

P75. The Short-Term Economic Burden of Gestational Diabetes Mellitus in Italy

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Context: The incidence of Gestational Diabetes Mellitus (GDM) is rising in all developed countries.

Objective: The aim of this study was to assess the short-term economic burden of GDM from the Italian healthcare system perspective.

Intervention: A short-term model was built over the last pregnancy trimester (i.e., from the 28th gestational week until childbirth included).

Methods: The National Hospital Discharge Database (2014) was accessed to estimate delivery outcome probabilities and inpatient costs in GDM and normal pregnancies. Appropriate diagnostic (ICD9-CM) and diagnosis-related group (DRG) codes were used to identify GDM cases and different types of delivery, with or without complications, within the database. Neonatal outcomes probabilities were estimated from the literature. Additional data sources such as regional documents, tariff lists and national statistics were used to populate the model. The average cost per case was calculated at national level to estimate the annual economic burden of GDM. Sensitivity analyses were performed to quantify the uncertainty around base case results.

Patients: A cohort of 502,596 women delivering in 2014 in Italy.

Main Outcome Measures: Maternal: preeclampsia, polyhydramnios, labor induction, cesarean section, pre-term delivery. Neonatal: macrosomia, hypoglycemia, hyperbilirubinemia, shoulder dystocia, respiratory distress, brachial plexus injury.

Results: The amount of pregnancies complicated by GDM in Italy was assessed at 54,783 in 2014 using a prevalence rate of 10.9%. The antenatal outpatient cost per case was estimated at €43.7 in normal pregnancies compared to €370.6 in GDM patients, which is equivalent to a weighted sum of insulin- (14%; €1,034.6) and diet- (86%; €262.5) treated women's costs. Inpatient delivery costs were assessed at €1,601.6 and €1,150.3 for euglycemic women and their infants, and at €1,835.0 and €1,407.7 for GDM women and their infants, respectively. Thus, the overall cost per case difference between GDM and normal pregnancies was equal to €817.8 (+29.2%), resulting in an economic burden of about €44.8 million in 2014 at national level. Probabilistic sensitivity analysis yielded a cost per case difference ranging between €464.9 and €1,164.8 in 80% of simulations.

Conclusions: The economic burden of GDM in Italy is substantial even accounting for short-term medical costs only. Future research addressing long-term consequences from a broader societal perspective is recommended.

