

Table 5. Summary of Findings: Take-Home Messages

Mother	
Maternal pharmacokinetics during pregnancy	<ul style="list-style-type: none"> • Several physiologic changes occur during pregnancy with the potential of altering the pharmacokinetics of clozapine in the mother. • The available data about how clozapine concentrations change during pregnancy are too limited to define a net effect, and the available data are probably influenced by modifying factors.
Maternal outcomes	<ul style="list-style-type: none"> • No reliable data exist about the relationship between pregnancy, course of psychiatric symptoms, and changes in clozapine concentrations during pregnancy. • The relationship between GDM and clozapine treatment is not clear. An increased body mass index early in pregnancy may be a better predictor of the development of GDM than the use of antipsychotics. • The relationship between maternal clozapine treatment and pregnancy-induced hypertension is unknown.
Fetus	
Placental passage of clozapine	<ul style="list-style-type: none"> • Clozapine partially passes the placenta. • It is unknown whether decreasing concentrations of AGP during pregnancy affect the extent to which clozapine crosses the placenta.
Neurodevelopment	It is unclear whether early developmental exposure to clozapine results in permanent changes in the brain that affect cognitive function or behavior in both the short and long term.
Fetal disorders	<ul style="list-style-type: none"> • Data thus far do not support that in utero exposure to clozapine is associated with more “fetal disorders” than exposure to other antipsychotics during pregnancy. • In utero exposure to clozapine appears to be able to cause reduced or absent fetal heart rate variability in the unborn infant, which, misleadingly, could mimic the symptoms of potential asphyxia.
Stillbirth and abortion	Data thus far do not support that in utero exposure to clozapine is associated with an increased risk of termination of pregnancy and risk of abortion.
Congenital malformations	Although the available data are limited in terms of quality and quantity, clozapine does not appear to be a teratogenic agent.
Prematurity	Data thus far do not support that there is a significant difference in gestational age at birth between clozapine-exposed infants and infants exposed to other antipsychotics.
Delivery complications	Data thus far do not support that there is a significant difference in “pregnancy, labor, and delivery complications and risk factors” between clozapine-exposed infants and infants exposed to other antipsychotics.
Birth weight and height	<ul style="list-style-type: none"> • The risk of increased infant birth weight after maternal clozapine use during pregnancy is unclear. • The risk and implications of the larger head circumference seen with clozapine compared with other antipsychotics remain to be elucidated.
Neonate	
Neonatal pharmacokinetics of clozapine	The elimination half-lives of clozapine and nortclozapine appear to be prolonged compared to the half-lives in adults. Available data are too limited, however, to define an elimination half-life of clozapine and nortclozapine in neonates.
Neonatal outcomes	<ul style="list-style-type: none"> • It is conceivable that clozapine exerts pharmacodynamic effects in the first 2–3 weeks after birth if the neonate has been exposed to clozapine in utero. • Data thus far do not support that there is a significant difference in neonatal disorders between clozapine-exposed infants and infants exposed to other antipsychotics.
Infant exposure to clozapine through breast milk	There is little information about clozapine in breast milk, but the chemical properties of the drug make it likely that clozapine enters the breast milk of nursing mothers taking clozapine.

Abbreviations: AGP = α_1 -acid glycoprotein, GDM = gestational diabetes mellitus.