



Maternal Hypertension Initiative Teams Call Implementing Maternal Early Warning Systems for Early Recognition

July 24, 2017

12:30 – 1:30 pm

Overview

- HTN Initiative and Data Updates (15 mins.)
- Maternal Early Warning Systems (20 mins.)
- Team Talks – Implementing Maternal Early Warning Systems (20 mins.)
- Next Steps & Questions (5 mins.)

HTN Initiative: Collaborative Tools and Updates

ILPQC Annual Conference



- Save the Date: Tuesday, December 19
- Westin Lombard, Main Ballroom (same hotel, larger space)

Replacing Kate

- Reposting position and beginning new round of application review and interviews through early August
- Will provide update next month

OB Teams Monthly Calls: Back to the Bundle



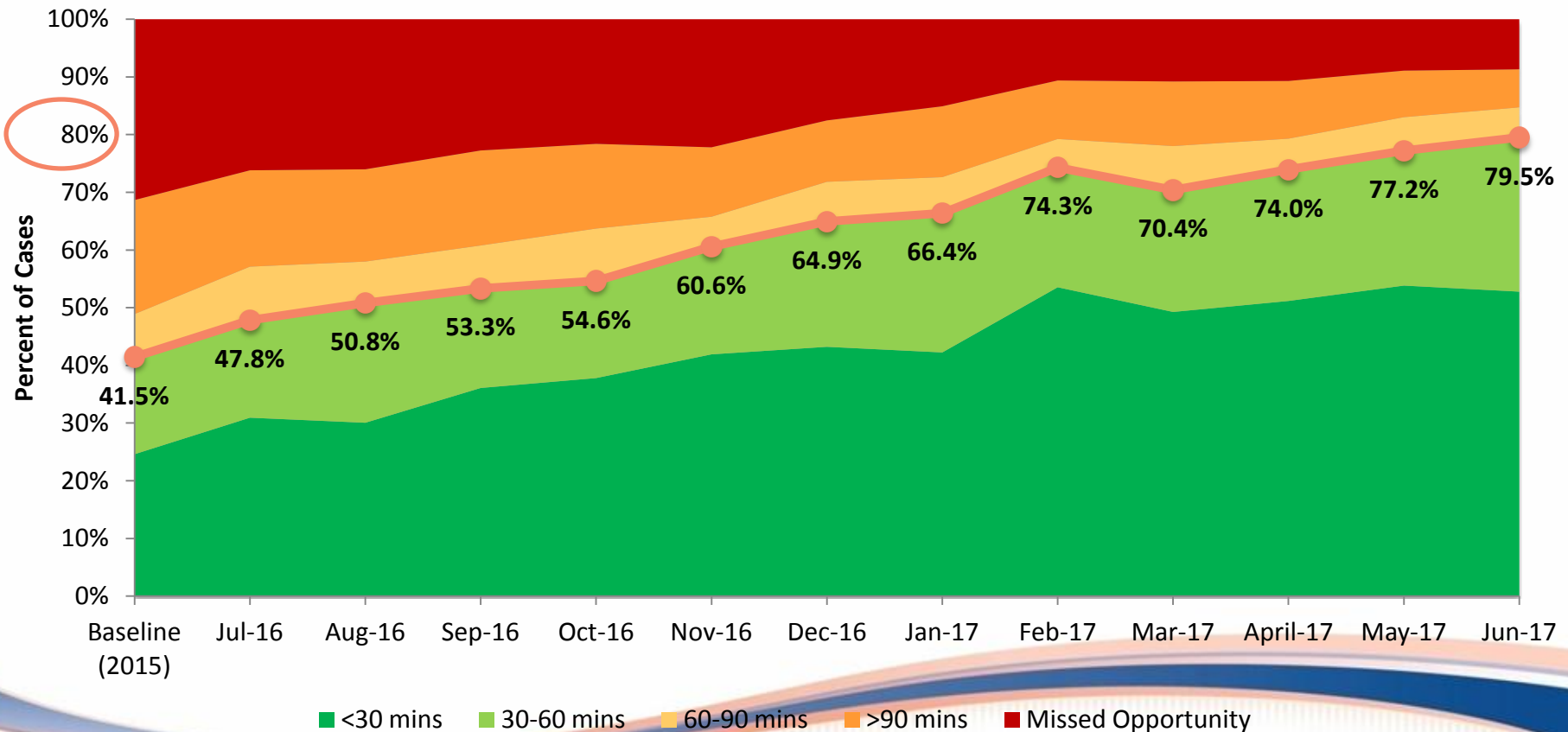
| Call Date | Topic | Volunteers |
|---------------------------------|--|--------------------------|
| June 26 12:30 – 2:30 pm | Readiness - Implementing Provider / Staff Education across units and Checklists | Lori Andriokos |
| July 24 12:30 – 1:30 pm | Recognition & Prevention – Implementing Early Recognition Protocols (MEWS) and Patient Education | Felicia Fitzgerald |
| August 28 12:30 – 1:30 pm | Response - BP Medication and Treatment Algorithms | Soti Markuly, Jim Keller |
| September 25 12:30 – 1:30 pm | Reports/System Learning – Drills, Simulations, and Team Communications | Angela Rodriguez |
| October 23 12:30 – 1:30 pm | Sustainability Planning | Deb Miller |

Maternal Hypertension Data: Time to Treatment



ILPQC: Maternal Hypertension Initiative

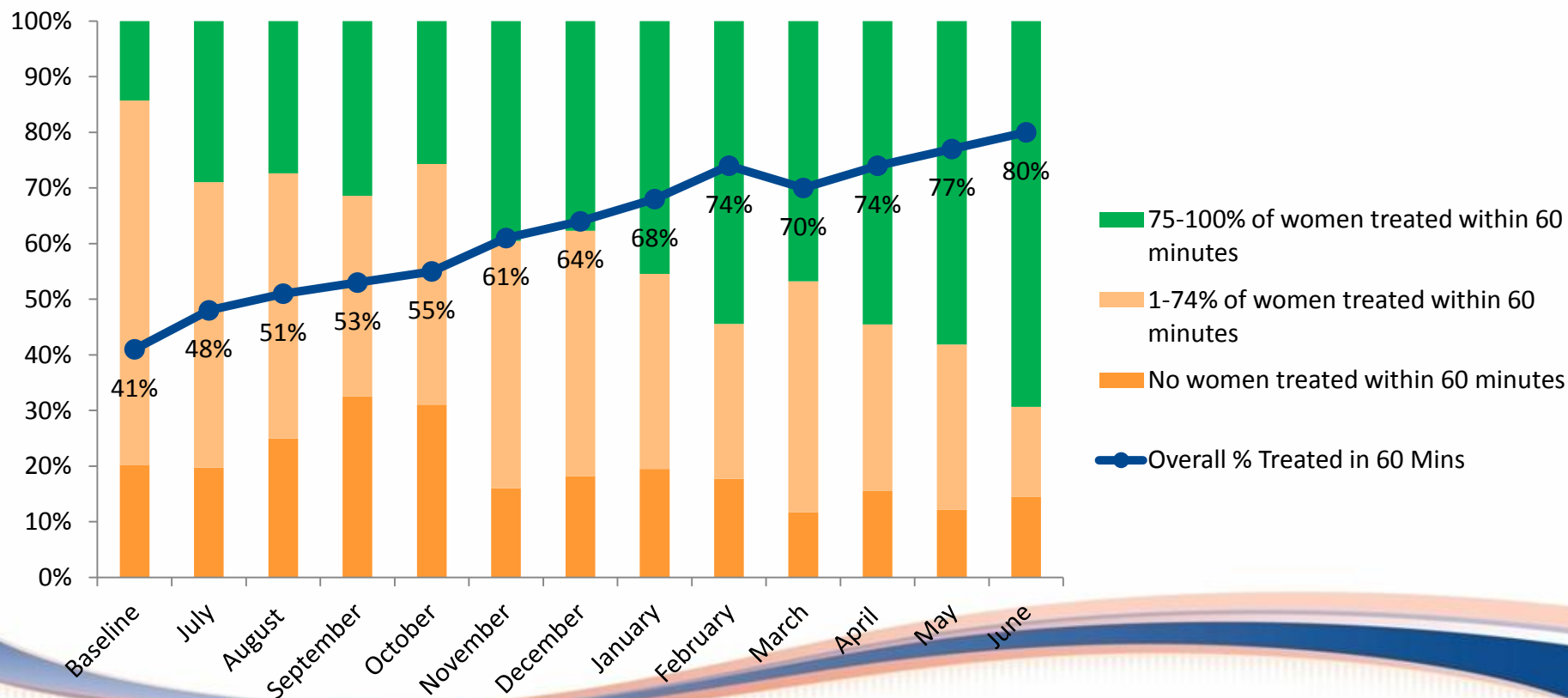
Percent of Cases with New Onset Severe Hypertension Treated in <30, 30-60, 60-90, >90 minutes or Not Treated
All Hospitals, 2016-2017



