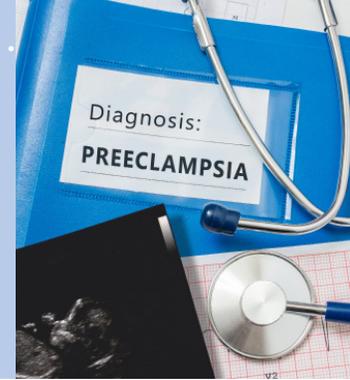


# Maternal Hypertension Initiative



## AIM

Reduce the rate of severe morbidities in women with preeclampsia, eclampsia, or preeclampsia superimposed on pre-existing hypertension by 20% by December 2017

## PROBLEM

Worldwide and in the United States, hypertension is one of the leading cause of pregnancy-related deaths (PRDs) before, during, or after delivery. The American College of Obstetricians and Gynecologists (ACOG, 2013) reports that the incidence of preeclampsia, specifically, has increased by 25% in the past 20 years. Preeclampsia causes an estimated 60,000 maternal deaths yearly worldwide. There are 50 to 100 near misses for every maternal death. Reports from North Carolina and California found maternal deaths due to hypertension had significant prevention opportunities (Berg, C. et al., 2005 & California Department of Public Health, 2011).

Prior to the initiative, Severe Maternal Morbidity (SMM) rates associated with preeclampsia were also rising in Illinois. The Illinois SSM rate excluding hemorrhage per 10,000 births increased from 79.8 in 2011 to 87.7 in 2014 (IDPH, 2016).

## SCOPE

One hundred and ten (99%) Illinois birthing hospitals are participating in the ILPQC Maternal Hypertension Initiative. Overall, 105 hospitals have submitted data during the initiative, averaging 82 teams per month, including a total of almost 13,000 women who have experienced severe maternal HTN in participating Illinois hospitals over the course of the initiative.

## EVIDENCE-BASED PRACTICES

ACOG recently released updated diagnostic criteria and guidelines on hypertension in pregnancy (2013, 2015, 2017). Other state perinatal quality collaboratives have successfully implemented statewide maternal hypertension quality improvement initiatives. California Maternal Quality Collaborative (CMQCC), the first to complete their initiative in August 2014, found that by using their collaborative infrastructure to implement evidence-based tools and guidelines using quality improvement science tools including process flow diagrams, Plan-Do-Study-Action (PDSA) cycles, and regular review of data on: maternal outcomes, time to treatment, use of nurse-provider debriefs, and patient discharge follow-up, participating hospital teams achieved a 48% reduction in severe maternal morbidities associated with maternal hypertension (excluding hemorrhage). CMQCC also showed a significant reduction in eclampsia statewide (Shields, AJOG 2017).

## ILPQC MISSION

Engage perinatal stakeholders across disciplines and at every level, in a collaborative effort to improve the quality of perinatal care and health outcomes for Illinois women and infants using improvement science, education, and evidence-based guidelines.



To learn more about the Illinois Perinatal Quality Collaborative, please visit us at [www.ilpqc.org](http://www.ilpqc.org)

# Maternal Hypertension Initiative

## INITIATIVE SUCCESSES:

THE ILPQC HYPERTENSION TEAMS HAVE WORKED HARD TO DRIVE EFFECTIVE QUALITY IMPROVEMENT THAT HAS LED TO IMPROVED CARE FOR MATERNAL HYPERTENSION ACROSS ILLINOIS:

- Increased percent of women with sustained new onset severe range hypertension receiving medication within 60 minutes from 42% at Baseline (2015) to 85% (December 2017).
- Increased percent of women receiving preeclampsia discharge education materials from 37% at Baseline (2015) to 88% (December 2017).
- Increased percent of women with new onset severe hypertension with a follow-up appointment scheduled within 3-10 days from 51% at Baseline (2015) to 81% (December 2017).
- Increased percent of cases with new onset severe hypertension where a provider/nurse debrief was completed from 2% at Baseline (2015) to 49% (December 2017).
- Decrease in severe maternal morbidity and mortality from 15% at Baseline (2015) to 9% (October 2017). Overall reduction of 41% ( $p < 0.004$ ).

## APPROACH

The ILPQC OB Advisory Workgroup began planning the Maternal Hypertension Initiative in January 2015. ILPQC worked with the Illinois Department of Public Health (IDPH), Statewide Quality Council, Regionalized Perinatal Program, including perinatal network administrators, and epidemiologists with the Office of Women's Health and the national Alliance for Innovation on Maternal Health (AIM) to develop key driver diagrams, process and outcome measures, data forms and education roll-out.

Twenty-three volunteer wave 1 teams started meeting in January 2016 to test and provide feedback on data collection strategies. In May 2016, 89 additional hospital teams joined the initiative. All participating hospital teams attended a two-hour educational webinar and 330 participants from 101 hospital teams attended a full-day Face-to-Face Meeting in Springfield, Illinois where the Maternal Hypertension Initiative Toolkit Binder was distributed. From June 2016 through December 2017, teams attended monthly one-hour collaborative learning webinars, collected, reported, and monitored data on all patients with

new onset severe range hypertension to the ILPQC web-based real-time data system, used quality improvement strategies to test and implement protocols to recognize, prevent, respond, and learn from cases of severe range hypertension, and met monthly to review their progress. Baseline data included retrospective record review for October thru December 2015. Quarterly outreach and support to hospitals needing additional assistance to reach their goal were provided by the State Project Director and Perinatal Network Administrators. Mid-initiative the teams shared challenges and successes with each other at the Fall 2016 Annual Conference in Chicago and the Spring 2017 HTN Face-to-Face Meeting in Springfield.

Over the course of the initiative, teams participated in 18 one-hour collaborative learning webinars, 10 QI topic calls, and two Face-to-Face Meetings to use collaborative learning, rapid response data, and QI strategies to drive improvements in care.

## SUSTAINING THE GAINS

Since January 2018 (start of sustainability), 60+ teams have submitted monthly data into the ILPQC data system and time to treatment has been maintained at 80-85%. Teams have kept engaged in hypertension work through quarterly teams calls, discussion at perinatal network meetings, and continued recognition at ILPQC meetings. HTN teams developed sustainability plans focused on:

1. Compliance monitoring: Time to treatment for severe HTN, use of magnesium, timely discharge follow up, and discharge preeclampsia education.
2. New hire education on management of maternal HTN (AIM e-modules).
3. Incorporate HTN education into ongoing staff/provider education (drills, simulations, e-modules).

