



Maternal Hypertension Initiative Teams Call Implementing Standard Order Sets, Protocols, & Checklists

January 23, 2017

12:30 – 1:30 pm

Overview



- HTN Initiative: Collaborative Tools and Updates (20 mins.)
- South Nassau Communities Hospital New York (20 mins.)
 - Madeline Cozzi-Gottlieb, MS, RNC-OB, Women & Children's Services,
 Nursing Professional Development Specialist, Nursing Education,
 Professional Development, Practice & Research
 - Camille D'Amato, RNC-OB, MS, CLNC Assistant Director Performance Improvement
- Team Talks (10 mins.)
 - Mary Jean Handrigan RN, MSN & Lori Andriakos RNC, BSN, AMITA Health Women's and Children's Hospital
 - Mona LeGrand, MSN, RNC-OB, C-EFM, Memorial Hospital of Belleville/Memorial Hospital East
- Patient and Family Advisors
- Upcoming Opportunities

Next Steps & Questions



HTN Initiative: Collaborative Tools and Updates

Collaborative Data Review
Strategies for Data Entry
QI Support
A QI Story

Collaborative Call Schedule: Focus on System Changes

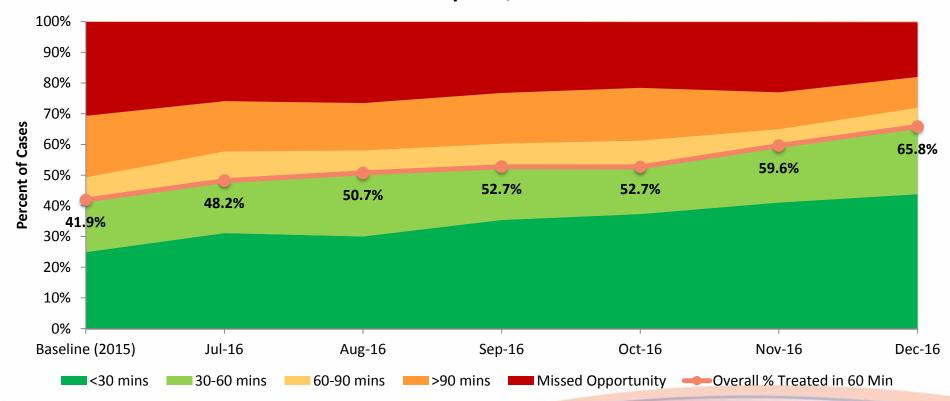


	Call Date	Topics –Top 5 system level changes/interventions to decrease the time to treatment and improve discharge education and follow-up:
	December 19, 2016 12:30 – 1:30 pm	Establish a system to perform <u>regular debriefs</u> after all new onset severe maternal hypertension cases
★	January 23, 2017 12:30 – 1:30 pm	Develop and implement <u>standard order sets</u> , <u>protocols</u> , <u>and checklists</u> for recognition and response to severe maternal hypertension and integrate into EHR
	February 27, 2017 12:30 – 1:30 pm	Implement a system to <u>identify pregnant and postpartum women</u> in all hospital departments and execute <u>protocol for measurement</u> , <u>assessment</u> , <u>and monitoring</u> of blood pressure and urine protein for all pregnant and postpartum women
	March 27*, 2017 12:30 – 1:30 pm	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)
	April 24, 2017 12:30 – 1:30 pm	Implement a system to provide patient-centered <u>discharge education materials</u> on severe maternal hypertension and implement protocols to ensure patient <u>follow-up</u> <u>within 10 days</u> for all women with severe hypertension and 72 hours for all women on medications
	May	Anticipate Face —to — face meeting