Maternal Hypertension Data: Time to Treatment

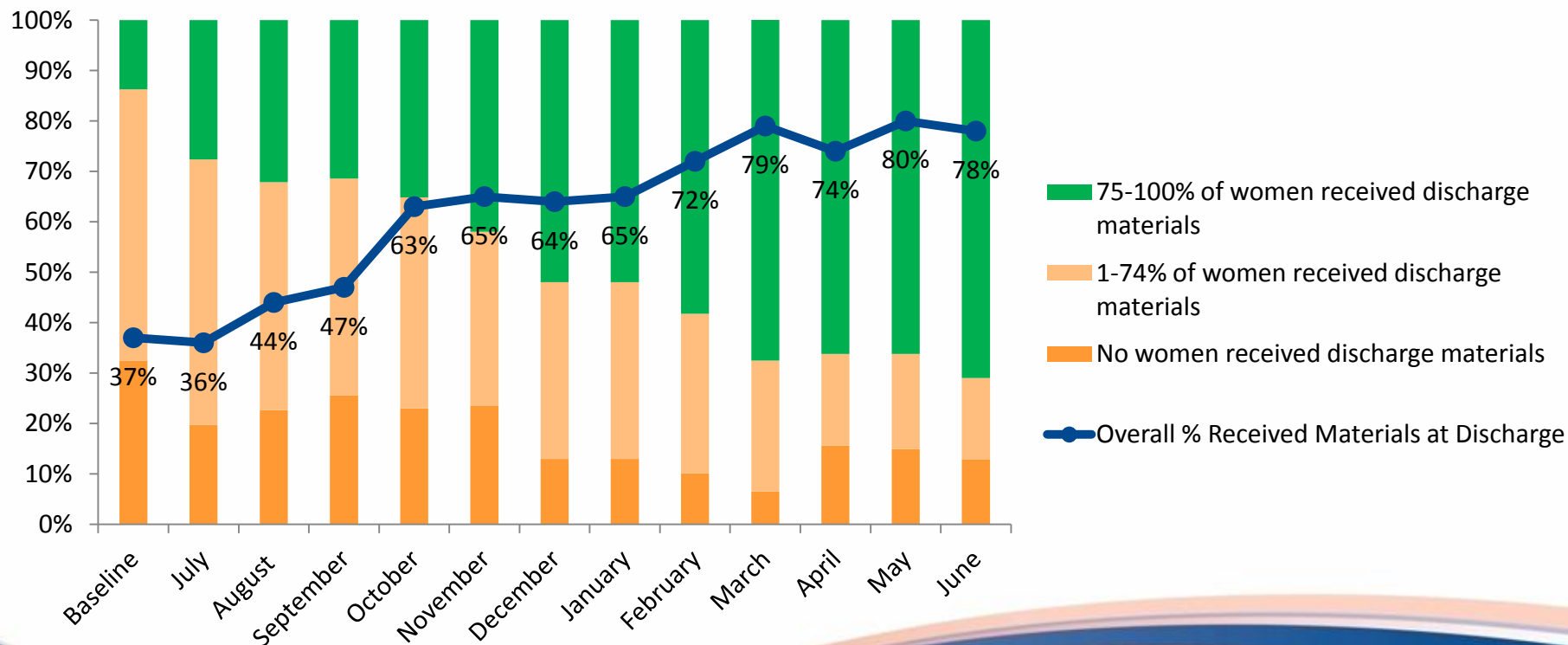


ILPQC: Maternal Hypertension Initiative
Percent of All Reporting Hospitals that Treated Cases with New Onset Severe Hypertension within 60 Minutes
All Hospitals, 2016-2017



Maternal Hypertension Data: Patient Education

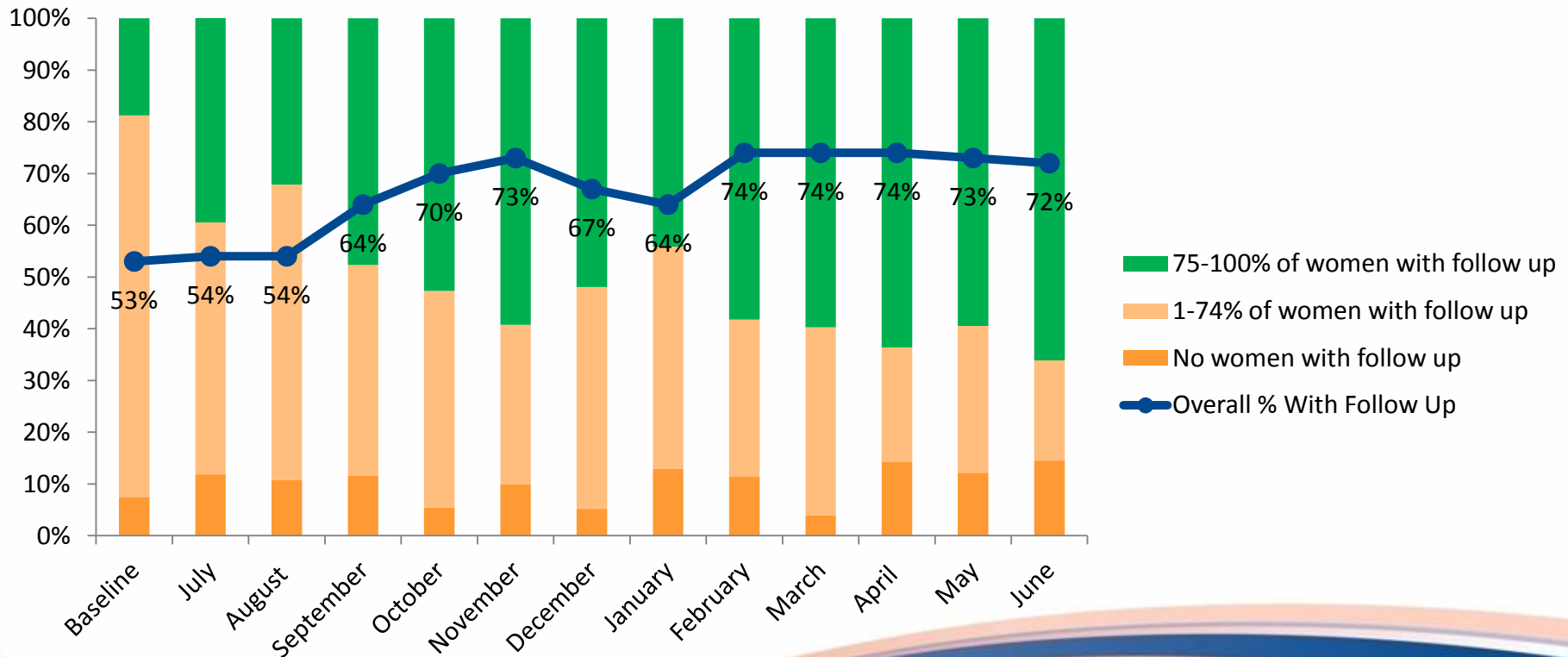
ILPQC: Maternal Hypertension Initiative
Percent of All Reporting Hospitals Where Women Received Discharge Education Materials
All Hospitals, 2016-2017



Maternal Hypertension Data: Patient Follow-up



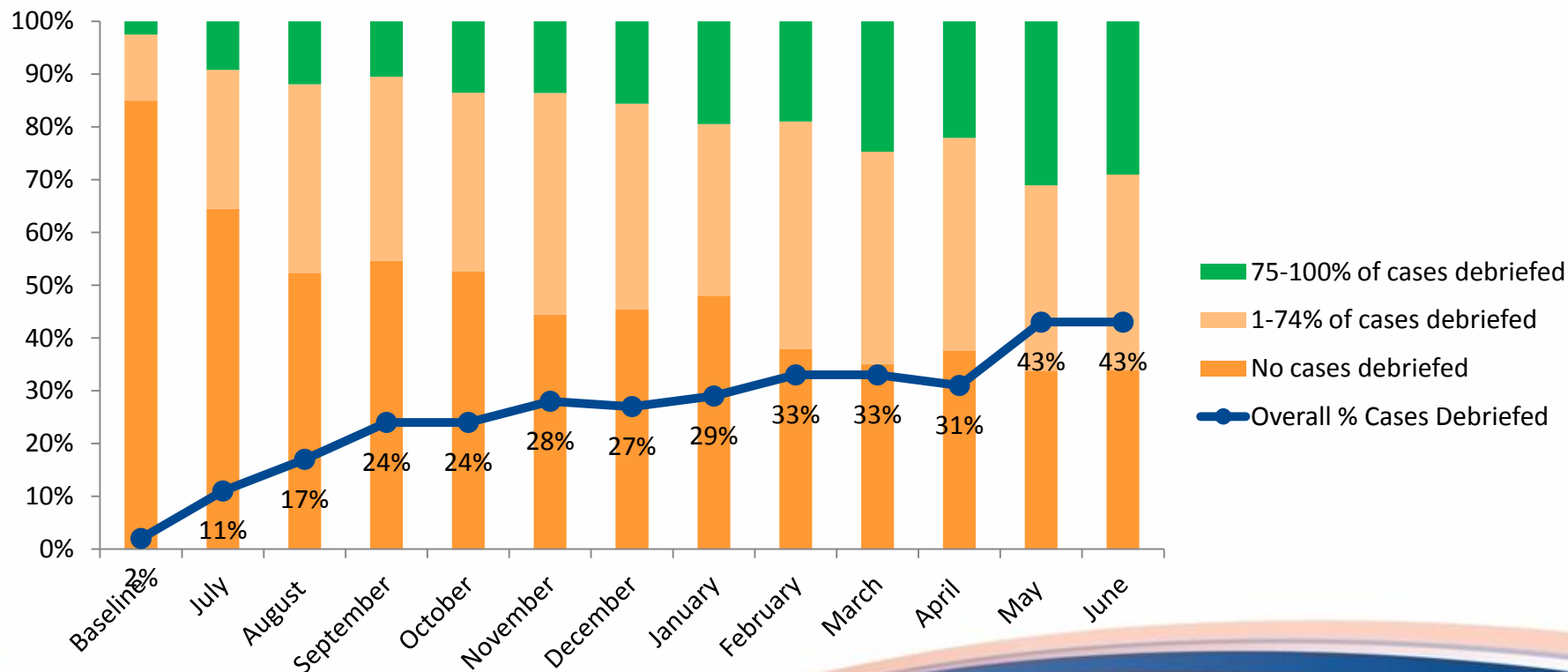
ILPQC: Maternal Hypertension Initiative
Percent of All Reporting Hospitals Where Follow-up Appointments were Scheduled within 10 Days
All Hospitals, 2016-2017



Maternal Hypertension Data: Debrief



ILPQC: Maternal Hypertension Initiative
Percent of All Reporting Hospitals Where Cases of New Onset Severe Hypertension were Debriefed
All Hospitals, 2016-2017



