



Maternal Hypertension Initiative: Wave 1 Teams Call

April 25, 2016
12:30 – 1:30 pm

Overview

- Wave 1
 - Goals for Wave 1
 - Wave 1 Data Status
 - Wave 1 Survey – Lessons Learned
- Final Data Form
- Wave 2 Update
- May 2nd Webinar
- May 23rd Face-to-Face Collaborative Learning Session
- ILPQC Team Talks
 - Roma Allen, MSN, RNC-OB – Elmhurst Memorial Hospital
 - Sue Carlson, DNP, APN-BC – Advocate South Suburban
- Next Steps

Wave 1 – Goals (Jan-April)

- Test implementation of data form at your hospital and collect baseline data
- Share successes, challenges, and barriers with other Wave 1 hospitals via Team Talks
- Learn from CA and NC teams successful strategies for data collection
- Identify your hospital's current process flow for managing patients with severe HTN across units
- Provide feedback to improve data collection forms/process and share strategies with Wave 2

Steps for Data Form Implementation



1. Implement the Severe HTN Data Form at the bedside for all women who have been identified with new onset severe HTN
2. Use chart review to collect discharge and outcome data on all women identified with new onset severe HTN
3. Use your EMR to identify all patients with new onset severe HTN to insure you've captured all cases through the bedside implementation of the Severe HTN Data Form, can use chart review to collect data on missed patients.
4. Enter data in REDCap by the 15th of the month for the previous month (i.e. May 15th for April data)

Wave 1 – Data Entry Status

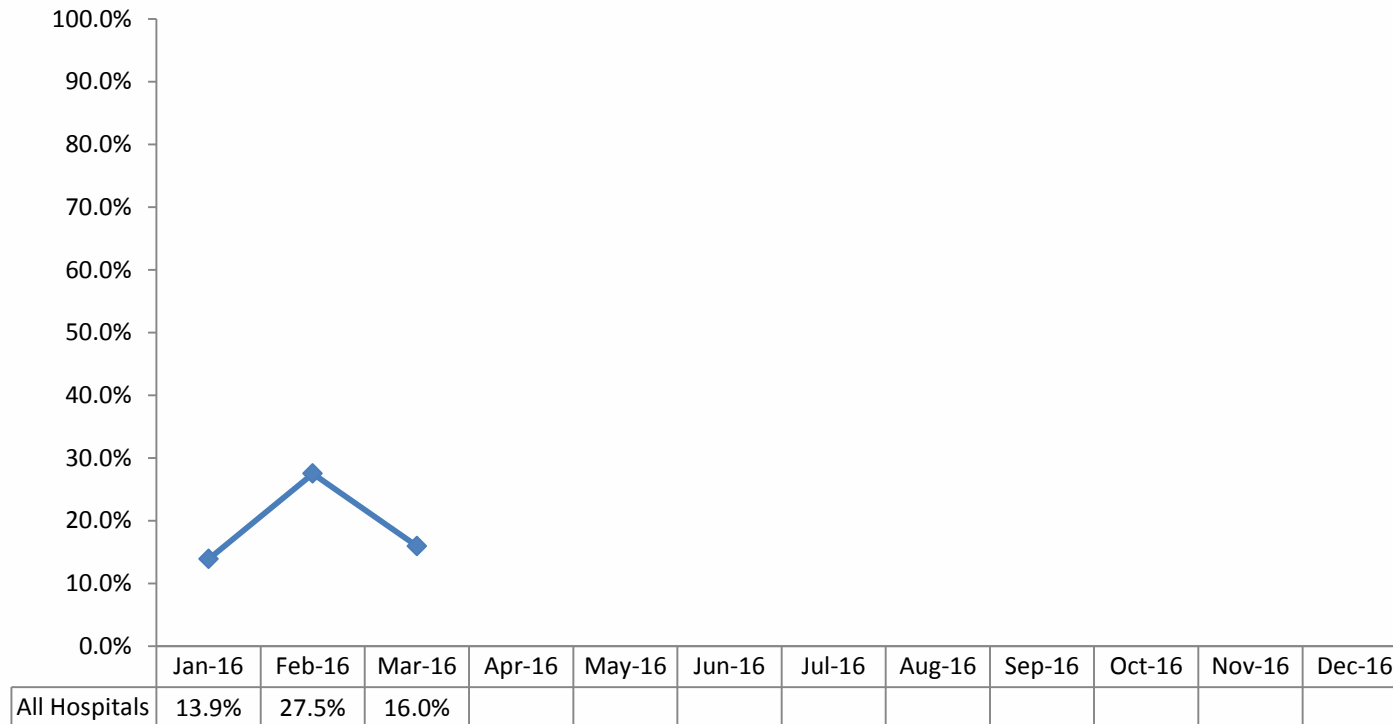


| | Total Records | # Teams with Data |
|----------------|---------------|-------------------|
| January | 36 | 9 |
| February | 80 | 16 |
| March | 94 | 12 |
| Overall | 210 | 19 |