Maternal HTN: Time to Treatment



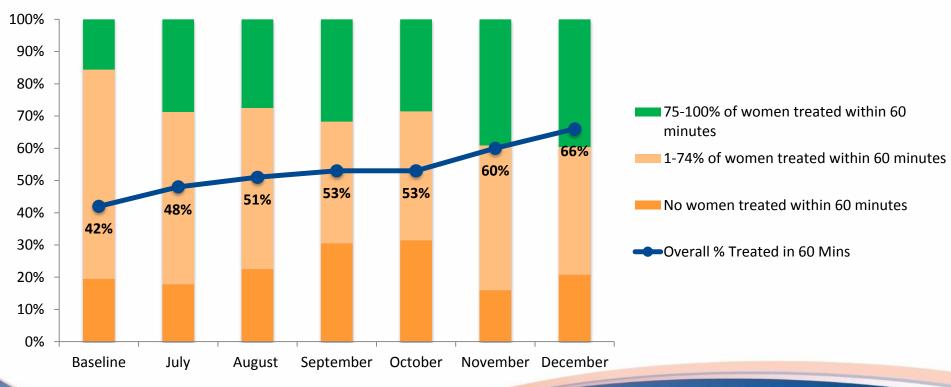
ILPQC: Maternal Hypertension Initiative
Percent of Cases with New Onset Severe Hypertension Treated in <30, 30-60, 60-90, >90 minutes or Not Treated
All Hospitals, 2016



Maternal Hypertension Data: IL@PQC 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



Severe Hypertension Data Entry Status



	Total Records	# Teams with Data
Baseline (2015)	1577	86
July	550	74
August	635	81
September	554	83
October	423	70
November	437	70
December	365	55
Overall	4541	98

Note: Birth Certificate data comparison

- 90 teams had both baseline and November and/or December data
- 75-80 teams with complete data entry seems a feasible goal for more complex clinical initiative (HTN)

Timely Data Entry:



- Approximately 40 teams typically submit data by current due date of 15 days after month's end (e.g. 11/2016 data due 12/15/2016)
- Approximately 70-80 teams submit data by 45 days after month's end
- 15 days may be not be feasible for some teams, however
 45 days too long of a delay for data to facilitate rapid-cycle quality improvement
- New target will be:
 - Ideally 15 days and all teams have data in within 30 days of months end

Strategies for Increased Data Entry



- Teams with consistent data entered but missing most recent months, teams with inconsistent data, and teams missing baseline data:
 - Teams will receive a support call from Patti or Kate
 - Problem solve solutions to encourage data entry within 30 days
 goal to support hospital QI efforts
- Teams with little to no data entered will receive out reach from their Network Administrator to identify barriers and provide support

QI Support Strategies: Reduce Time to Treatment



- Strategy 1: Individual QI Support Calls
 - Patti reaching out to teams with % of patients receiving treatment in 60 minutes
 25% of the time or less for November data
 - Calls focus on discussion of barriers and QI strategies to consistently identify and treat women within <30-60 minutes and share resources for success

QI Support Strategies: Reduce Time to Treatment



- <u>Strategy 2</u>: Small Group QI Topic Calls
 - Discussion leaders (team champions) have been identified to share successful strategies from their hospital for each call (≥75% patients treated <60 minutes)
 - Each call will focus on 1-3 barriers, with time at the end to discuss any barriers teams are facing:
 - 1/26 from 10 11 am: Providers Prefer Oral Medication, Medication Unavailable in <30-60 mins, Nurse Reluctant or cannot give IV Meds
 - 2/6 from 11 am 12 pm: Lack of Knowledge of Treatment Parameters & Standard Treatment Protocols
 - 2/8 from 12 1 pm: Competing Priorities, Provider Availability
 - 2/15 from 11 am 12 pm: Provider Dislikes Treatment Parameters, Treating BP with Mag, Fear of Hypotension
 - Please plan to call into at least one call call in information is the same for all calls!
 - Conference Line: 1-877-860-3058
 - Participant Code: 850 207 6731