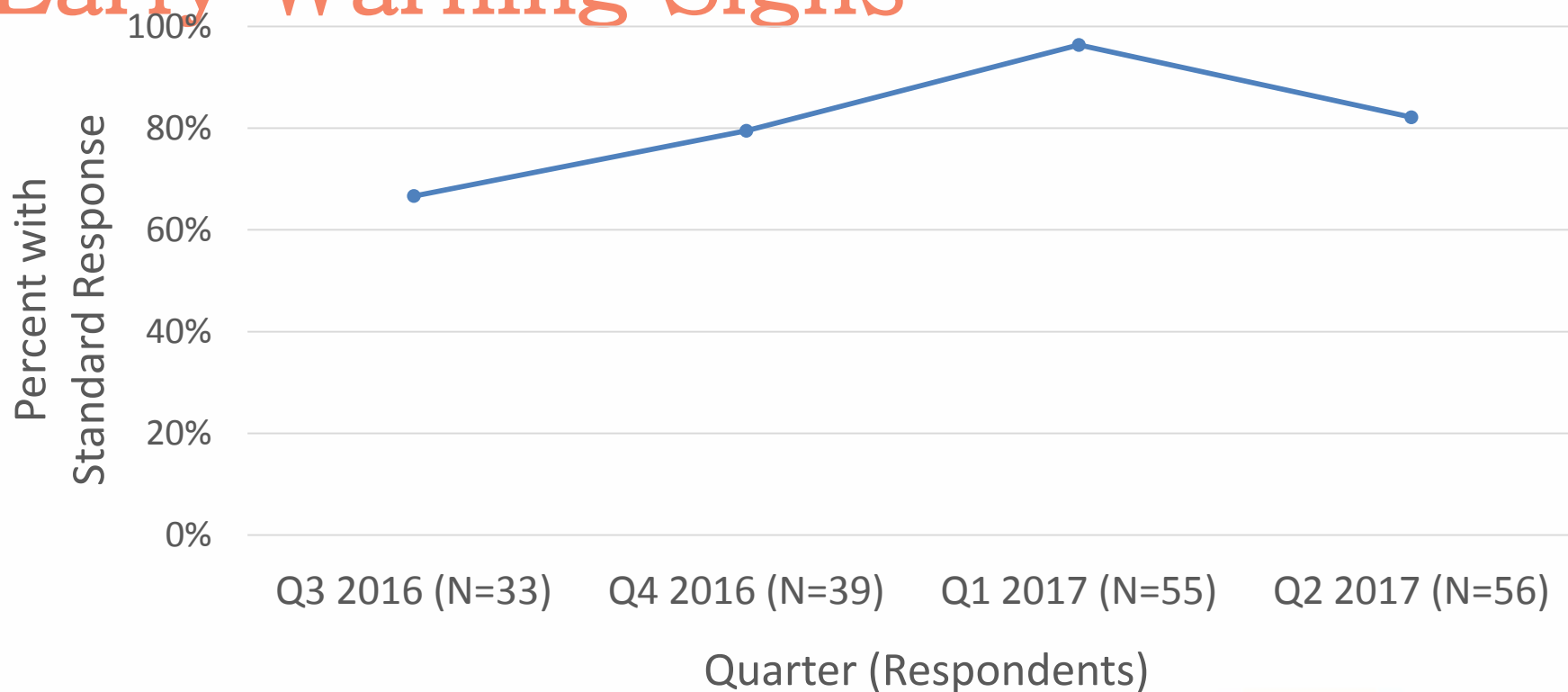
Severe Hypertension Data Entry Status



| | Total Records | # Teams with Data |
|-----------------|---------------|-------------------|
| Baseline (2015) | 1619 | 87 |
| July | 589 | 75 |
| August | 658 | 83 |
| September | 572 | 85 |
| October | 515 | 73 |
| November | 566 | 81 |
| December | 569 | 75 |
| January | 559 | 80 |
| February | 506 | 79 |
| March | 556 | 77 |
| April | 494 | 77 |
| May | 541 | 74 |
| June | 333 | 62 |
| Overall | 8077 | 100 |

Get June
data in
by 7/31!

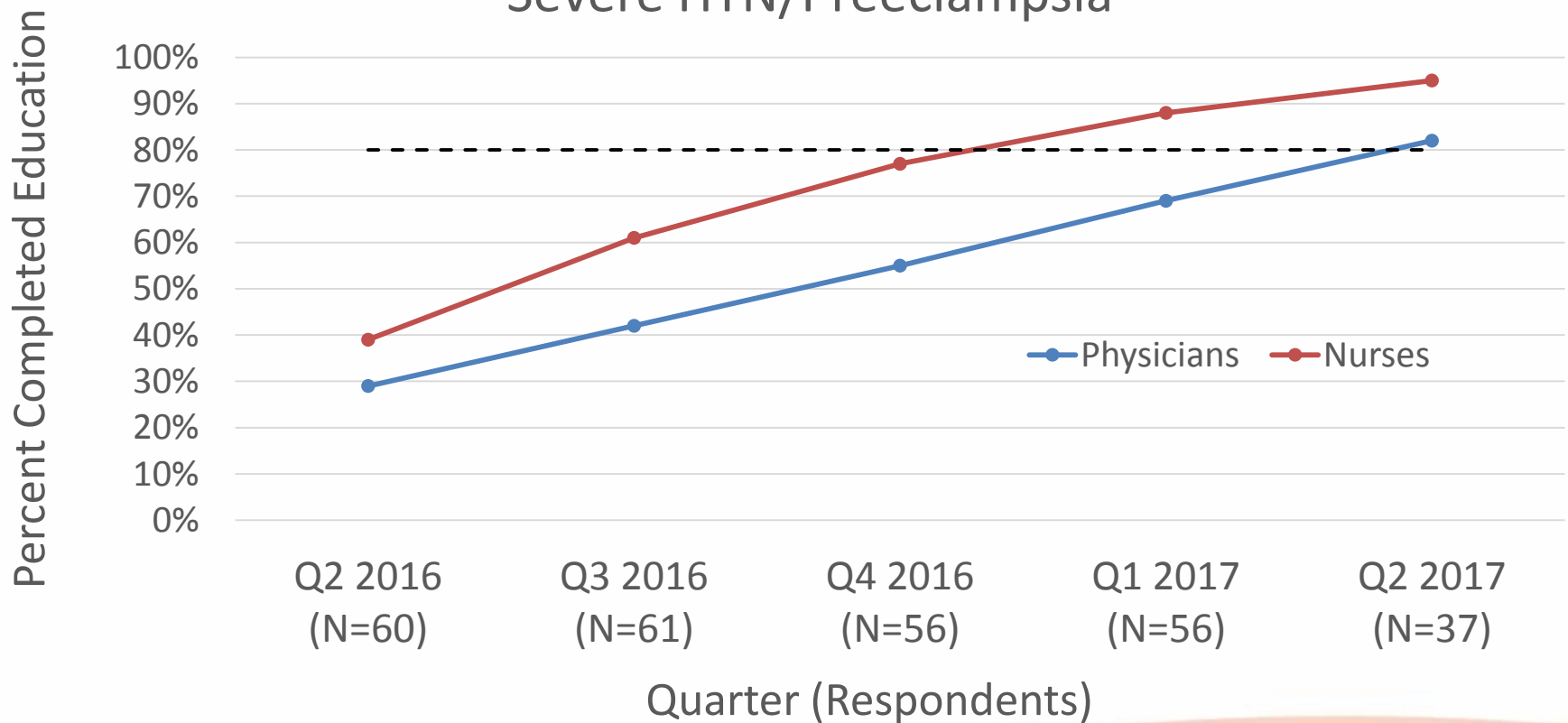
Implementation Checklist: Hospitals with Standard Response to Maternal Early Warning Signs



AIM Quarterly Measures: Provider & Nurse Education



Cumulative percent of OB providers and nurses completed (within last 2 years) *clinical education* on Severe HTN/Preeclampsia

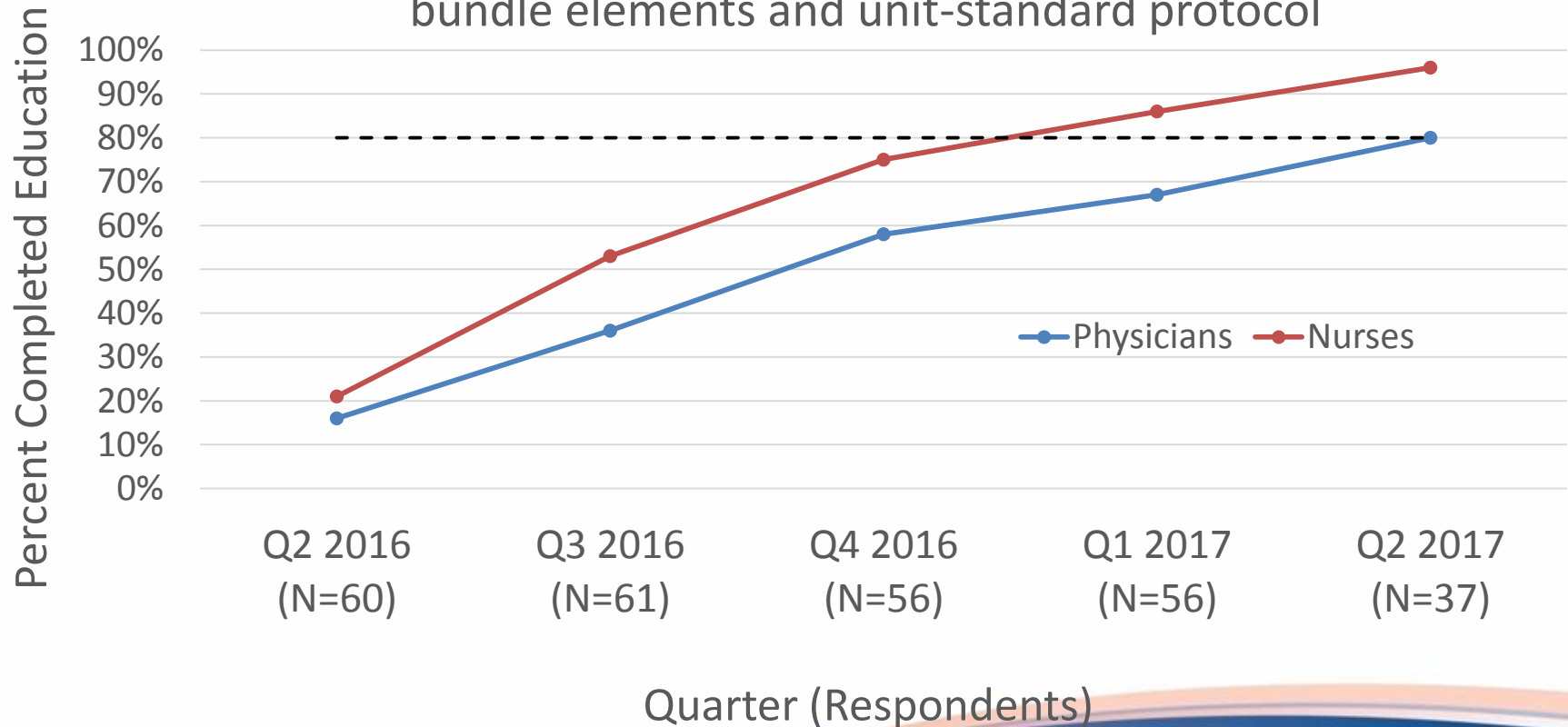


AIM Quarterly Measures: Provider & Nurse Education



Cumulative percent of OB providers and nurses completed (within the last 2 years)

implementation education on Severe HTN/Preeclampsia bundle elements and unit-standard protocol



REVISED - Key Driver Diagram: Maternal Hypertension

GOAL: To reduce preeclampsia maternal morbidity in Illinois hospitals

Key Drivers

GET READY
IMPLEMENT STANDARD PROCESSES for optimal care of severe maternal hypertension in pregnancy

RECOGNIZE
IDENTIFY pregnant and postpartum women and ASSESS for severe maternal hypertension in pregnancy

RESPOND
TREAT in 30 to 60 minutes every pregnant or postpartum woman with new onset severe hypertension

CHANGE SYSTEMS
FOSTER A CULTURE OF SAFETY and improvement for care of women with new onset severe hypertension