Maternal HTN: Maternal Outcomes



ILPQC: Maternal Hypertension Initiative Percent of Cases with New Onset Severe Hypertension with any Maternal OB Outcomes* All Hospital, 2016



*OB Hemorrhage with transfusion of ≥ 4 units, Intracranial Hemorrhage or Ischemic event, Pulmonary Edema, ICU admission, HELLP Syndrome, Oliguria, Eclampsia, DIC, Renal failure, Liver failure, Ventilation, Placental Abruption

Wave 1 Survey: Results

- 22 of 23 Wave 1 teams completed survey – Thank you!
 - 77.3% of teams meeting at least monthly (17)
 - 18 teams with physicians /2 teams with midwife participating
 - 13 teams with quality participating
 - 11 teams with ED participating
 - 86.4% have implemented the data form (86.4%)
 - 78.9% of teams implementing form at bedside (15 of 19)
 - 77.3% of teams using chart abstraction to collect data (17 of 22) including:
 - 9 teams using EMR keyword searches
 - 1 team using dashboards
 - 8 teams using ICD-10 codes
 - 10 teams using delivery logs
 - 7 teams using pharmacy records

Wave 1 Survey: Data Collection Strategies

“Some of the patient data was collected in real time and for other patient's it was via chart review. We had training sessions for the nurses to explain the data form and what to do when a patient presents for care.”

“RNs have been selected to be champions, several have filled out bedside collection forms.”

“RNs fill out a log book with the patient label and brief data, team then researches chart and logs in RedCap.”

“Had to make it a quality project on our Lean Daily Management Board.”

Wave 1 Survey: Lessons learned

“We have included Pharmacy in our team to address any barriers to access of meds and review order sets.”

“We implemented a new triage log to get the people who are new diagnosis for severe range hypertension.”

“Great to have ER engaged.”

“Added HTN meds to all pyxis on floor for easier access.”

Wave 1 Survey – Strategies Going Forward

“I can't get our quality department to run ICD 10 reports: they are "too busy"... that would help. More commitment; a truly engaged physician champion.”

“Need to engage staff at the bedside.”

“We had a great debriefing today with our monthly drills, we need to get better about debriefing these types of cases as well.”

Initial Wave 1 Opportunities for Quality Improvement



- Consider the following team goals for May:
 - Identify opportunities for your team to meet at least monthly if not already
 - Identify opportunities to engage providers, QI, and ED if not already
 - Reach out to ILPQC if you have not yet been able to implement the data form

SEVERE HYPERTENSION DATA FORM

Topic: Maternity service team review and document sequence of events, successes with and barriers to swift and coordinated response to preeclampsia with severe features.

Goal: Reduce time to treatment (< 60 minutes) for new onset severe hypertension (≥ 160 systolic OR ≥ 110 diastolic) with preeclampsia or eclampsia or chronic/gestational hypertension with superimposed preeclampsia (include patients from triage, L&D, Antepartum, PP, ED) in order to reduce preeclampsia morbidity in Illinois.

Instructions: Complete within 24 hrs. after all cases of new onset severe hypertension (≥ 160 systolic or ≥ 110 diastolic) event in pregnancy up to 6 wks postpartum. Debrief should include primary RN and primary MD to identify opportunities for improvement in identification and time to treatment of HTN.

Date: _____ **GA at Event (weeks & days) OR # Days PP:** _____

Patient Location (check all that apply) Triage L&D Postpartum
 Antepartum ED

Maternal Age: _____ **Height:** _____ **Current Weight:** _____

Diagnosis: Chronic HTN Gestational HTN Preeclampsia

Superimposed Preeclampsia Postpartum Preeclampsia Other _____

PROCESS MEASURE (P1): Medical Management

| Time: hh:mm | Measure |
|-------------|---|
| | BP reached ≥ 160 or diastolic ≥ 110 (sustained >15 min) |
| | First BP med given |
| | BP reached <160 and diastolic BP <110 |

Medications (check all given)

| Medications | Dosage(s) given | Reason not given |
|--------------------------------------|---|------------------|
| <input type="checkbox"/> Labetalol | | |
| <input type="checkbox"/> Hydralazine | | |
| <input type="checkbox"/> Nifedipine | | |
| Magnesium Sulfate Bolus | <input type="checkbox"/> 4gm <input type="checkbox"/> 6gm <input type="checkbox"/> Other | |
| Magnesium Sulfate Maintenance | <input type="checkbox"/> 1gm/hr <input type="checkbox"/> 2gm/hr <input type="checkbox"/> 3gm/hr <input type="checkbox"/> Other | |
| Any ANS (if <34 wks)? | <input type="checkbox"/> Partial Course <input type="checkbox"/> Complete Course <input type="checkbox"/> Not Given | |

BALANCING MEASURE (B1,B2): Monitor Medical Management

B1. Did diastolic pressure fall to <80 within one hour after meds given?