REVISED - Key Driver Diagram: Maternal Hypertension Initiative

GOAL: To reduce preeclampsia maternal morbidity in Illinois hospitals

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

Key Drivers

<u>Interventions</u>

GET READY

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

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

RECOGNIZE

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

- ☐ Implement a system to <u>identify pregnant and postpartum women</u> in all hospital departments
- ☐ Execute <u>protocol for measurement</u>, <u>assessment</u>, <u>and monitoring</u> of blood pressure and urine protein for all pregnant and postpartum women
- ☐ Implement <u>protocol for patient-centered education</u> of women and their families on signs and symptoms of severe hypertension

RESPOND

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

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

CHANGE SYSTEMS

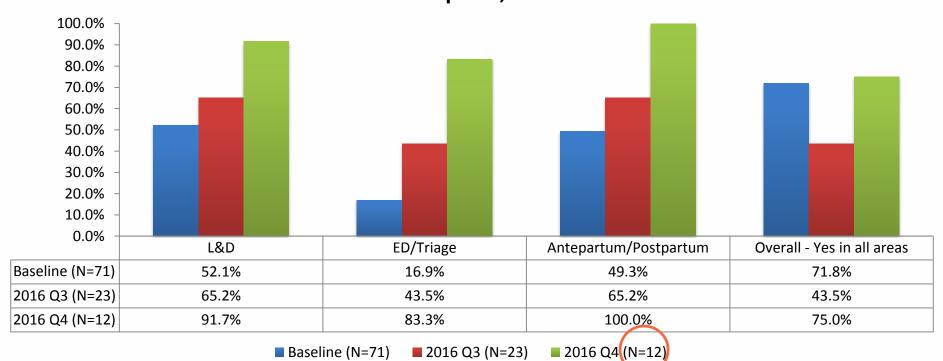
FOSTER A CULTURE OF SAFETY and improvement for care of women with new onset severe hypertension

- ☐ Establish a system to perform <u>regular debriefs</u> after all new onset severe maternal hypertension cases
- ☐ Establish a process in your hospital to perform <u>multidisciplinary systems-level reviews</u> 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)

Maternal Hypertension Data: IL@PQC Standard Protocols

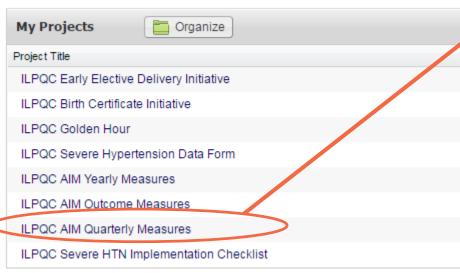


ILPQC: Maternal Hypertension Initiative Percent of Teams that have Standard protocols for Monitoring and Treating Severe Preeclampsia/Eclampsia (Including Order Sets/Algorithms), by Unit All Hospitals, 2016

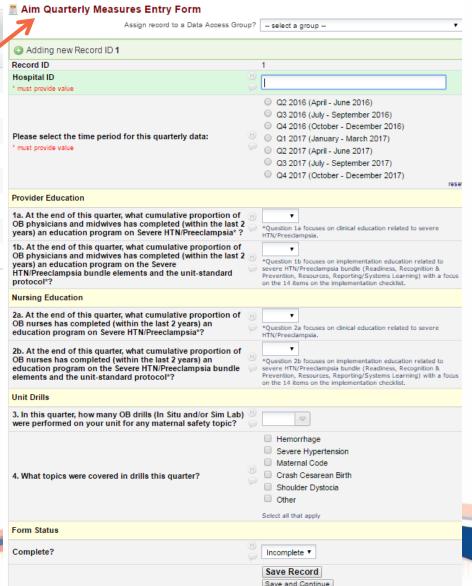


AIM Quarterly Survey



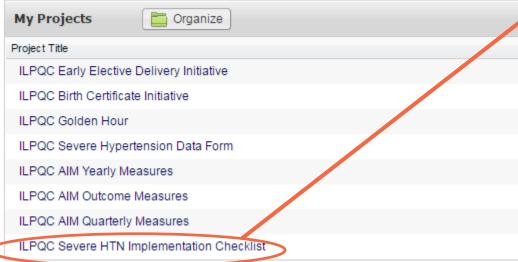


- Open REDCap while on the call and click on 'My Projects'
 - Complete AIM Quarterly
 Measures for 2016 Q3 and Q4
 - Only 4 questions