Interventions

- ❑ Develop standard order sets, protocols, and checklists for recognition and response to severe maternal hypertension and integrate into EHR
- ❑ Ensure rapid access to IV and PO anti-hypertensive medications with guide for administration and dosage (e.g. standing orders, medication kits, rapid response team)
- ❑ Educate OB, ED, and anesthesiology physicians, midwives, and nurses on recognition and response to severe maternal hypertension and apply in regular simulation drills

- ❑ Implement a system to identify pregnant and postpartum women in all hospital departments
- ❑ Implement a Maternal Early Obstetric Warning System at your hospital
- ❑ Execute protocol for measurement, assessment, and monitoring of blood pressure and urine protein for all pregnant and postpartum women
- ❑ Implement protocol for patient-centered education of women and their families on signs and symptoms of severe hypertension

- ❑ Execute protocols for appropriate medical management in 30 to 60 minutes
- ❑ Provide patient-centered discharge education materials on severe maternal hypertension
- ❑ Implement protocols to ensure patient follow-up within 10 days for all women with severe hypertension and 72 hours for all women on medications

- ❑ Establish a system to perform regular debriefs after all new onset severe maternal hypertension cases
- ❑ Establish a process in your hospital to perform multidisciplinary systems-level reviews on all severe maternal hypertension cases admitted to ICU
- ❑ Incorporate severe maternal hypertension recognition and response protocols into ongoing education (e.g. orientations, annual competency assessments)

AIM: By December 2017, to reduce the rate of severe morbidities in women with preeclampsia, eclampsia, or preeclampsia superimposed on pre-existing hypertension by 20%

ANNOUNCING:

QUALITY IMPROVEMENT RECOGNITION AWARDS

ILPQC SEVERE MATERNAL HYPERTENSION INITIATIVE

GOLD

- ✓ Structure Measures
+
- ✓ **All 4** Process
Measure goals met

SILVER

- ✓ Structure Measures
+
- ✓ **3 of the 4** Process
Measure goals met

BRONZE

- ✓ Structure Measures
+
- ✓ **2 of the 4** Process
Measure goals met

DETERMINED BY DATA* FOR QUARTER 3 OF 2017

TO BE AWARDED AT 5TH ANNUAL ILPQC CONFERENCE: NOVEMBER 2017

**SEVERE HTN DATA, AIM QUARTERLY MEASURES, & IMPLEMENTATION CHECKLIST*

Award Criteria

Award Criteria for IL Maternal Hypertension Hospital Teams:

Structure Measures:

- ❷ Severe Maternal HTN Policies in place in all units (Implementation Checklist question 1 A-C)
 - ❷ Standard protocols for early warning signs, updated diagnostic criteria, monitoring and treatment of severe preeclampsia/eclampsia on L&D, Antepartum/Postpartum, Triage
- ❷ Provider & Nursing education: ≥80% of providers and nurses educated (AIM Quarterly Measure)

Process Measures:

- ❷ Time to treatment ≤60 minutes: ≥80% of cases
- ❷ Debrief: ≥30% of cases
- ❷ Discharge education: ≥70% of cases
- ❷ Follow-up appointments scheduled within 10 days of discharge: ≥70% of cases

AIM Yearly Measures

My Projects Organize

Project Title

- ILPQC Early Elective Delivery Initiative
- ILPQC Birth Certificate Initiative
- ILPQC Golden Hour
- ILPQC Severe Hypertension Data Form
- ILPQC AIM Yearly Measures**
- ILPQC AIM Quarterly Measures
- ILPQC Severe HTN Implementation Checklist

AIM Yearly Measures Entry Form

Editing existing Record ID 1

Record ID 1
(To rename this record, modify the value immediately below.)

Record ID

Hospital ID
** must provide value*

1. Preeclampsia Protocols: Do you have Preeclampsia Policies and Procedures (reviewed in the last 3 years) that include Unit-standard approaches to Severe Hypertension, Magnesium administration and Treatment of Magnesium overdoses? Yes No reset

2. On what date did your hospital complete their Preeclampsia Policies and Procedures? Today M-D-Y

3. Preeclampsia EHR Integration: Were you able to integrate the new Severe Preeclampsia processes (e.g. order sets, tracking tools) into your EHR? Yes No reset

4. Patient/Family Support: Have you developed OB specific resources and protocols to support patients, family and staff through major OB complications? Yes No reset

5. On what date did your hospital complete the OB resources and protocols for patient/family support through major OB complications? Today M-D-Y

6. Debriefs: Have you established a system in your hospital to perform regular formal debriefs after cases with major complications? Major complications will be defined by each facility based on volume, but is meant to include more than cases with ICU admissions and with ≥ 4 units RBC transfusions. Yes No reset

7. On what date did your hospital establish a system to perform regular formal debriefs for cases of severe maternal hypertension with major complications? Today M-D-Y

8. Multi-disciplinary Case Reviews: Have you established a process in your hospital to perform multi-disciplinary systems-level reviews on all cases of severe maternal morbidity (including women admitted to the ICU or receiving ≥ 4 units RBC transfusions)? Yes No reset

9. On what date did your hospital establish a process to perform multi-disciplinary systems-level reviews on all cases of severe maternal morbidity? Today M-D-Y

Form Status

Complete?

- Open REDCap while on the call and click on 'My Projects'
 - Click "ILPQC AIM Yearly Measures"
 - Only 5 questions (plus dates)
 - **Due August 11th, 2017**

AIM Yearly Measures Cont.

- Completion date of specific Preeclampsia Policies and Procedures
- Integration of new Severe Preeclampsia processes into ERH
- Completion date of OB protocol implementation for patient/family support
- Implementation date of formal debriefs for major complication cases
- Implementation date of multi-disciplinary reviews for severe maternal morbidity cases

AIM Quarterly Survey

My Projects Organize

| Project Title |
|---|
| ILPQC Early Elective Delivery Initiative |
| ILPQC Birth Certificate Initiative |
| ILPQC Golden Hour |
| ILPQC Severe Hypertension Data Form |
| ILPQC AIM Yearly Measures |
| ILPQC AIM Outcome Measures |
| ILPQC AIM Quarterly Measures |
| ILPQC Severe HTN Implementation Checklist |

Aim Quarterly Measures Entry Form
Assign record to a Data Access Group? -- select a group --

Adding new Record ID 1

Record ID: 1

Hospital ID:
* must provide value

Please select the time period for this quarterly data:
* must provide value

- Q2 2016 (April - June 2016)
- Q3 2016 (July - September 2016)
- Q4 2016 (October - December 2016)
- Q1 2017 (January - March 2017)
- Q2 2017 (April - June 2017)
- Q3 2017 (July - September 2017)
- Q4 2017 (October - December 2017)

Provider Education

1a. At the end of this quarter, what cumulative proportion of OB physicians and midwives has completed (within the last 2 years) an education program on Severe HTN/Preeclampsia*?
*Question 1a focuses on clinical education related to severe HTN/Preeclampsia.

1b. At the end of this quarter, what cumulative proportion of OB physicians and midwives has completed (within the last 2 years) an education program on the Severe HTN/Preeclampsia bundle elements and the unit-standard protocol*?
*Question 1b focuses on implementation education related to severe HTN/Preeclampsia bundle (Readiness, Recognition & Prevention, Resources, Reporting/Systems Learning) with a focus on the 14 items on the implementation checklist.

Nursing Education

2a. At the end of this quarter, what cumulative proportion of OB nurses has completed (within the last 2 years) an education program on Severe HTN/Preeclampsia*?
*Question 2a focuses on clinical education related to severe HTN/Preeclampsia.

2b. At the end of this quarter, what cumulative proportion of OB nurses has completed (within the last 2 years) an education program on the Severe HTN/Preeclampsia bundle elements and the unit-standard protocol*?
*Question 2b focuses on implementation education related to severe HTN/Preeclampsia bundle (Readiness, Recognition & Prevention, Resources, Reporting/Systems Learning) with a focus on the 14 items on the implementation checklist.

Unit Drills

3. In this quarter, how many OB drills (In Situ and/or Sim Lab) were performed on your unit for any maternal safety topic?

4. What topics were covered in drills this quarter?

- Hemorrhage
- Severe Hypertension
- Maternal Code
- Crash Cesarean Birth
- Shoulder Dystocia
- Other

Select all that apply

Form Status

Complete?

Save Record
Save and Continue

- Open REDCap while on the call and click on 'My Projects'
 - Complete AIM Quarterly Measures for 2016 Q3 and Q4
 - Only 4 questions
 - **Q1 2017 due April 15th**

Severe HTN Implementation Checklist

My Projects

| Project Title |
|--|
| ILPQC Early Elective Delivery Initiative |
| ILPQC Birth Certificate Initiative |
| ILPQC Golden Hour |
| ILPQC Severe Hypertension Data Form |
| ILPQC AIM Yearly Measures |
| ILPQC AIM Outcome Measures |
| ILPQC AIM Quarterly Measures |
| ILPQC Severe HTN Implementation Checklist |

Adding new Record ID 1

Record ID 1

Hospital ID

* must provide value

Please select the time period for this quarterly data:

* must provide value

Q2 2016 (April - June 2016)

Q3 2016 (July - September 2016)

Q4 2016 (October - December 2016)

Q1 2017 (January - March 2017)

Q2 2017 (April - June 2017)

Q3 2017 (July - September 2017)

Q4 2017 (October - December 2017)

reset

Readiness - For every unit in your hospital do you have:

1. Standard protocols for early warning signs, updated diagnostic criteria, monitoring and treatment of severe preeclampsia/eclampsia (include order sets and algorithms).

Yes No

a. L&D

* must provide value

reset

b. Antepartum/Postpartum

* must provide value

Yes No

reset

c. Triage/ED

* must provide value

Yes No

reset

2. Unit education on protocols, unit-based drills or simulations (with post-drill debriefs).

Yes No

a. L&D

* must provide value

reset

b. Antepartum/Postpartum

* must provide value

Yes No

reset

c. Triage/ED

* must provide value

Yes No

reset

3. Process for timely identification, triage, and evaluation of pregnant and postpartum women with hypertension including ED and outpatient areas.

Yes No

* must provide value

reset

4. Rapid access to IV medications used for severe hypertension/eclampsia: Medications should be stocked and immediately available on L&D and in other areas where patients may be treated. Include brief guide for administration and dosage.

Yes No

a. L&D

* must provide value

reset

b. Antepartum/Postpartum

* must provide value

Yes No

reset

c. Triage/ED

* must provide value

Yes No

reset

5. System plan for escalation, obtaining appropriate consultation and maternal transport, as needed for severe maternal hypertension, preeclampsia, and eclampsia.