YES NO

B2. If yes, was there corresponding deterioration in FH rate (Category 3)?

YES NO

OB Complications (check all that apply)

GA at Delivery (weeks & days): _____ **Date:** _____

Adverse Maternal Outcome: _____ **Date:** _____

- Transport In? YES NO Date: _____
Transport Out? YES NO Date: _____
- OB Hemorrhage with transfusion of ≥ 4 units of blood products
 Intracranial Hemorrhage or Ischemic event
 Pulmonary Edema ICU admission HELLP Syndrome
 Oliguria Eclampsia DIC
 Renal failure Liver failure Ventilation
 Placental Abruption Other _____ None

Adverse Neonatal Outcome: _____ **Date:** _____

NICU/SCN admission IUFD Other _____ None

Maternal Race/Ethnicity (check all that apply):

White Black Hispanic Asian Other

PROCESS MEASURE (P2) Discharge Management

A. Discharge Education: Education materials about preeclampsia given?

YES NO

B. Discharge Management: Follow-up appt scheduled within 3-10 days (for all women with any severe range hypertension/preeclampsia)

YES NO

Was patient discharged on meds?

YES NO

If YES: Was follow up appointment scheduled in <72 hours?

YES NO

COMMENTS about Medical Management, Monitoring, Discharge

Opportunities for improvement to reduce time to treatment (identification severe HTN to treatment goal <60 minutes): De-brief

Debrief Participants: Primary MD: YES NO Primary RN: YES NO

| TEAM ISSUES | Went well | Needs improvement | Comment |
|---------------------------|-----------|-------------------|---------|
| Communication | | | |
| Recognition of severe HTN | | | |
| Assessing situation | | | |
| Decision making | | | |
| Teamwork | | | |
| Leadership | | | |

| SYSTEM ISSUES | Went well | Needs improvement | Comment |
|---|-----------|-------------------|---------|
| HTN medication timeliness | | | |
| Transportation (intra-, inter-hospital transport) | | | |
| Support (in-unit, other areas) | | | |
| Med availability | | | |
| Any other issues: | | | |

Wave 2 Update

- 84 Wave 2 teams registered as of 4/22 (107 teams total!)
- Launch to all 107 teams on 2-hour webinar on Monday, May 2nd from 12:30 – 2:30 pm
- Still accepting teams for Wave 2!
 - Roster link:
<https://www.surveymonkey.com/r/HTNroster>
 - REDCap access form:
https://docs.google.com/forms/d/16F_IITLmDvesqhvwq6bQxIC17nHGmMchav1-feAsMo/viewform?c=0&w=
- Please share with your networks!

HTN May 2nd 2-hour Kick-off Webinar



- HTN Bundle Implementation Kick-off Webinar from 12:30 – 2:30 pm on May 2nd
- Request for HTN process flow examples from 2 Wave 1 teams
 - Opportunity to share how new onset severe range HTN is identified and treated in your hospital
 - Can share a process flow from L&D, triage, or ED
 - See example from CA on next slide

HTN May 2nd 2-hour Kick-off Webinar



- ILPQC welcome— 5 minutes
- HTN Initiative Overview, Importance, Timeline – 10 minutes
- Overview of California’s Experience (Nancy Peterson and CA Teams) - 30 minutes
- Forming your QI team – 5 minutes
- Baseline/Data Collection Process – 20 Minutes
- ILPQC Data System Training – 15 minutes
- HTN process flow examples from 2 Wave 1 team – 20 minutes
- Next Steps – 10 minutes
- Questions – 10 minutes

Treatment of Blood Pressure greater than or equal to 160/xx OR xx/110:

Position: semi-fowlers; cuff at level of heart; displace uterus

BP \geq 160/xx or xx/110?
May recheck with manual cuff* in 10 minutes
*(for verification)

yes

Remains
 \geq 160/xx or
xx/110?
30-60 min timeframe
begins

no

Recommend:
Recheck every
30 minutes.

Primary RN
Notify OB of BP
Notify Charge RN

and

- Start IV and draw Labs
- Recommend IVP med* within 30-60 min of 2nd BP
- Monitor BP q 5 min \diamond
- Monitor EFM
- Admit patient

then

- \diamond Recommend: Continue BPs q 5 min. until BPs remain less than 160/xx or xx/110, then may repeat BP measurement
- every 10 mins for 1 hour,
 - then every 15 mins for 1 hour,
 - then every 30 mins for 1 hour,
 - and then every hour for 4 hours.

OB Provider

- Order IV push labetalol or hydralazine *
- Admit patient

consider

- Difficult IV start, > 30-60 mins? Give PO nifedipine 10 mg for first med dose (may repeat q 20min PRN x6).
- Does Patient meet criteria for severe preeclampsia? Magnesium Sulfate 4gm loading dose.

