Paris Consensus on Gestational Diabetes Mellitus screening 2018:

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Diabetes in Pregnancy is the most common medical condition affecting pregnant women. The International Diabetes Federation (IDF) suggests that 1:6 (16.8%) pregnancies are affected by diabetes. Of this number, 16% are affected by established diabetes (Type 1, Type 2) while the majority (84%) are affected by GDM. GDM is now generally defined as the diagnosis of hyperglycaemia first recognised in pregnancy with the condition that overt diabetes has been excluded early in pregnancy, especially in women at high risk of diabetes. There are a number of factors associated with the alarming increase of GDM prevalence. These include obesity, with the global estimate of female population now at 30%. In addition mothers are having their babies at a later stage and GDM increases with age. Finally, the prevalence of background diabetes and pre-diabetes in populations is also rising, reported at 4.6% and 26.4% respectively from the NHANES data in women aged 18-44 years

The most up to date prevalence figures for GDM in Europe come from the DALI trial. This shows that 39% of women with a BMI > 29 have GDM.

GDM is a significant clinical burden, challenging healthcare delivery. When we care for a woman with GDM, we care for two patients (mother and offspring) in the short term, but also what we do impacts on their future life-long health. GDM is associated with adverse perinatal outcomes and future obesity, diabetes and increased cardiovascular risk factors in both. The screening and diagnosis of GDM is cheap when compared to other screening programmes and interventions for the majority are low cost and effective (lifestyle changes).

The European Board and College of Obstetrics and Gynaecology (EBCOG), together with the European Diabetes in Pregnancy Study Group (DPSG), supported by FIGO, endorses:

(1) Universal screening for GDM using a one step approach and the evidence based IADPSG/WHO2013 criteria

The association between GDM and future diabetes and obesity in the mother is very strong. Mothers with GDM followed up from the landmark HAPO study 10-14 years later had a significant burden of diabetes (10.7% v 1.6%) and pre-diabetes (46.5% v 19.6%) compared to mothers with normal glucose tolerance (NGT). As the HAPO study was observational, mothers remained untreated. It is anticipated that active early intervention in women with GDM will reduce this disease burden. In the follow up of children from the same HAPO study, the results are once again startling. Children from mothers with GDM had a significant burden of pre-diabetes (4.7% v 1.7%) and overweight/obesity (22.7% v 5.3%) compared to mothers with NGT. It has been proposed that early active treatment of GDM may reduce the future burden of metabolic abnormality and childhood obesity. However, at present, there is no published evidence that treatment of GDM can reduce the rate of obesity and metabolic dysfunction in the offspring, since the two follow up studies of the two large intervention RCTs did not show any difference in metabolic dysfunction and obesity in offspring at the age of 4-10 years. Therefore, it is imperative that we, the professional community, continue long term surveillance of both the mother and the offspring and gather more evidence. Thus:

(2) EBCOG commits to continued longitudinal follow-up of the mother-infant pairs

. Although we commit ourselves to a clinical practice in 2018 that is based on current best evidence, we must remain committed to embrace new discoveries as Science and medicine never stand still. One such discovery is plasma glycated CD59 being a possible biomarker of glucose abnormalities, at least in a US population screened by a 2-step process using a glucose challenge test (GCT) and 100g 0GTT using Carpenter& Coustan criteria. This would require further assessment in a variety of populations (including Europeans) using a 1-step screening approach with a 75g OGTT and IADPSG/WHO2013 criteria. Cost-effectiveness analyses comparing different screening strategies based on the IADPSG/WHO2013 criteria (universal screening, selective screening based on risk factors or a two-step screening strategy with the glucose challenge test) in European populations are needed, as this will help policy makers and national societies to revise their guidelines and implement them. Cost-effectiveness analyses are planned for the BEDIP-N study, a large Belgian prospective cohort study evaluating the diagnostic yield of different screening strategies based on the IADPSG/WHO2013 criteria.

Another area of debate is whether early screening and intervention would be more useful than current screening beyond 24 weeks acording to current criteria. Several researchers are working in this area and results are awaited. We should commit to a review and revision of this consensus on a regular basis and thus:

3. **EBCOG commits to ongoing research in GDM with a view to timely revisions of this consensus.**

Early identification and treatment of GDM alone will not be sufficient since maternal obesity is the strongest factor contributing to obesity in their offspring. Diet and exercise before and during pregnancy do have some beneficial effect in these women, but are unlikely to result in major improvements in infant's outcome. Therefore, prevention of childhood overweight and obesity is the most important factor to prevent obesity during reproductive life and, therefore, to prevent obesity in the next generation and to break the current vicious circle. Thus:

4. **EBCOG commits to promote prevention of childhood and adolescent obesity by informing governments and health care officials on this utmost important issue.**

To implement this Paris consensus EBCOG council will need to identify a country champion for each European country to communicate the message effectively. In addition, there has to be willingness by professionals to change and examine professional practice. Finally we need to embrace new evidence and update clinical practice and policy in light of this evidence.