Yes No

a. L&D

* must provide value

reset

- Open REDCap while on the call and click on 'My Projects'
 - Complete Severe HTN Implementation Checklist for 2016 Q3 and Q4
 - 14 easy yes/no questions
 - **Q1 2017 due April 15th**

Overview

- HTN Initiative and Data Updates (20 mins.)
- Maternal Early Warning Systems (20 mins.)
- Team Talks – Implementing Maternal Early Warning Systems (20 mins.)
- Next Steps & Questions

IMPLEMENTING MATERNAL EARLY WARNING SIGNS

Subcommittee on Vital Sign Triggers

“Every birthing facility in the United States should adopt tools that identify maternal patients who require urgent bedside evaluation by a physician, including tested examples of obstetric warning criteria that identify critical vital signs and symptoms”



Maternal Early Warning System: Two Essential Components

1. The Maternal Early Warning Criteria
2. A supporting Effective Escalation Policy



The Maternal Early Warning Criteria

Obstetric Early Warning Score Chart - Maternity Use Only

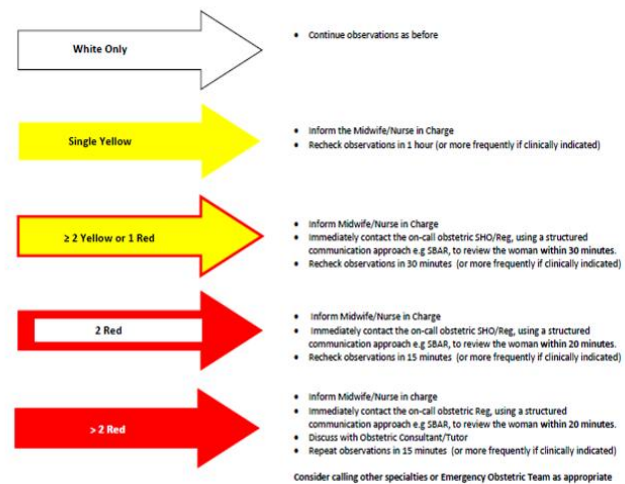
| | | | | |
|------------------------------|---------|-------------|-----------------------------|------------------------------|
| Name _____ | | Month _____ | Booking BP _____ mmHg | HSC Health and Social Care |
| Consultant _____ | | Year _____ | BMI _____ Kg/m ² | |
| Hosp No. _____ | | Ward _____ | | |
| Date: _____ | | | | Please tick below |
| Frequency of Obs: _____ | | | | 4/N <input type="checkbox"/> |
| Time 24hr clock: _____ | | | | 7/N <input type="checkbox"/> |
| Resps | 130 | | 130 | |
| | 21-30 | | 21-30 | |
| | 10-20 | | 10-20 | |
| % O ₂ Saturation | >100 | | >100 | |
| | 95-100% | | 95-100 | |
| | 60% | | 60 | |
| Empiled O ₂ /RA | % | | % | |
| | 39 | | 39 | |
| | 38 | | 38 | |
| Temp | 37 | | 37 | |
| | 36 | | 36 | |
| | 35 | | 35 | |
| | 150 | | 150 | |
| | 140 | | 140 | |
| Heart Rate | 130 | | 130 | |
| | 120 | | 120 | |
| | 110 | | 110 | |
| | 100 | | 100 | |
| | 90 | | 90 | |
| Systolic Blood Pressure | 80 | | 80 | |
| | 70 | | 70 | |
| | 60 | | 60 | |
| | 50 | | 50 | |
| | 130 | | 130 | |
| Diastolic Blood Pressure | 120 | | 120 | |
| | 110 | | 110 | |
| | 100 | | 100 | |
| | 90 | | 90 | |
| | 80 | | 80 | |
| Early Pregnancy 50 reactions | Yes | | Yes | |
| | No | | No | |
| Anesthetic Fluid if ROM | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| A/N PV Blood | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| A/N Uterine Tone | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| Lochia | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| P/N Uterine Tone | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| Wound - Contraction | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| Neuro Response | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| Pain Score | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| Neuro | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| Looks Unwell | Other | | Other | |
| | Other | | Other | |
| | Other | | Other | |
| Total Yellow Scores: _____ | | | | N/A - Not applicable |
| Total Red Scores: _____ | | | | |
| Signature (Details): _____ | | | | |

Obstetric Early Warning Score Chart - Maternity Use Only

ACTION PROTOCOL

The Early Warning Scoring System and Action Protocol are designed to help identify deterioration in the woman and ensure appropriate early intervention. All action taken must be fully documented in case notes. Staff should use their clinical judgement, and seek advice if they have concerns about any woman, regardless of the score.

If an OEWS chart is being commenced in a freestanding midwife led unit the parent obstetric unit needs to be informed and transfer protocols commenced



Interventions / Investigations

Airway – Breathing – Circulation

If appropriate, sit upright and administer oxygen

Consider need for IV access, review observation chart, fluid balance, hourly urimeter, drug prescription chart and level of monitoring

Consider need for 12 lead ECG, Chest X-ray, arterial blood gas, CBC, U&E, Coag screen

Observations explanation

| | |
|--------------|-------------------|
| Pain Score | Neuses Score |
| 0 = none | 0 = no nausea |
| 1 = a little | 1 = mild nausea |
| 2 = moderate | 2 = severe nausea |
| 3 = severe | 3 = vomiting |

P.V. Loss

A standard maternity pad:

Partially stained = 30mls
Saturated to capacity = 120mls

A single absorbent incontinence pad (75x57cm):

Saturated will hold 250mls of blood.

Surgical swabs:

Saturated small surgical swab (10cmx10cm) = 60mls
Saturated large surgical swab (45cmx40cm) = 130mls

A standard kidney dish:

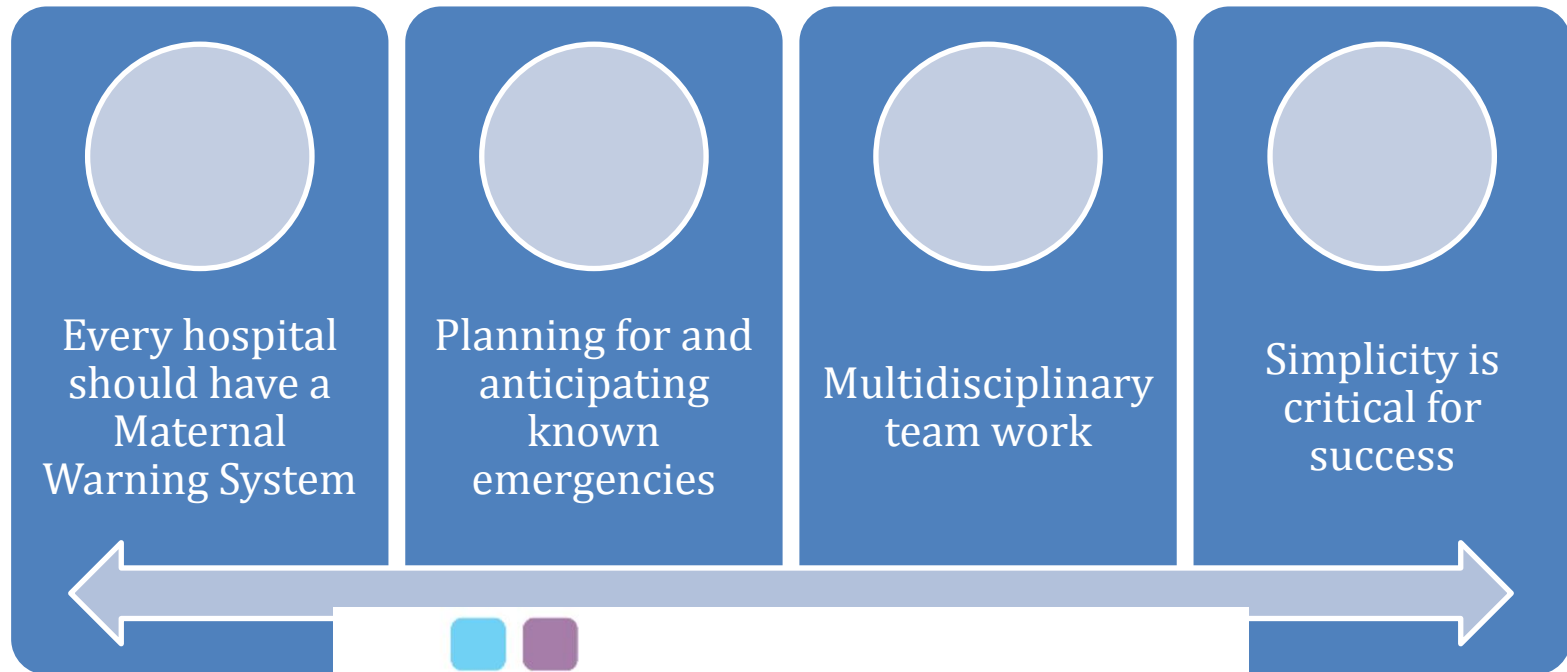
Holds 500mls of blood

In Major cases consider weighing swabs

Ball, Saxe P., Rogan T., Peterson-Drews S. (2006) Improving the accuracy of estimated blood loss at obstetric haemorrhage using clinical reconstruction. British Journal of Obstetrics and Gynaecology

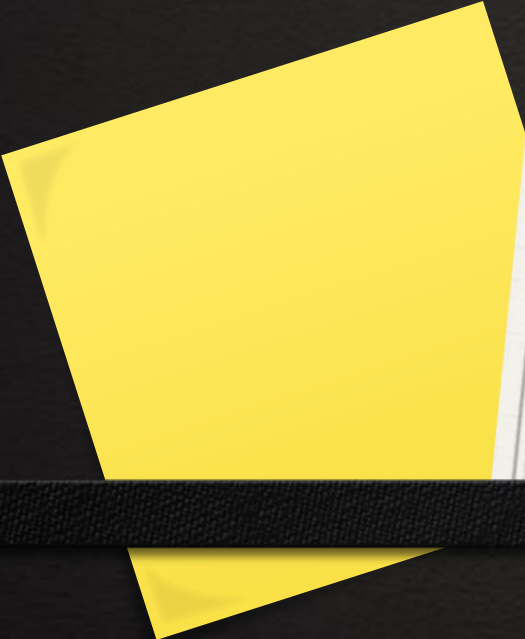
Adapted from the Belfast Trust OEWS Chart September 2013

Supporting Effective Escalation Policy



AIM Resources

- **Maternal Early Warning Criteria**
- <http://safehealthcareforeverywoman.org/patient-safety-tools/maternal-early-warning-criteria/>
- **eLearning Interactive Implementation Series**
- http://safehealthcareforeverywoman.org/aim-program/aim-emodules/#link_acc-1-3-d



Modified Early Obstetric Warning System

Cindy Williamson
Crawford Memorial Hospital
October 2015

MEOWS

- 0 Patient care emergencies may occur at any time in any setting. It's important that we as health care providers are prepared by establishing early warning systems based on clinical triggers, designate first responders and their roles upon arrival, availability of appropriate emergency supplies, conduct emergency drills and simulations and use of a standard communication tool (SBAR). Having all these systems in place may reduce or prevent the severity of medical emergencies.