*MED NOTES:

Labetalol IVP: (q 10min PRN; 300mg max dose)

Peak response within 5 minutes

***Requires continuous pulse oximetry**

x 1 hr after each dose.

On M/B unit: contact Mgr re equip/staff requirements.

Contraindicated: Bronchial Asthma or Heart Block

Hydralazine IVP: (q 20min PRN; 25mg max dose)

Onset: 5-15 min

Peak response: 10-80 min

Contraindicated: Mitral Valvular disease

▶Be sure to CHECK ORDER for details▶

HTN May 2nd 2-hour Kick-off Webinar



- Time: 12:30-2:30 pm
- Conference Line: 1 877 860 3058
- Host Code: 143 516 5688
- Participant Code: 850 207 6731 (Use this code when requested by system!)
- Adobe Connect:
<http://northwesternuniversity.adobeconnect.com/obteamshtn>

HTN Face-to-Face Meeting

May 23 Springfield: Registration



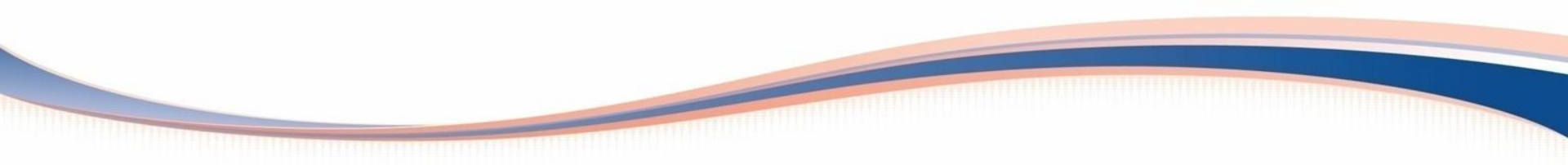
- Registration is now live!
- Strongly encouraged to bring both nurse and provider teams leads
- <https://www.eventbrite.com/e/maternal-hypertension-face-to-face-collaborative-learning-session-tickets-24489550906>
- Registration fee of \$25 plus \$2.37 Eventbrite processing fee
- 79 individuals registered to date
- Registration closes on 5/16
- Begin work on process flow / storyboard to bring

HTN Face-to-Face: Agenda

Monday, May 23rd, Springfield IL



| | |
|----------------------------|--|
| 9:45 – 10:05 am | Welcome, Overview of HTN Initiative, What are We Trying to Accomplish? (Ann) |
| 10:05 – 10:35 am | Overview of CA HTN Initiative and Outcomes (Larry Shields) |
| 10:35 – 11:05 am | The AIM HTN Bundle 101: key steps for implementation (Nancy Peterson) |
| 11:05 – 11:30 am | Understanding QI Strategies for Bundle Implementation (Patti) |
| 11:30 am – 12:15 pm | Team Storyboard and Process Flow Presentations/Viewing |
| 12:15 – 1:00 pm | Working Lunch – Teams/Table discuss key take aways from story boards |
| 1:00 – 1:15 pm | Accurate Measurement of BP and other Strategies for Success (Nancy / Larry) |
| 1:15 – 1:30 pm | Small group implementation cafes / key topic discussions |
| 1:30 – 2:30 pm | Strategies for Data Collection – Lessons Learned from Wave 1 Teams (Ann/Patti) |
| 2:30 – 3:00 pm | Using Your Data to Drive Quality Improvement (Patti) <ul style="list-style-type: none">• Demo of HTN REDCap Reports (Kate) |
| 3:00 – 3:30 pm | Recap Teams Monthly QI Cycle and Questions, Next Steps, Wrap-up (Panel) |



Team Talk

- Roma Allen, MSN, RNC-OB – Elmhurst Memorial Hospital
- Sue Carlson, DNP, APN-BC – Advocate South Suburban



Healthy DrivenTM

Edward-Elmhurst
HEALTH



Elmhurst Memorial Hospital

Team Members

Roma Allen MSN, RN; Michelle Kavanagh BSN, RN; Kimberly Darey, MD.; Rebecca Cazzato MSN, RN, IBCLC; Kimberly Harris MSN, RNC, C-EFM; Andrea White, BSN, RN; Adriana Calcev MSPHRD.

