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OF HEALTHCARE EXCELLENCE

## Early Detection and Management of Gestational Diabetes Mellitus for Improved Outcomes of Mothers and Their Babies

Protecting and optimizing the health of pregnant woman and their unborn babies is of the utmost importance. A substantial public health concern for pregnant women and their babies is the increasing prevalence of gestational diabetes (GDM) as it is associated with both short-term and long-term complications. Representative complications include pregnancy-induced hypertensive disorders, premature labor, shoulder dystocia, caesarean section and both, low or high birthweight for gestational age, risk of developing glucose disorders, cardiovascular diseases and increased likelihood of cancer. Thus, early identification and management of GDM is crucial for optimizing outcomes.

Diagnosis of GDM is based on fasting glucose and/or oral glucose tolerance test (OGTT) under standardized conditions with a quality-controlled measurement of glucose. Currently, there is not an international consensus regarding screening methods and optimal cut-offs for diagnosis and/or intervention of GDM. Thus, optimizing interventions and outcomes can be difficult.

At the Hospital Clinico San Carlos in Madrid, Spain an integrated clinical care team has focused on improving the detection, management, and prevention of GDM in pregnant women. To do so, they have overhauled the coordination of fasting glucose and oral glucose tolerance testing to enable earlier detection of pregnant women with borderline high glucose or 'low

hyperglycemia' (defined as baseline blood glucose levels between 92 and 95 mg/dL, such that the Carpenter and Coustan criteria would not indicate gestational diabetes). This was achieved through the implementation of the one-step International Association of Diabetes and Pregnancy Study Groups (IADPSG) recommendations for GDM screening.

The expedited testing procedures lost fewer patients to follow-up, while also identifying new patients at risk that were previously missed. Diagnosis of GDM increased from 10.6% to 35.5%, resulting in targeted treatment and reduction in GDM-related complications for mothers and their newborns, such as reduced premature birth, reduced rates of gestational hypertension and reduced cesarian sections. Overall direct cost savings of €15,000 per 100 women was achieved, corresponding to an annual savings of €250,000 in this focus area.

For their valued outcomes and patient-centric initiative, this integrated clinical care team was awarded a 2020 UNIVANTS of Healthcare Excellence Award with recognition of Distinction. Congratulations to María José Torrejón, *Head of Hormones and Metabolism Laboratory*, M. Cruz Cárdenas, *Head of Quality Unit of Medicine Laboratory Institute*, Alfonso L. Calle-Pascual, *Chief, Department of Endocrinology and Nutrition*, Nuria García de la Torre, *Endocrinologist*, Miguel Ángel Herráiz Martínez, *Chief, Department of Obstetrics and Gynaecology*.

24.9%

**INCREASE**  
in identification of  
Gestational Diabetes

€250,000

in mitigated costs  
and procedures

10.9%

**REDUCTION**  
in premature birth

#### **KEY TAKEAWAYS**

1. Gestational Diabetes is an important public concern for both pregnant mothers and their babies, both short and long-term side effects.
2. Early identification of gestational diabetes is crucial to enable mitigation of downstream complications and risks and to improve outcomes.
3. Collaboration across disciplines to enable process changes for the betterment of patient care is a key success factor for improving GDM outcomes.