Clinical Triggers

- 0 Upon admission, with each set of vitals and any changes in patient condition an OB EWS score will be calculated based on the following:
 - ✓ Respiratory Rate per minute
 - ✓ Heart Rate per minute
 - ✓ Systolic Blood Pressure
 - ✓ Diastolic Blood Pressure
 - ✓ Temperature
 - ✓ SpO₂
 - ✓ LOC

Positive & Negative

- 0 Measurement Artifact: A single abnormal vital sign can reflect measurement artifact. Verify isolated abnormal measurement heart rate, BP, Resp Rate, SpO2 or neurological state and re-evaluate.
- 0 Sometimes it might not trigger a score high enough to call the provider or the RRT but you just feel as the nurse (or even a family member may call) with your specialized assessment skills “something isn’t right” act on those feelings and activate the RRT
- 0 It is essential that the RRT is non-judgmental and respectful of the staff or families concerns

OB EWS Score

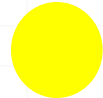
- 0 Determining a score involves assigning a number between 0 and 3 to each of the six vital signs and 1 neurological status
- 0 The sum of the scores equals the OB EWS score

| Score | 3 | 2 | 1 | 0 | 1 | 2 | 3 |
|--------------------------|------------------------------|---|--------------------------|---------------------------|------------------------------|-------------------------------------|-------|
| Resp Rate per minute | ≤ 8 | | 9-11 | 12-20 | 21-24 | ≥25 | |
| Heart Rate per minute | ≤ 40 | 41-59 | | 60-100 | 101-110 | 111-129 | ≥ 130 |
| Systolic Blood pressure | ≤ 60 | 61-79 | 80-100 | 101-140 | 141-160 | | ≥ 161 |
| Diastolic Blood pressure | ≤ 40 | 41-50 | | 51-90 | 91-100 | 101-109 | ≥ 110 |
| Temperature | | < 35.0 C < 95.0 F | 35.1-36 C 95.1-96.8 F | 36.1-38 C 96.9-100.4 F | 38.1-38.5 C 100.5-101.3 F | > 38.6 C >101.4 F | |
| SpO2 | < 89 | 90-93 | 94-100 | | | | |
| LOC | Somnolent - Responds to pain | Drifts off during conversation-Responds to verbal command | Drowsy | Alert | Agitation or Confusion | New onset of agitation or confusion | |

Interventions based on scoring



Score 0-1



Score 2-3



Score 4-5



Score 6 or >

- Green (0-1)** ~ Continue to monitor and document findings.
Inform charge nurse and/or house supervisor.
- Yellow (2-3)** ~ Review patient status with charge nurse, OB Director and/or house supervisor. Notify provider with concerns and increase monitoring to every 2 hours.
- Orange (4-5)** ~ Immediately review patient status with charge nurse, OB Director and/or house supervisor and notify provider. Increase monitoring to every 15 minutes until score is 3 or less.
- Red (6 or >)** ~ Call provider and Rapid Response team IMMEDIATELY and prepare for imminent delivery or maternal rescue

Notification of Chain of Command

- 0 “What do I do if I’ve called the primary provider and the situation wasn’t resolved and the patients condition is same or worsening and I’m concerned?”
- 0 It is vital to continue to a more senior person
- 0 The appropriate chain would be
 - Charge Nurse
 - OB Director and/or House Supervisor
 - ACNO
 - CNO

Activation of Rapid Response Team

- Dial 451 and overhead page “Rapid Response team to room 40__” Give exact location
- The **OB nurse** will serve as the team leader and delegate responsibilities to RRT responders
 - Ensure physician has been notified of need for immediate bedside evaluation
 - Have chart available
 - Give clear concise report of patient condition to RRT using S-B-A-R

S-Situation (What is going on with the patient)

B-Background (OB History)

A-Assessment (What does the nurse think the problem is?)

R-Recommendation (What does the nurse think the patient needs immediately?)

- Stay with the patient and assist RRT with assessment and interventions
- Assure Hemorrhage cart is located in patients room if deterioration of condition was due to hemorrhage

Rapid Response Team (RRT) responsibilities:

- Receive report from OB nurse
Assess patient
- Discuss concerns/findings with OB nurse and physician
- Document findings on RRT record sheet
- Discuss on-going treatment of patient and appropriateness of transfer to SCU if indicated

Cardiopulmonary responsibilities:

- Assure the crash cart is outside of patient room
- Receive report from OB nurse
- Assess airway/assist with and maintain ventilation as needed
- Report findings to nurse and physician
Document findings on RRT record sheet

SCU/ER Nurse responsibilities:

- Receive report from OB nurse
- Assist with ventilation
- Assist in obtaining additional equipment if needed
- Assist with special procedures as needed
- Report findings to OB nurse and physician
- Document findings on RRT record sheet

OB EARLY WARNING SYSTEM DOCUMENTATION REVIEW

VITAL SIGNS

| | | |
|---------------------------------|--------------------------|---|
| Respiratory Rate | | |
| 18 | Respirations: Documented | 0 |
| Heart Rate | | |
| 59 | Heart Rate: Documented | 2 |
| Systolic Blood Pressure | | |
| 122 | Systolic BP: Documented | 0 |
| Diastolic Blood Pressure | | |
| 62 | Diastolic BP: Documented | 0 |
| Temperature | | |
| 98.3 | Temperature: Documented | 0 |
| Pulse Ox | | |
| 93 | | 1 |

ASSESSMENT

| | | |
|---|------------|----|
| Level of Consciousness | | |
| Alert | | 99 |
| LOC: Documentation Missing or Outdated | | |
| Number of Cesarean Sections <small>Only Needs to be Answered Once</small> | | |
| 0 | Documented | |

REQUIRED INTERVENTIONS

- GREEN (0-1)** Continue to monitor and document findings according to AWHONN maternal and fetal monitoring standards
- YELLOW (2-3)** Review patient status with Shift Supervisor/Charge Nurse
If intervention is required, primary RN will complete intervention, notify provider of concern & completed interventions, and continue to monitor
- ORANGE (4-5)** Immediately review patient status with Shift Supervisor/Charge Nurse and notify provider
Increase monitoring frequency to every 5 to 15 minutes until score is 3 or less
Once score is 3 or less, continue to monitor and document findings according to AWHONN maternal and fetal monitoring standards
- RED (> 5)** Call provider IMMEDIATELY and prepare for imminent delivery or maternal rescue
- Black (>99)** Documentation missing or outdated... Correct deficiencies and update score

OUTPUT

| | | |
|--|---|---|
| Urine Output (Previous 4 Hours) | | |
| 0 | 3 | Urine Output: Documentation Missing or Outdated -OR- Output Below Parameters |

FETAL HEART RATE

| | |
|--|-------------------------------|
| FHR Category & Decelerations | |
| Category I | Both Must be Charted Together |
| <input checked="" type="checkbox"/> None <input type="checkbox"/> Early <input type="checkbox"/> Late <input type="checkbox"/> Variable <input type="checkbox"/> Prolonged | |
| 0 | FHR Assessment: Documented |

UTERINE ACTIVITY

| | | | |
|---|---|-------------------|---|
| Contraction Pattern | | | |
| Normal <= 5 Ctx in 10 Mins (Averaged over 30 mins) | | | |
| Contraction Pattern: Documented | | | |
| Uterine Activity Score: Only One Applies | | | |
| Less than 37 Weeks | 0 | ... & Previous CS | 0 |
| At Least 37 Weeks | 0 | ... & Previous CS | 0 |
| Risk Factors that Increase Uterine Activity Score: Induction/Augmentation, Prev CS, Less Than 37 Weeks | | | |

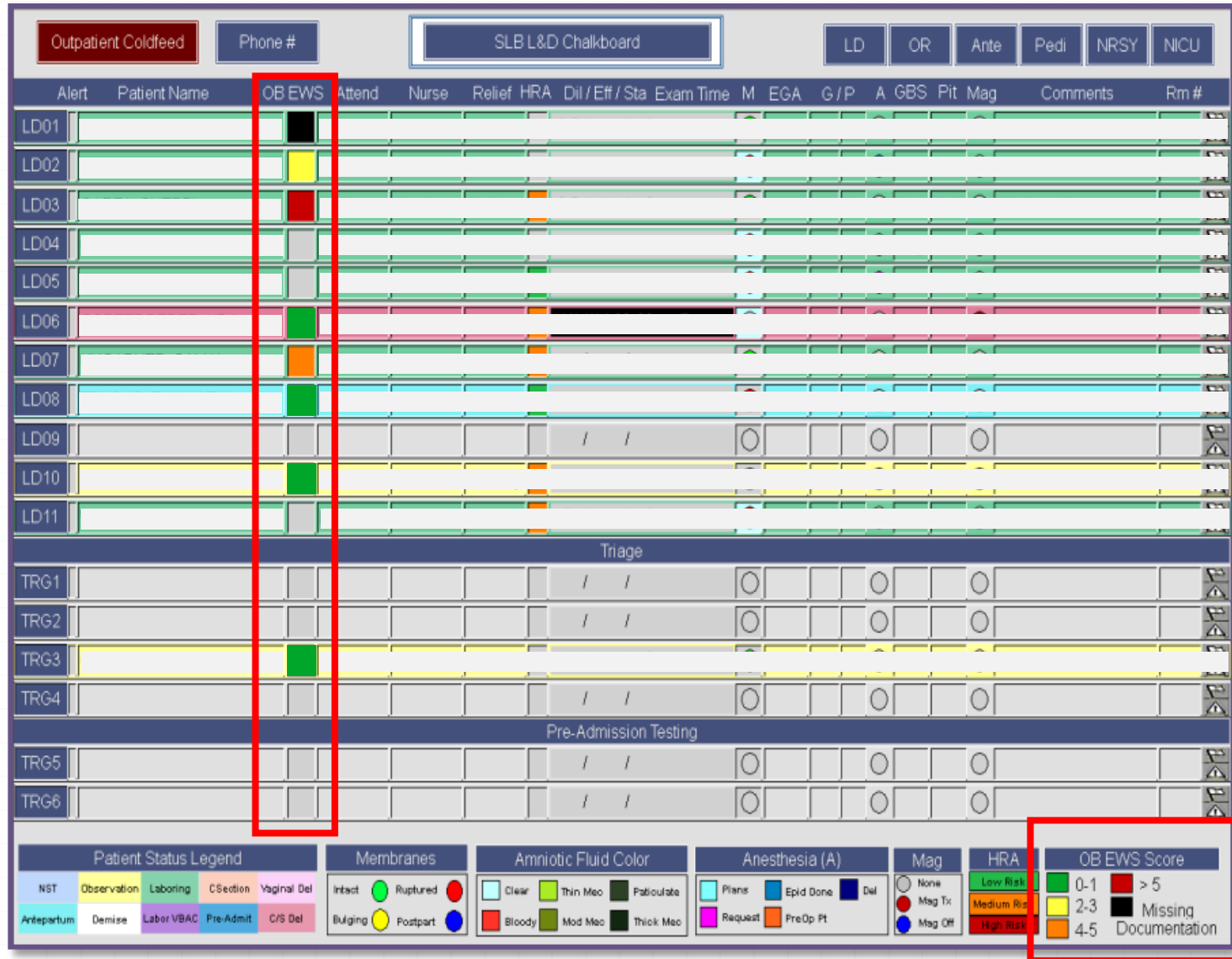
PP HEMORRHAGE

| | |
|--|---|
| Bleeding Only if Applicable | |
| OBH Stage I | 0 |
| M / d /yyyy | |
| H : mm | |
| OBH Stage II | |
| M / d /yyyy | |
| H : mm | |
| OBH Stage III | |
| M / d /yyyy | |
| H : mm | |