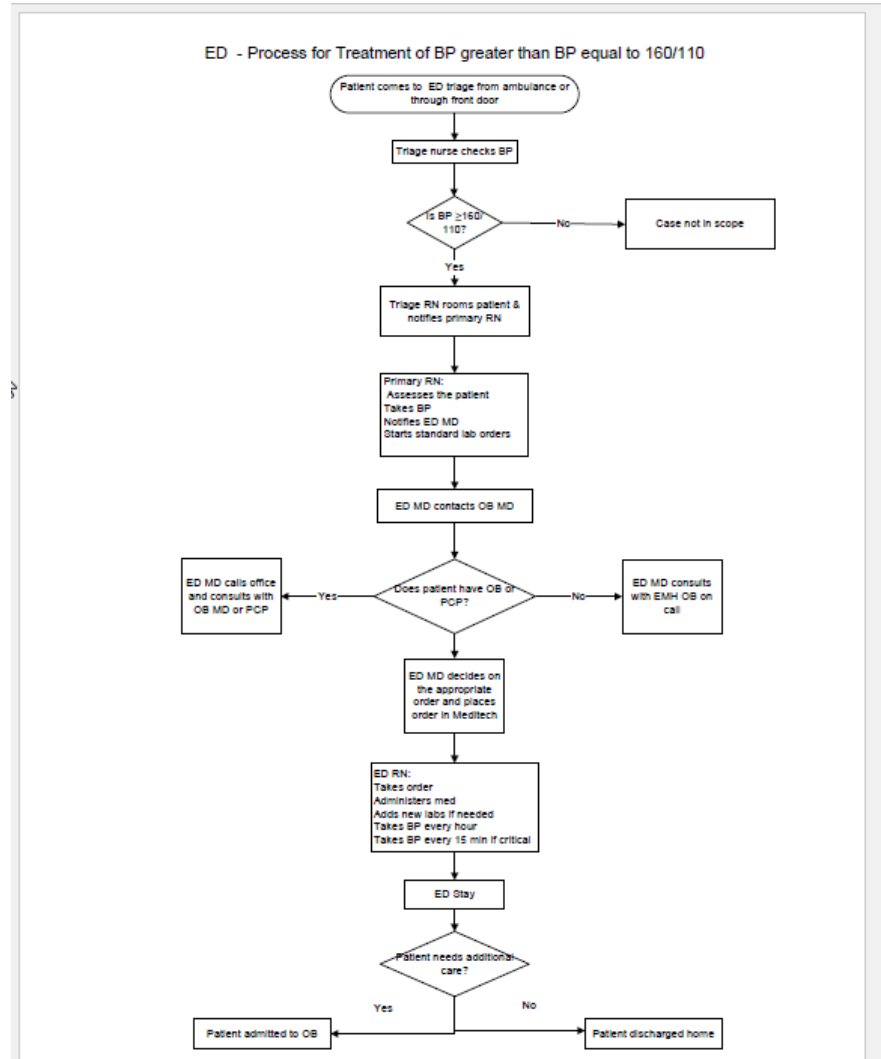
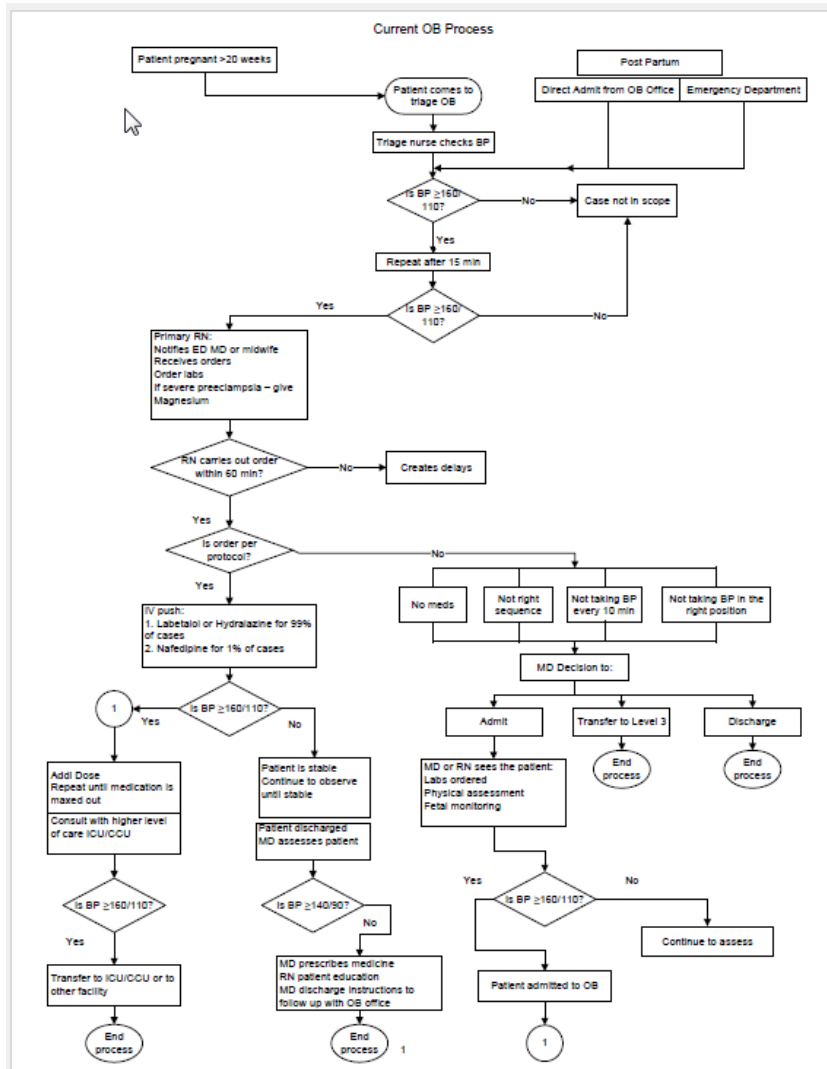
Family Birthing Center