Severe HTN Implementation ILE PQC Checklist





- 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

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			Q3 2016 (July - September 2016)	
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		\circ	Q3 2017 (July - September 2017)	
		0	Q4 2017 (October - December 2017)	
eadiness - For every unit in your hospital do you have:				res
. Standard protocols for early warning signs, updated liagnostic criteria, monitoring and treatment of severe			**	
reeclampsia/eclampsia (include order sets and algorithms).			Yes	
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. Antepartum/Postpartum		0	Yes	
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Process for timely identification, triage, and evaluation of regnant and postpartum women with hypertension			Yes	
ncluding ED and outpatient areas.		0	No	
must provide value				res
. Rapid access to IV medications used for severe				
ypertension/eclampsia: Medications should be stocked and mmediately available on L&D and in other areas where		0	Ven	
atients may be treated. Include brief guide for			Yes	
dministration and dosage.		0	No	
L&D				res
. L&D must provide value				
			Yes	
. Antepartum/Postpartum				
must provide value	9	0	No	res
Triang/FD		0	Yes	
. Triage/ED			No	
must provide value				res
. System plan for escalation, obtaining appropriate				
onsultation and maternal transport, as needed for severe		0	Yes	
naternal hypertension, preeclampsia, and eclampsia.			No	
. L&D	9	-	110	res
must provide value				
		0	17	

QI Methods Example: ILC PQC Linking data review to PDSA cycle Under Position Position Plant PQC Under Position Positio

- Review your team data in your next team meeting
- How are you doing over time?
 - Consistent? Improving?
- How do you compare to other teams?
- Have you tried any system changes to develop and implement standard order sets, protocols, and checklists?
 - If yes, could they be improved?
 - If no, why not try now?
 - These systems based changes help to empower nurses and drive sustainable culture change across units

A QI Story: All hands on deck





PDSA WORKSHEET

Team Name: OUR Hospital	Date of test: 1/20/17	Test Completion Date: 1/23/17		
Overall team/project aim: To reduce preeclampsia maternal morbidity in OUR Hospital by reducing time to treatment				
What is the objective of the test? To identify barriers to effective implementation of standard order sets				

PLAN

Briefly describe the test: OUR Hospital's data reveals we are treating about 25% of women within 60 minutes after educational efforts. Our OB Team convened and reviewed sample orders sets from ACOG Committee Opinion No. 623 as a systems change to reduce time to treatment. We decided to test the draft order set on the L&D unit for 1 weekend to identify barriers to see if they facilitated timely treatment and identify barriers to successful implementation prior to rolling out at our hospital. How will you know that the change is an improvement? We will know that the use of the draft order sets is an improvement on practice if we treat women within 60 minutes and it reduces barriers to accessing and administering antihypertensive medications up confirmation of severe range blood pressures.

What driver does the change impact? GET READY <u>IMPLEMENT STANDARD PROCESSES</u> for optimal care of severe maternal hypertension in pregnancy

What do you predict will happen? We predict that we will treat women with 60 minutes while the draft orders set is in use over the weekend.

PLAN

List the tasks necessary to complete this test (what)	Person responsible (who)	When	Where
Review order set with nurses on staff over the weekend.	Terrance, Team lead	1/20/17	L&D
Place order set by the Pyxis MedStation for reference	Terrance	1/20/17	L&D
Record notes on medication administration process on Severe Hypertension Log Book (already in place)	Nursing Staff	1/20/17- 1/22/17	L&D
Meet to discuss experience	Nursing Staff and QI Team	1/23/17	L&D
5.			
6.			

DO: Test the changes.

Was the cycle carried out as planned? X Yes □ No

Record data and observations. Nursing staff wasn't able to implement draft standard orders set when rejected by pharmacy impeding access to first line actibypertensives.

What did you observe that was not part of our plan? Rejection of draft order sets based on ACOG committee opinion was not anticipated.