Update OB EWS Score

Total Score
103

Chalkboard



It's about saving lives

- 0 The early warning system identifies at-risk patients sooner so that the appropriate interventions may be performed

Thank you,

Cindy Williamson RN

Martha Johnson RN, BSN

Nikki Henry, Risk Manager

Team Talks

- Darlene Hammond, UnityPoint Health Pekin Hospital
- Erika Roetker, St. Margaret's

Maternal Early Obstetric Warning System (MEOWS)

Darlene Hammond, RNC-OB, C-EFM, CPPS



Why did we establish this process?

- ❖ Unity Point Health Pekin had several new RNs. Providers expressed concern that their lack of experience would lead to unawareness of patient changes and timeliness in informing the provider of these changes
- ❖ Joint Commission has a requirement to have written criteria for observation of patient change or deterioration in condition along with having an outline in place for who and when to call for assistance for that patient
- ❖ Requirement from our insurance carrier to have a Maternal Early Warning System in place by November of 2015



Initiation of Process

Through literature searches, many articles were found to be available identifying best practices. This was very helpful but most were for larger institutions with greater resources than what we had available.

AWHONN had presented a Webinar in 2014 by Jill Mhyre, MD and Toby D'Oria, MA, RNC, APN entitled *Implementing Maternal Early Warning Criteria*. This was of valuable assistance in the implementation of this practice for us. Review of the slides allowed the team to gather key points for both practice and education

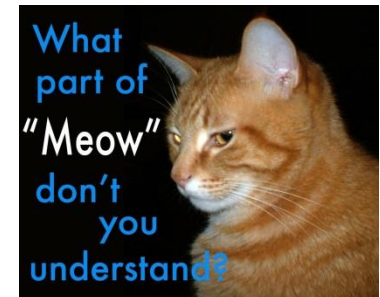
Providers were kept informed of criteria and the practice to be implemented along with the timeline.

Staff members were educated through Departmental Meetings; during our annual education day in the fall of 2015 prior to the initiation of practice in November, 2015; with poster education; one on one as needed; and by written communication in the break room



Barriers

- ❖ Staff feeling patient did not “need” assessment
- ❖ Staff following protocol for re-assessment rather than calling provider with one abnormal finding
- ❖ Providers understanding of why staff were calling to let them know information
- ❖ Working with Medical Records for scanning form in record due to color copy
- ❖ Getting form into electronic form due to need for color coding---which makes documentation easier





Successes

- ❖ Audits show consistent assessment of patients over past 12 months
- ❖ Have not had to call for Rapid Response Team to the OB department since implementation of assessment form
- ❖ Providers are becoming comfortable with staff
- ❖ Providers have understanding that when they are receiving a call now, there truly is a change in patient status
- ❖ Calls to providers have actually decreased



Form



PEKIN HOSPITAL

For use in
Maternity ONLY

MODIFIED EARLY OBSTETRIC WARNING SYSTEM - ME(O)WS
Contact Doctor for early intervention if patient triggers one red or two yellow scores at any time.

| | DATE | | | | | | | | | | | | | | | | | | | |
|----------------------------|--------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | TIME | | | | | | | | | | | | | | | | | | | |
| Resp Rate | >30 or <10 | | | | | | | | | | | | | | | | | | | |
| | 23-30 | | | | | | | | | | | | | | | | | | | |
| | 11-22 | | | | | | | | | | | | | | | | | | | |
| O2 Sats | ≥95 | | | | | | | | | | | | | | | | | | | |
| | 91-94 | | | | | | | | | | | | | | | | | | | |
| | ≤90 | | | | | | | | | | | | | | | | | | | |
| Temp | ≤97.2 | | | | | | | | | | | | | | | | | | | |
| | 97.3-99.9 | | | | | | | | | | | | | | | | | | | |
| | 100.0-101 | | | | | | | | | | | | | | | | | | | |
| Heart Rate | >101 | | | | | | | | | | | | | | | | | | | |
| | ≥130 or ≤60 | | | | | | | | | | | | | | | | | | | |
| | 111-129 | | | | | | | | | | | | | | | | | | | |
| Systolic B/P | 60-110 | | | | | | | | | | | | | | | | | | | |
| | <60 | | | | | | | | | | | | | | | | | | | |
| | ≥160 | | | | | | | | | | | | | | | | | | | |
| Diastolic B/P | 140-159 | | | | | | | | | | | | | | | | | | | |
| | 100-139 | | | | | | | | | | | | | | | | | | | |
| | 80-99 | | | | | | | | | | | | | | | | | | | |
| Urine Output (every 2 hrs) | ≤80 | | | | | | | | | | | | | | | | | | | |
| | ≥105 | | | | | | | | | | | | | | | | | | | |
| | 90-105 | | | | | | | | | | | | | | | | | | | |
| Neurologic Response to: | 50-89 | | | | | | | | | | | | | | | | | | | |
| | ≤50 | | | | | | | | | | | | | | | | | | | |
| | ≥50ml/hr | | | | | | | | | | | | | | | | | | | |
| Looks Unwell? | 30-49ml/hr | | | | | | | | | | | | | | | | | | | |
| | Pain Only | | | | | | | | | | | | | | | | | | | |
| | <30 ml/hr | | | | | | | | | | | | | | | | | | | |
| Totals | Alert | | | | | | | | | | | | | | | | | | | |
| | Unresponsive | | | | | | | | | | | | | | | | | | | |
| | YES | | | | | | | | | | | | | | | | | | | |
| RN Initials | NO | | | | | | | | | | | | | | | | | | | |
| | Yellow | | | | | | | | | | | | | | | | | | | |
| | Red | | | | | | | | | | | | | | | | | | | |

All white: continue observation as before
1 Yellow: Reassess in one hour; **2 Yellow** or **1 Red:** contact OB provider for early maternal intervention,
2 Red: Contact OB provider for Intervention. Inform Manager/HS to adjust staff (1:1 care). Assess every 15 minutes or more frequently as needed; **3 Red:** Contact OB provider for orders & possible bedside evaluation, inform Manager/HS to adjust staff (1:1 care), consider calling Urgent Assessment assistance in care of patient, continue Assessment and scoring at a minimum of every 15 minutes
 To be scored at a minimum of every 8 hours or with each Vital Sign Assessment if taken more frequently than every shift

PATIENT LABEL

Any Questions???



meusrecados.com

dhammond@pekinhospital.com



St. Margaret's Hospital

IMPLEMENTATION OF A MATERNAL EARLY WARNING SYSTEM



Our Team

- Dr. Donna Sweetland, Physician Champion
- Erica Roetker, Director of Obstetrics and Patient Care Support
- Cynthia Salazar, Staff RN
- Ad Hoc members include:
 - Jolene Woytinek, Director of ICU/ Emergency Room
 - Lauren Pare, Clinical Pharmacist

About us...

- We are part of the SMP health System based in North Dakota.
- Our facility is the farthest east and the largest.
- We are licensed for 70 inpatient beds
- Our OB unit has 6 LDRP's and 2 double rooms that are used for cesarean section patients.
- We also have an operating room located on our unit.
- We have 5 practicing OB/GYN MD's
- 350 deliveries last year



Implementation: Policies and Procedures

- Maternal Hypertension Policy and Nursing Assessment Policy
 - A maternal hypertension policy was developed as a reference so all OB RN's and MD's
 - Provides a guideline to safely care, prevent complications and ensure the safety of mother and baby for the intrapartum or postpartum patient with severe hypertension.
- Nursing assessment policy provides a guide for standardized assessment for all Intrapartum or Postpartum patients to receive the same quality of care and assessment across the board.

Implementation: Standing Orders

- Standardized Standing Orders

| | |
|----|--|
| 3. | Vital signs: Every 15 min. x 2, every 30 min. x 3, then every 1 hour; Temp Q 4° After Magnesium Sulfate is discontinued- vital signs every 2 hours x 2, then every 4 hours Notify Physician if BP ≥ 160 systolic or 105 diastolic |
| 4. | <p>If two consecutive BP ≥ 160 systolic or 110 diastolic administer:</p> <p><input type="checkbox"/> LABETALOL 20mg IV over 2 minutes – recheck BP in 10 minutes</p> <ul style="list-style-type: none"> If still elevated, give labetalol 40 mg IV over 2 minutes, recheck BP in 10 minutes If still elevated, give labetalol 80 mg IV over 2 minutes, recheck BP in 10 minutes <p>Consult with MFM</p> <ul style="list-style-type: none"> If still elevated, repeat labetalol 80 mg IV over 10 minutes to achieve total dose of 220mg (includes all previous administration) Recheck BP in 20 minutes. If still elevated switch to: <p><input type="checkbox"/> HYDRALAZINE 10mg IV over 2minutes, recheck in 20 minutes</p> <ul style="list-style-type: none"> If still elevated, give Hydralazine 10mg IV over 2 minutes, recheck BP in 20 minutes If still elevated, give labetalol 20mg IV over 2 minutes, recheck BP in 10 minutes If still elevated, give labetalol 40 mg IV over 2 minutes, Consult MFM <p><input type="checkbox"/> NIFEDIPINE 10mg PO if no IV access, repeat BP in 30 minutes</p> <ul style="list-style-type: none"> If still elevated, give Nifedipine 20mg PO, recheck BP in 20 minutes If still elevated, give Nifedipine 40mg PO, recheck BP in 20 minutes <p>And have MFM consult. If still elevated switch to labetalol or Hydralazine protocol</p> |

Nurse and Provider Education

- We provided the nurse's and providers with education on the initiative.
- Dr. Sweetland and myself offered a Grand Rounds and opened it up to ER/ICU nurses and physicians
- I went to ER/ICU committee meetings to educate the ER MD's about the initiative and our treatment plan for the hospital
- ER/ICU nurses were provided with education through healthstream on the protocol and treatment of maternal hypertension at our facility.
- I worked with Jolene (ER/ICU Director) to implement the protocol in ER/ ICU and deploy the data collection tool so we did not miss any patients who may have presented to the ER department.