Approximately 2000 deliveries/year
Level IIE nursery

Healthy Driven[™]
Edward-Elmhurst
HEALTH

- Team members meet monthly
 - Multidisciplinary
- Data collection began in February
 - Retrospective
 - Not at the bedside

CURRENT Process Flow Diagram



Plan → Do → Study → Act

| | | |
|---------------------------------------|-----------------------|-----------------------|
| Team Name: Elmhurst Memorial Hospital | Date of test: 2/25/16 | Test Completion Date: |
|---------------------------------------|-----------------------|-----------------------|

Overall team/project aim: Decrease time to treatment with appropriate resources available

What is the objective of the test? Immediate access to appropriate supplies for administering hypertensive medications

PLAN:

Briefly describe the test:

-1m syringe currently in stock to draw up appropriate hydralazine dose (10mg/0.25ml) did not fit into IV tubing. Transfer of hydralazine from 1ml syringe to 3ml syringe was needed in order to administer intravenously through IV tubing. Change in 1 ml syringe to one that fits into IV tubing needed.

How will you know that the change is an improvement?

1. Appropriate syringe available for IV administration
2. Time of medication order to administration < 30minutes
3. Staff feedback on availability and utilization of new syringe

What driver does the change impact?

- Will directly impact the process of administering hydralazine to a maternal patient with severe hypertension.
- Will decrease the amount of steps necessary to administer hydralazine.
- Care management for every pregnant or postpartum woman with new onset severe hypertension

What do you predict will happen?

- decrease in time → treatment
- decreased chance of error of amount of medication given, decrease chance of needle stick injuries

PLAN

| List the tasks necessary to complete this test (what) | Person responsible (who) | When | Where |
|--|--------------------------|----------------|----------|
| Research appropriate syringes. Find one that adapts to current IV tubing | Dr. Darey | March 1, 2016 | OB Dept. |
| Ask unit manager to order correct 1 ml syringe for unit | Michelle Kavanagh | March 10, 2016 | OB Dept. |
| Contact unit distribution to have new syringe stocked in unit stock room | Jen Stirrat | April 1, 2016 | OB Dept. |
| Educate staff on presence and purpose of new syringe | Michelle Kavanagh | April 20, 2016 | OB Dept. |

Plan for collection of Data: Begin May 1, 2016

DO: Monitor availability of syringes, observe RN practice in utilization of syringe, analyze time of order to time of medication administration

Plan → Do → Study → Act

| | | |
|---------------------------------------|-----------------------|-----------------------|
| Team Name: Elmhurst Memorial Hospital | Date of test: 3/22/16 | Test Completion Date: |
|---------------------------------------|-----------------------|-----------------------|

Overall team/project aim: Improve access to maternal hypertensive medications

What is the objective of the test? Create consistency in medication access in the OB department and ED to improve diagnosis to treatment time

PLAN:

Current state: The OB department has a 'Mag Kit' that when accessed in the Pyxis system will also provide you with Labetalol. During a Maternal Hypertension Team Meeting medication, access was inconsistent in the ED and access to Hydralazine was not available in the 'Mag Kit'. ED had no clinical decision support in the Pyxis and all medication must be ordered and removed separately.

The Maternal Hypertension Team meeting recommended the following changes:

1. Pharmacy becomes an Adhoc team member
2. Hydralazine added to the 'Mag Kit'
3. Name changed for consistent messaging to 'Preeclampsia Kit'
4. Duplicate the process in the ED and create a 'Preeclampsia Kit' in the ED Pyxis

How will you know that the change is an improvement?

- Name change to 'Preeclampsia Kit' with access to all medications it provides a trigger for clinical decision support and decrease in the OB and ED department time to treatment
- Rapid access to medications used for severe hypertension with guide for administration and dosage
- Facility-wide standard protocols for appropriate medical management in under 60 minutes

What driver does the change impact?

- Implementation of standard processes for optimal care of severe maternal hypertension in pregnancy
- Care management for every pregnant or postpartum woman with new onset severe hypertension

What do you predict will happen?

