pregnancy and maternal health. Improving maternal health and nutrition plays an important role in reducing the future development of such diseases in offspring”
- The Political Declaration of the High-level Meeting of the UN General Assembly on the Prevention and Control of Non-communicable Diseases held in New York on 19th September 2011

Notes with concern that maternal and child health is inextricably linked with non-communicable diseases and their risk factors, specifically such as prenatal malnutrition and low birth weight create a predisposition to obesity, high blood pressure, heart disease and diabetes later in life, and that pregnancy conditions, such as maternal obesity and gestational diabetes, are associated with similar risks in both the mother and her offspring

Advocates for the inclusion of non-communicable disease prevention and control within sexual and reproductive health and maternal and child health programs, especially at the primary health-care level, as well as other programs as appropriate, and also integrate interventions in these areas into non-communicable disease prevention programs

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**We**, the undersigned, as leaders and representatives of professional medical organizations, public health agencies research institutions, governments, affected communities, civil society and private industry, living and working in Europe,

## **Hereby Declare**

That maternal obesity and HIP is a significant public health challenge impacting maternal, newborn and child health and the future burden of type 2 diabetes and cardio metabolic disorders globally and in Europe.

That until and unless urgent action is taken to systematically address the issue, it has the potential to undo the gains in maternal and newborn health and worsen the ongoing diabetes and obesity epidemic.

That focusing on maternal obesity and HIP provides a unique opportunity to integrate services, to lower traditional maternal and peri natal morbidity and mortality indicators and address inter-generational prevention of NCDs such as obesity, diabetes, hypertension, CVD and stroke.

That we resolve to address the challenges posed by the rising rates of hyperglycemia in pregnancy and maternal obesity and to convert them into opportunities for improved health outcome for mothers and the future generation of Europeans.

And to this effect,

## **We, Hereby Agree**

To undertake actions in our various capacities to support efforts to address the link between maternal health obesity and diabetes as a public health priority

To accelerate the implementation of the FIGO GDM initiative in Europe, including by pursuing supportive policy actions and mobilizing resources for its implementation. (<http://obgyn.onlinelibrary.wiley.com/hub/issue/10.1002/ijgo.2015.131.issue-53/>)

To seek to adopt and implement the FIGO Adolescent, Preconception and Maternal Nutrition recommendations in Europe where applicable, in order to address the nutritional needs of girls and women in order to both prevent and manage current or future complications. To adopt the life course approach- considering perinatal health within the context of women's overall health and placing a particular emphasis on adolescent and preconception nutrition as well as maternal and postpartum health. (<http://obgyn.onlinelibrary.wiley.com/hub/issue/10.1002/ijgo.2015.131.issue-54/>)

To support efforts to increase public awareness about hyperglycemia in pregnancy and its impact on maternal and child health, encourage preconception counseling, antenatal care and post-natal follow up.

To promote and celebrate a National GDM Awareness Day as an instrument to bring public attention and raise awareness of the problem

To support and encourage task shifting, role based training to build capacity for prevention, early diagnosis, and treatment of HIP and continued engagement with the high risk mother child pair over a prolonged time period.

To advocate for access to uninterrupted diagnostic supplies, medications and trained manpower for diagnosis and appropriate management for HIP at all levels of care at affordable costs keeping the pregnant women's convenience in mind.

To ensure that as a minimum, all pregnant women in Europe attending health facilities are tested for hyperglycemia using a single-step procedure, as advocated by FIGO.

To make all efforts to support post-partum follow up and engagement of the high risk mother child pair post-GDM pregnancy linked to the child's vaccination program by engaging and collaborating with other health care professionals.

To help develop, support and carry out a robust research agenda that fuels both the discovery of new tools and procedures to improve point of care diagnostics, monitoring and management of HIP and the ability to engage, counsel and track the mother-child pair over the long term; as well as carry out operational research to improve collaboration and efficacy in existing programs, keeping in mind the health care delivery realities in different parts of Europe.

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## Resources

### EUROPEAN PERINATAL HEALTH REPORT

Health and Care of Pregnant Women and Babies in Europe in 2010

<http://dx.doi.org/10.3109/17538157.2010.492923>

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Benhalima K, Mathieu C, Van Assche A, Damm P, Devlieger R, Mahmood T, Dunne F. Survey by the European Board and College of Obstetrics and Gynaecology on screening for gestational diabetes in Europe *Eur J Obstet Gynecol Reprod Biol.* 2016 Jun; 201:197-202

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WOMEN AND DIABETES IN THE EU Gender and Chronic Disease Policy Briefings November 2012. European Institute of Women's Health, 33 Pearse Street, Dublin 2, Ireland <http://www.eurohealth.ie>

International Diabetes Federation IDF Diabetes Atlas 7th Edition <http://www.diabetesatlas.org/>

The International Federation of Gynaecology and Obstetrics (FIGO) Initiative on Gestational Diabetes Mellitus: A Pragmatic Guide for Diagnosis, Management, and Care. *International Journal of Gynaecology and Obstetrics* 131 S3 (2015) S173–S211 <http://obgyn.onlinelibrary.wiley.com/hub/issue/10.1002/ijgo.2015.131.issue-S3/>

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European Board and College of Obstetrics and Gynaecology (EBCOG)-Standards of care for women's health in Europe-Obstetric and Neonatal Services 2014 ([www.ebcog.eu](http://www.ebcog.eu))

Report by the Secretary-General on the prevention and control of non-communicable diseases (A/66/83) <http://www.ghd-net.org/sites/default/files/UN%20Secretary-General's%20Report%20on%20NCDs.pdf>

General Assembly Resolution on Prevention and control of non-communicable diseases (A/RES/64/265) <http://www.un.org/en/ga/president/65/issues/A-RES-65-238.pdf>