STUDY:

Did the results match your predictions?

Yes X No

Compare the result of your test to your previous performance: Performance did not improve as the draft order set was not utilized.

What did you learn? Pharmacy needs to be at the table up front to identify different perspectives and bring everyone together around evidence based standards/ACOG guidelines.

ACT: Decide to Adopt, Adapt, or Abandon.

<u>Adapt</u>: Improve the change and continue testing plan.

Plans/changes for next test: Reconvene workgroup to review draft order sets with pharmacy, emergency department, triage and other stakeholders. Start meeting with presentation of ACOG guidelines and evidence on strategies to reduce SMM in women with severe range BP.

Adopt: Select changes to implement on a larger scale and develop an implementation plan and plan for sustainability

Abandon: Discard this change idea and try a different one



South Nassau Communities Hospital - Standard Order Sets, Protocols, & Checklists

Madeline Cozzi-Gottlieb, MS, RNC-OB & Camille D'Amato, RNC-OB, MS, CLNC

South Nassau Communities Hospital, New York



Hypertension in Pregnancy

South Nassau Communities Hospital Madeline Cozzi-Gottlieb, MS, FNP-C, RNC-OB, C-EFM Camille A. D'Amato, MS, RNC-OB, CLNC









- NYS Partnership for Patient
 - Both HEN sessions
- Safe Motherhood Initiative / ACOG
- National Improvement Challenge
 - Submitted application in June 2016
 - Received second place award in September 1, 2016

Implementation of Treatment III Best Practices



- Literature Search
 - ACOG Committee Opinion, Number 623, February 2015 (replaces #514, December 2011). Emergent therapy for "Acute –Onset, Severe hypertension during pregnancy and the post-partum period.
 - SMI/ACOG, Maternal Safety Bundle for Severe Hypertension in Pregnancy and Algorithms
- Policy Review:
 - Requested/obtained policies from Regional Perinatal Center
 - Requested /obtained policies from local catchment area
 - Obtained medication review by in-house pharmacists

Implementation of Treatment III Best Practices



- Draft Order set
 - Severe Antepartum, Intrapartum or Postpartum Hypertension Order Set was created
 - Feedback requested from members of the Maternal Child Steering committee, the physician directors of the Emergency department and Critical care.
 - Presented draft to the hospital based forms committee on 9/22/2016
 - Revisions requested/completed by October 2016
 - Final version was approved by MCH Steering committee and the forms committee

Implementation of Treatment Best Practices



- Final Order Set:
 - Hard copy of the approved order set was created
 - Multidisciplinary education completed
 - Labor and delivery RN and physicians
 - Mother Baby RN's
 - Emergency and Critical care Departments (via the unit specific educators)
 - Implementation of the Hard copy of the order set November 2016
 - Hard copies were posted in the L&D, MB and given to ED and ICU
 - The hard copy was used as a guide for physician order entry
 - Final order set sent to the EMR team for inclusion in the list of available order sets.
 - EMR Go-Live January 3, 2017
 - Staff education of go-live and how to acquire order set.



Notify physician if systolic BP measurement is greater than or equal to 160 mmHg OR if diastolic BP is greater than or equal

nois Perinatal to 110 mmHg (Severe Hypertension). ality Collaborative Repeat BP measurement in 15 minutes ☐ Institute continuous fetal monitoring if undelivered and fetus is viable

