

# Women from the Caribbean and Africa at highest risk of ICU admission during childbirth

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Women born in the Caribbean or Africa are two times more likely to be admitted to an intensive care unit at the time of their delivery than Canadian-born women, a new study has found.

The risk for both mom and newborn being admitted to an [intensive care unit](#), or ICU, at the same time was also 2.75 times higher for Caribbean-born [women](#) and two times higher for African-born women. Mothers from Jamaica and Ghana each had the highest overall risk of ICU admission at the time of delivery, approximately 2.7 times higher than Canadian-born women.

The study, published today in *Critical Care Medicine*, was led by Dr. Joel Ray, a physician at St. Michael's Hospital and scientist at the Institute for Clinical Evaluative Sciences. Dr. Ray looked at the country of origin of all women who gave birth in Ontario between 2003 and 2012.

During the study period, there were 881,504 births among 604,253 Canadian-born mothers, and 305,494 births to 221,574 immigrant mothers. Of the births among immigrant women, there were 2,999 births to women from Ghana and 10,440 births to women from Jamaica.

About 1.8 per 1,000 Canadian-born women were admitted to an ICU, compared to 6.7 Ghanaian-born and 6.3 Jamaican-born women. Rates for both mom and baby admitted to the ICU were 1 per 1,000 for

Canadian-born women, compared to 6 Ghanaian-born women and 4.5 Jamaican-born women.

"The findings showed a clear trend for ICU admissions of Caribbean-born and African-born women giving birth in Ontario," said Dr. Ray. "One likely explanation for the elevated risk is that women from these regions are at much higher risk of pre-eclampsia, or high [blood pressure](#) in pregnancy, which has been identified as a major predictor of ICU admission."

Previous work by Dr. Ray has shown that the rate of pre-eclampsia is approximately 3.5 times greater among immigrant Ontario women born in African or Caribbean regions.

Dr. Ray said that the shared higher risk may be explained by common genetic ancestry, persisting economic disadvantage following migration to Canada or lower health literacy. Further, pre-eclampsia has an up to 50 per cent chance of being inherited.

"Although pre-eclampsia is a serious condition, it is treatable and manageable with early intervention," said Dr. Ray. "Now that we've identified a possible higher risk in these particular groups, it's important for clinicians to provide appropriate resources to pregnant patients, hopefully minimizing the risk of deliveries that result in mom, baby or both being admitted to an ICU."

Dr. Ray said that including a simple hand out explaining the signs and symptoms of pre-eclampsia would promote health literacy and awareness for all women, not just those at higher risk.

"Many women who develop pre-eclampsia realize too late that something is wrong, so they progress to a more critical form the disease. Important symptoms of pre-eclampsia include headache, vision changes

and swelling," said Dr. Ray. "If they exhibit other risk factors for pre-eclampsia, women from Jamaica, Ghana and other high-risk regions could also be started on low-dose aspirin before 20 weeks gestation, which effectively and safely reduces the risk of pre-eclampsia and pre-term birth."

Women can also optimize their health before becoming pregnant through weight reduction and getting any existing blood pressure issues under control.

Provided by St. Michael's Hospital

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