Consistent access to medication in the ED prior to transfer to the OB Department

PLAN

| List the tasks necessary to complete this test (what) | Person responsible (who) | When | Where |
|---|-----------------------------|--------------|---------------|
| 1. Add Hydralazine to the 'Kit' | Anne Burns PharmD | May 1, 2016 | OB Department |
| 2. Create Name Change in Pyxis System to 'Preeclampsia Kit' | Anne Burns PharmD | May 20, 2016 | OB Department |
| 3. Add 'Preeclampsia Kit' to ED Pyxis | Anne Burns PharmD | May 20, 2016 | OB Department |
| 4. OB depart. Education nurses & Drs. | Michelle Kavanagh Dr. Darey | May 15, 2016 | OB Department |
| 5. Ed Depart Education nurses & Drs. | Andrea White Dr. Darey | May 15, 2016 | OB Department |

Plan for collection of data:

Short Term Goals...

- Break down the current process flow diagram to identify barriers and possible solutions.
 - Create ideal process flow diagram
- Identify topics to begin staff education
 - ILPQC Project focus and goals
 - Accurate and consistent blood pressure measurement
 - Importance of discharge teaching and follow up
- Plan for escalation of treatment and resources
- Ensure rapid access to medications
 - Currently working with pharmacy department

Advocate South Suburban Hospital: Metro Chicago Region



South Suburban Hospital

- ❖ 17800 S. Kedzie Ave in Hazel Crest, IL.
- ❖ Approximately 20 miles south of Chicago
- ❖ Advocate South Suburban Hospital is a general medical and surgical hospital with 240 beds. Survey data for the latest year available shows that 43,957 patients visited the hospital's emergency room. The hospital had a total of 12,306 admissions. Its physicians performed 3,161 inpatient and 6,380 outpatient surgeries.
- ❖ South Suburban Hospital has a Special Care Nursery Level II with exception: that means we generally transfer high risk maternal patients and specific neonatal patients (for instance less than 32 weeks EGA) to a higher level of care
- ❖ In 2014, just over 1100 births were recorded for the year. In 2015, there were 1269 births (an increase of over 16%)
- ❖ Demographics for Hazel Crest in 2010 included
 - ❖ 85.2% Black
 - ❖ 10.2% White
 - ❖ 3.7% Hispanic

Process of data collection for the ILPQC Maternal HTN Initiative

- ❖ Discussion of bedside data collection tool with nurses and at Safety huddles
- ❖ Approach ACMs, Charge nurses and staff on a daily basis to see if any patients on the census are hypertensive and meet the criterion for severe hypertension
- ❖ Flyers (bedside audit tool) with information on the unit
- ❖ Daily chart audits to check BPs
- ❖ Pharmacy reports regarding administration of Labetalol and Hydralazine
 - ❖ *Note: With MFM consults, Labetalol is often initiated PO with Magnesium Sulfate initiated*
 - ❖ *BP is managed with no FHM changes*

Barriers to data collection

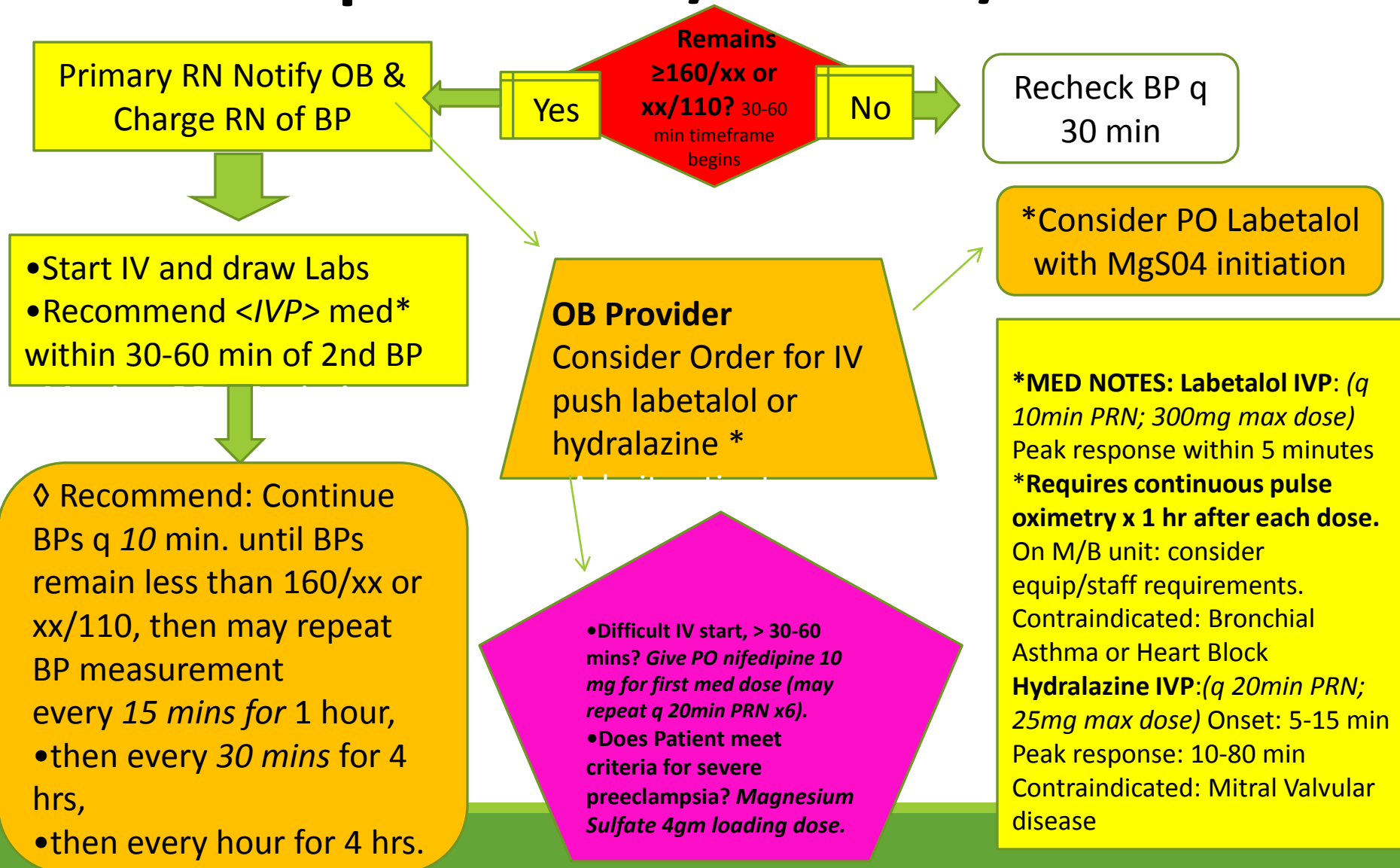
No bedside reports were completed by the staff nurses:

