Eligibility, Utilization and Effectiveness of 17-Alpha Hydroxyprogesterone Caproate (17OHPC) in a Statewide Population-based Cohort of Medicaid Enrollees

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The primary objective was to estimate the initiation and adherence rates of 17 ?-hydroxyprogesterone caproate (17OHPC) among eligible mothers in a statewide population-based cohort of Medicaid enrollees. The secondary objectives were to (1) determine the association of maternal sociodemographic and clinical characteristics with 17OHPC utilization and (2) assess the real-world effectiveness of 17OHPC on recurrent preterm birth prevention and admission to neonatal intensive care unit (NICU). This is a retrospective cohort study using a linked, longitudinal administrative dataset of birth certificates and medical assistance claims. Medicaid-enrolled mothers in Pennsylvania were included in this study if they had at least one singleton live birth from 2014 to 2016 following at least one spontaneous preterm birth. Maternal Medicaid claims were used to ascertain the use of 17OHPC from various manufacturers, including compounded formulations. Propensity score matching was used to create a covariate balance between 17OHPC treatment and comparison groups. We identified 4,781 Medicaid-covered 17OHPC-eligible pregnancies from 2014 to 2016 in Pennsylvania, 3.4% of all Medicaid-covered singleton live births. The population-based initiation rate was 28.5% among eligible pregnancies. Among initiators, 50% received ?16 doses as recommended, while 10% received a single dose only. The severity of previous spontaneous preterm birth was the strongest predictor for the initiation and adherence of 17OHPC. In the matched treatment (*n* = 1,210) and comparison groups (*n* = 1,210), we found no evidence of 17OHPC effectiveness. The risks of recurrent preterm birth (relative risk [RR] 1.10, 95% confidence interval [CI] 0.97-1.24) and births admitted to NICU (RR 1.00, 95% CI 0.84-1.18) were similar in treated and comparison mothers. The 17OHPC-eligible population represented 3.4% of singleton live births. Less than one-third of eligible mothers initiated treatment. Among initiators, 50% were treatment adherent. We found no difference in the risk of recurrent preterm birth or admission to NICU between treatment and comparison groups.

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