

Study finds toolkit could improve detection and management of iron deficiency in pregnancy

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Iron deficiency in pregnancy is a common problem that often goes unrecognized and untreated due to a lack of knowledge of its implications and competing clinical priorities. To enhance screening and management of iron deficiency in pregnancy, a research team at Toronto's St. Michael's Hospital developed a quality improvement toolkit, called IRON MOM. The implementation of IRON MOM resulted in increased rates of ferritin testing and decreased rates of anemia at St. Michael's obstetric clinics.

The implementation of a novel quality improvement toolkit has shown to enhance early detection and treatment of [iron](#) deficiency in [pregnancy](#), according to a study led by St. Michael's Hospital.

IRON Deficiency in Pregnancy with Maternal Iron Optimization (IRON MOM) is a paper-based toolkit that includes clinical pathways and educational resources to guide clinicians and [expectant mothers](#) through diagnosis and management of

iron deficiency.

The research, published today in *PLOS Medicine*, compares rates of ferritin testing in the obstetric clinics at Toronto's St. Michael's Hospital before and after the implementation of the IRON MOM toolkit. Ferritin is a blood cell protein that contains iron and ferritin tests can help obstetricians understand how much iron is being stored in the body.

If not treated, iron deficiency can cause serious health consequences, including anemia, early labour, [low birth weight](#) and long-term developmental issues in the child.

"Screening for iron deficiency in pregnancy is recommended by health agencies but with low awareness of its implications and competing priorities in busy obstetric clinics, it doesn't happen as often as it should," said Dr. Michelle Sholzberg, co-lead author, a hematologist at St. Michael's and a scientist at the hospital's Li Ka Shing Knowledge Institute.

"That was the impetus for the development of IRON MOM, which provides guidance and supports for women to feel empowered to speak to their care providers to ensure they're receiving enough iron."

One year after implementation of the IRON MOM toolkit, the team found an almost 10 times increase in the average monthly rate of ferritin testing in the obstetric clinics at St. Michael's.

They also found a significant decrease in the risk of anemia—a condition in which the body lacks sufficient healthy red blood cells to carry oxygen to the tissues—and those who required blood transfusions before and after pregnancy to improve their red blood cell count.

"IRON MOM demonstrated that priority setting and simple process changes in patient management can have a large impact on key clinical outcomes," said Dr. Jameel Abdulrehman, co-lead author from the University Health Network.

The researchers said these results provide support for expanding IRON MOM into other clinics and institutions. Currently, the team is working on an IRON MOM smartphone application that would make the toolkit available to women and clinicians across the country.

"It's widely accepted that many women will develop anemia in pregnancy as the result of iron deficiency," said Dr. Sholzberg. "But this doesn't have to be the case. Treating [iron deficiency](#) requires a culture change and IRON MOM addresses that need."

More information: *PLOS Medicine* (2019). [DOI: 10.1371/journal.pmed.1002867](#)

Provided by St. Michael's Hospital

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