Pharmacy/medications

- We worked with pharmacy to make sure we had immediate access to essential medications
 - Pharmacy built a kit in the pyxis with hypertensive medications available
 - These medications were also put on override so the nursing staff could take them out rapidly.
- Nursing staff was educated on the process change for pyxis and the standing orders for maternal hypertension
- This allowed the nursing staff to quickly treat severe range blood pressures without having to wait for a pharmacy to validate the order so they can retrieve the medications from the pyxis.
- This helped to keep our treatment time in the 30 minute window.
- When severe range blood pressures are identified, nursing initiates the maternal hypertension protocol and notifies the MD.

Implementation: Checklist

- Maternal Hypertension Checklist
 - The checklist gives the nurse's interventions and medications to help with treatment decision making
 - It is available in every labor room and at the nurse's station for reference.
 - ER received a modified version of the checklist.

HYPERTENSIVE EMERGENCY:

- 2 consecutive severe BP values ≥ 160 systolic or 110 diastolic
- Values taken within 15 minutes apart

- Notify Physician
- Call for assistance
- Ensure side rails are up
- Administer seizure prophylaxis (MgSO₄ first, unless contraindicated)
- Antihypertensive therapy
- Place IV
- Draw Preeclampsia labs
- Insert indwelling urinary catheter
- Check patellar reflex every hour

MAGNESIUM SULFATE

Contraindications: Pulmonary edema, renal failure, myasthenia gravis

IV access:

- Load 4-6 gram bolus over 20-30 minutes
- Label MgSO₄ tubing
- Maintenance dose of 2 grams/hour

ANTIHYPERTENSIVE MEDS

For SBP ≥ 160 or DBP ≥ 110

- Labetalol** (20 mg, 40, 80 IV* over 2 min, escalating doses, repeat q 10 min); Avoid in asthma or heart failure
- Hydralazine** (5-10 mg IV* over 2 min, repeat q 20 min until target BP reached)
- Oral Nifedipine** (10, 20, 40 mg capsules; repeat BP q 20 min until target BP reached)

*Maximum cumulative IV-administered doses should not exceed 220 mg Labetalol or 25 mg Hydralazine in 24 hours

ANTICONVULSANT MEDS

- Lorazepam** (ativan): 2-4 mg IVx 1, may repeat prn after 10-15 min
- Diazepam** (Valium): 5-10 mg IV q 5-10 min; maximum dose 30 mg.



St. Margaret's Health
St. Margaret's Hospital
SMP Health System

Outcomes

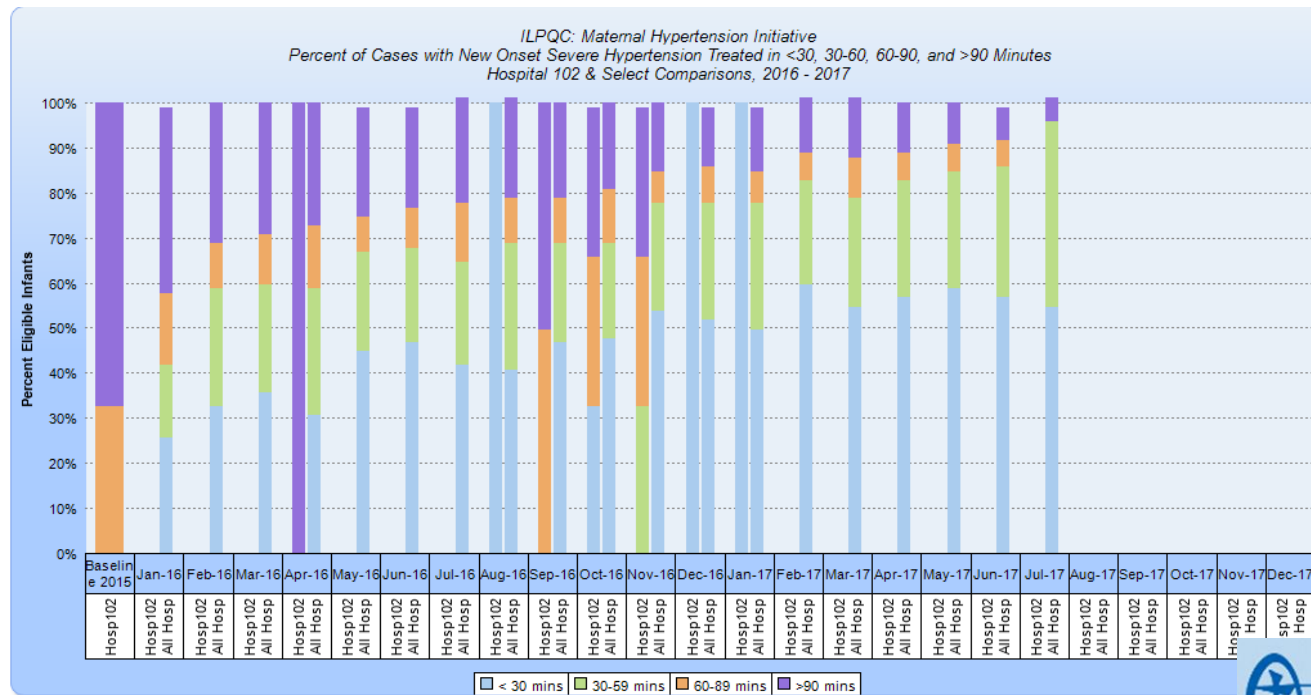
SUCSESSES

- Universal Protocol for treatment of sever range blood pressures throughout the facility
- Data being collected on the standardized form and reported in a timely manner
- All OB MD's on board with the treatment protocol for our patients
- Results are reported out consistantly at OB committee meetings quarterly.

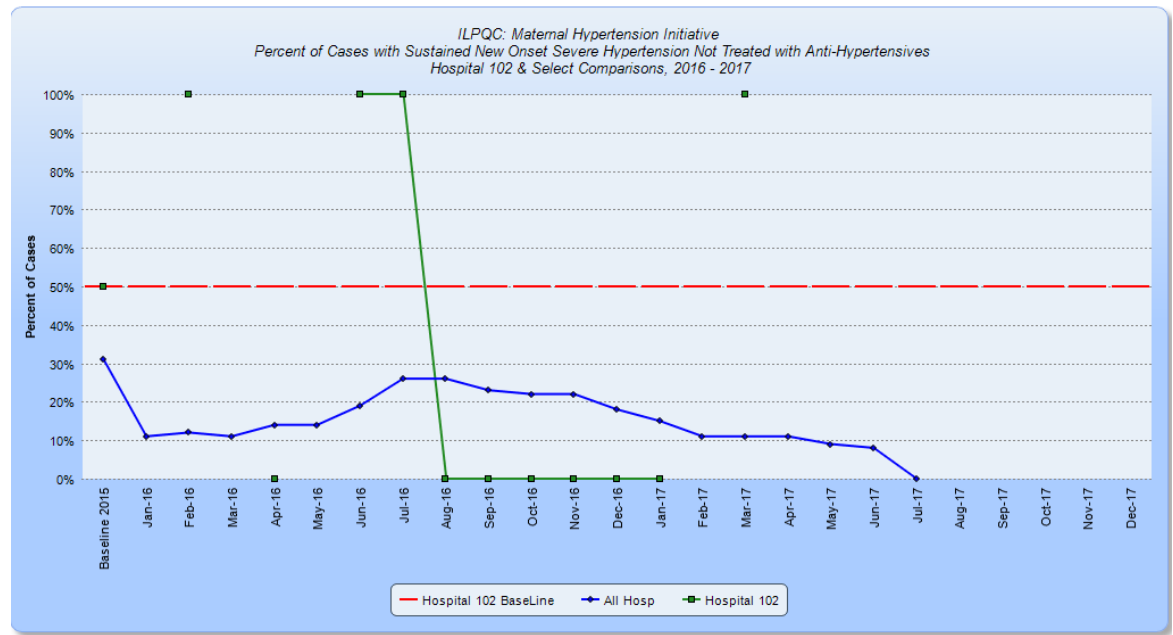
BARRIERS

- Sometimes increased blood pressures are not treated as being increased (“They are anxious” or “they are in pain”)
- Difficulty getting ER implemented. (Not aware of who is postpartum and may miss diagnosis)
- Change in Leadership mid way through project (I began this job at the end of August and was not communicated on what was done and what wasn't).

Outcomes by the numbers (2016-2017)



Outcomes by the Number (2016-2017)



Thanks for Listening!

ERICA ROETKER RN MSN

DIRECTOR OF OBSTETRICS AND PATIENT CARE SUPPORT

Identifying Patient/Family Advisors



- ILPQC RESOURCES:
 - **Save the date: Patient /Family Advisory QI Topic Call**
 - August 8, 12-1pm
 - CALL: 1-877-860-3058, Guest Passcode: 119 813 7632#
 - Outreach campaigns with Preeclampsia Foundation, Hands to Hold, March of Dimes in progress
 - Received about 5 volunteers from these patient/family networks
 - Following up with local teams if/when potential patient family advisory candidates in the area contact us
 - If contacted, please join us in this exciting opportunity!

HTN Initiative Next Steps



- Focus on QI strategies and reliable systems changes to reduce time to treatment for all patients, all units, all hospitals
- Review your hospitals REDcap Data at your monthly team meeting, share it to drive QI, set an improvement goal and share that goal
- Identify a patient/family advisor for your HTN Initiative Team and invite them to participate in your monthly QI team meetings
- Data past and upcoming due dates:
 - June severe HTN data form data due July 15-30 - Severe HTN Data Form
 - Report months of no cases of severe HTN (treated and not treated) by sending complete hospital name and month of no cases to infor@ilpqc.org
 - 2017 Quarter 2 Data were due July 15
 - AIM Quarterly Measures
 - Quarterly Implementation Checklist
 - **AIM Annual Measures due August 12**
- Email info@ilpqc.org with any questions!

Q&A

- Ways to ask questions:
 - Raise your hand on Adobe Connect to ask your question by phone
 - Post a question in the Adobe Connect chat box

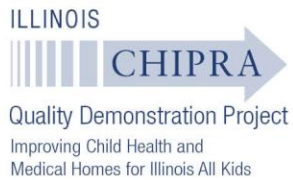


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