☐ If no IV access, insert medlock ☐ If the post-partum patient presents in the ED, call OB attending or resident for evaluation. **MEDICATIONS / BP MONITORING:** If Severe BP elevations are greater than or equal to 160 systolic or greater than or equal to 110 diastolic and persist for 15 minutes or more, administer: □ Labetalol 20 mg IV push over 2 minutes (by provider) to achieve a range between 140–160/90–100 mmHg (you may consider using a lower initial Labetalol dose, i.e., 10 mg, when IV Magnesium Sulfate is being administered for seizure prophylaxis). NOTE: Hold IV Labetalol for maternal pulse less than 60 beats per minute. ☐ Continuous pulse oximetry during IV push: Note: notify MD if O2 sat is less than 95% For Prevention of seizure activity: ☐ Magnesium Sulfate: Loading dose: 4 grams Magnesium Sulfate in 100ml of solution to infuse IVPB over 30 min via infusion pump followed by Maintenance dose: 40 grams in 1000ml water for injection infuse 2 grams Magnesium Sulfate / hour IVPB via infusion pump. Note: Initial Magnesium level to be drawn 6 hours post administration and every 6 hours while on infusion. Therapeutic range: 4-6mg/dl. Evaluation for toxicity includes: hourly reflex checks (to be completed while on infusion) Note: Symptoms of Toxicity include: hypotension, flaccid paralysis, CNS/respiratory depression. ☐ Repeat BP measurement in 10 minutes, record results If either BP threshold is still exceeded, administer Labetalol 40mg IV push over 2 min ■ Repeat BP measurement in 10 minutes, record results If either BP threshold is still exceeded, administer Labetalol 80mg IV push over 2 min ☐ Repeat BP in 10 minutes, record results Note: Maximum cumulative IV dose of Labetalol should not exceed 220 mg in 24 hours If either BP threshold is still exceeded, administer Hydralazine 10mg IV push over 2min NOTE: Maximum cumulative IV dose of Hydralazine should not exceed 25 mg in 24 hours.

Repeat BP in 20 minutes. If either BP threshold is still exceeded obtain emergency consult from Maternal Fetal

Medicine (MFM), Internal Medicine, Anesthesia or Critical Care intensivist.





- AMITA Health Women's and Children's Hospital
 - Mary Jean Handrigan RN, MSN
 - Lori Andriakos RNC, BSN
- Memorial Hospital of Belleville/Memorial Hospital East
 - Mona LeGrand, MSN, RNC-OB, C-EFM



In sickness and in health™

Maternal Hypertension Initiative

Mary Jean Handrigan RN, MSN Lori Andriakos RNC, BSN

- Level III Maternity Center
 - 14 LDR's
 - 8 Antepartum beds
 - 6 beds L&D ED
 - 3 OR's, with 2 bay Recovery suite
 - 30 NICU private rooms
 - 32 M/B rooms

Who is Amita Health- Women's and Children's Hospital

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- Initial steps that went well with few obstacles
 - Policy Development
 - Algorithms
 - CPOE –order set development
 - Medication Availability
 - Education
- Initiative Obstacles
 - DUA signature
 - Maintaining the momentum of early recognition and treatment (L&D, M/B and ED)

Steps to Implementing



Nursing Education:

- #1-Importance of obtaining Accurate Blood Pressure
- Poster presentation (3/2016)
 - Pt position
 - Correct cuff size
 - Manual B/P vs. Automated on monitor

#2-Skills day Presentation L&D and M/B staff (9/2016)

• Perinatal Outreach Educator –reviewed hands on skills for B/P measurement, Policy information, Med review.

#3- Mandatory Training for all RN's in L&D and M/B on Hypertension planned for March 2017.

Education-Nursing Staff and Physician



Presentation for Medical Staff- Severe Hypertension ACOG statements

- Dr. Cusak came to speak
- OB attendings, Anesthesiologists, ER Physicians
 Policy and algorithms were mailed to each of the above
 providers

Mandatory on-line course was completed by all providers Simulation developed for Hypertension, will be an option for reappointment

Education-Physicians

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- Facility/System-wide standard protocols with checklists and escalation policies for management and treatment of:
 - SAMC and ABMC
 - ❖ Amita System wide