- ❖ “uneasy about which patients qualify: unclear”
- ❖ “no time/ not my job”
- ❖ Low number that actually qualify as severe hypertension
- ❖ Quality personnel not able to run reports on ICD-10 codes

Nurses process to treatment

- ❖ Nursing staff contacts the OB Provider
- ❖ OB Provider quickly act upon severe hypertension that is sustained
- ❖ Many of these patients are transports to a higher level of care where MFM is staffed
- ❖ Only one case seen thus far was not treated within the 60 minutes
- ❖ There is no RN/MD debriefing happening that has been relayed or documented to this point

Treatment of Blood Pressure greater than or equal to 160/xx or xx/ 110:



Team Talks – HTN Initiative



- Teams assigned an OB Teams Call – look for email from Kate
 - June
 - NorthShore Evanston
 - Loyola
 - July
 - Northwest Community
 - Memorial Hospital of Carbondale
 - August
 - St. Anthony Hospital
 - HSHS St. Elizabeth
 - September
 - Advocate Sherman
 - Norwegian American
 - October
 - St. John's
 - Silver Cross
- Generate discussion and learning through sharing
 - Good foundation for storyboard/poster presentations!
- Present 5-10 mins. on current QI work, including:
 - How are you implementing the data form?
 - What are your challenges and successes?
 - How are you developing your process flow?
 - Share your process flow diagrams
 - Discuss process for identifying opportunities for improvement?
 - How are you organizing your team meetings?

ABOG MOC Credits

- The ABOG MOC standards now allow participation in ABOG-approved Quality Improvement Projects to meet the annual Improvement in Medical Practice (Part IV) MOC requirement.
- ILPQC Maternal HTN Quality Improvement Initiative has been approved to meet ABOG Part IV Improvement in Medical Practice requirements for 2016 and 2017.
- For further information, review the 2015 MOC Bulletin at <http://www.abog.org/bulletins/MOC2016.pdf>.



Process to Receive ABOG



MOC Credits

- **Starting in November 2016**, Physician Diplomates interested in applying their work on this initiative to their ABOG dashboard submit a letter to IPQC via info@ilpqc.org describing their participation in the initiative along with a letter from their quality improvement team lead, if a different person
- ILPQC submits list of all physician diplomats who actively participated in the initiative to ABOG at end of the QI initiative
- ABOG adds activity to physicians Diplomates' personal dashboard in the "Open" section of IMP Activities
- Within one month from the time of the QI initiative completion, ABOG will send the participating Diplomates an email requesting the Diplomate to complete and submit a short set of questions about his / her practice patterns after participating in this QI activity
- Once the Diplomate completes and submits these questions, the activity moves from the "Open" section of IMP Activities to the "Completed" section of IMP activities and that will complete their Part IV requirement for year.

Wave 1 Recap and Next Steps

- Continue baseline data collection/implementing data form and entering data into REDCap monthly
- Begin work on process flow / story board for May 23 Face to Face Meeting (share your team story).
- Contact ILPQC www.ilpqc.org with questions regarding data collection or process flow
- Participate in 2-hour implementation launch webinar May 2, 12:30 – 2:30 pm
- **Register** for the Face-to-Face Collaborative Learning Session on May 23 from 9:45 am – 3:30 pm at Dove Conference Center at St. John's in Springfield