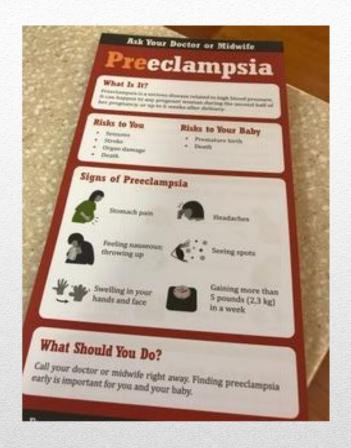
Hospital Protocols and Algorithms





Reference Materials for Staff





A PP Discharge Note - OROZCO, REYNA (FOOT	34/334)
	1/20
	07
OB Physician Name/Phone Number	
Follow-up Appointment	
Pt on Antihypertensive/Magnesium	
Must be w/in 72 hours	
Hypertensive w/o Meds	
Must be w/in 10 days	
Speciality	
Physician Name	20 00000
Phone Number	
Follow-up Appointment	
Speciality	
Physician Name	
Phone Number	
Follow-up Appointment	
Speciality	
Post Partum Instructions Other	
Other Post Partum Instructions	
F/U Labs	
Diet	
Diet	
Psychosocial	
Do you feel unsafe going home? Are you afraid of anyone close?	

Patient Education/Followup Appointments





Patient & Family Advisors

Patient/Family Advisors



- Stacey Porter and Jennifer Heiniger participating as patient advisors to the ILPQC OB Maternal Hypertension projects
- ILPQC encourages hospital teams to identify and include a patient/family advisor on their QI team
 - ILPQC developed tool to help staff/providers identify and provide information to potential patient/family members about working in QI
 - Now in trifold format and includes section for interested patients to return contact information to the hospital team
 - Draft for review and feedback in download box
 - Available on website and sent to all team members
- Stay tuned for an updated Patient Engagement webpage on the ILPQC website with additional resources

Opportunity to promote your ILQ QI work at the state capitol



- Opportunity to partner with Illinois Hospital Association to showcase your QI work at the <u>Quality-Advocacy Showcase</u> on April 5, 2017, Springfield, IL 11am-3pm in the IL State Capitol Rotunda
- Poster submissions are due February 7th online
 - May be able to use posters from ILPQC Annual Conference
- IHA will produce and print the posters for display at the event
- For more information and topics of interest go to: <u>http://www.ihatoday.org/IHA-Institute/Quality-Improvement-Showcase.aspx</u>

Team Talks - HTN Initiative



- Teams assigned an OB Teams Call look for email from Kate
 - January -
 - Alexian Brothers Women's and Children's Hospital
 - Memorial Hospital East/Belleville
 - February
 - Northwest Community Hospital
 - Rush-Copley
 - March
 - Elmhurst Memorial
 - Unitypoint Health Trinity
 - Alexian Brothers Women's and Children's
 - April
 - SwedishAmerican
 - Palos Community Hospital

- Generate discussion and learning through sharing
 - Good foundation for storyboard/poster presentations!
- Present 5-10 mins. on current QI work based on monthly call topic:
 - January implementing standard order sets, protocols, and checklists
 - February standardizing identification, BP measurement, assessment, and monitoring for pregnant/postpartum women
 - March rapid access to IV and PO anti-hypertensive medications
 - April implement system for standardized patient discharge education and follow-up

HTN Initiative Next Steps



- Focus on QI strategies to reduce time to treatment across all hospitals
- Attend at least one QI Topic Call on reducing barriers to time to treatment
- Identify a patient/family advisor for your HTN Initiative Team and participate in your monthly QI team meetings!
- Data past and upcoming due dates:
 - Severe HTN Data Form
 - December data was due January 15th
 - January data is due between February 15th and 28th
 - AIM Quarterly Measures
 - 2016 Q3 (July September) was due October 15th
 - 2016 Q4 (October December) was due January 15th
 - Quarterly Implementation Checklist
 - 2016 Q3 (July September) was due October 15th
 - 2016 Q4 (October December) was due January 15th
- Next teams call will be February 27, 2017 from 12:30 1:20 pm
- Email <u>info@ilpqc.org</u> 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



Contact

ILE PQC

Illinois Perinatal Quality Collaborative

- Email info@ilpqc.org
- Visit us at <u>www.ilpqc.org</u>









