

Maternal Mortality: Hypertension

Site Name:	Key Interventions:
Allegheny Health Network- Saint Vincent Hospital	<ul style="list-style-type: none"> • Pre-eclampsia specific discharge instruction sheets for elevated BP/pre-eclamptic pre-birth and post-birth patients with provider indicated range of BP expectations. (currently in DRAFT form) • Provide each antepartum/postpartum elevated BP/pre-eclamptic discharged patient with automated BP cuff DME to take, track BP's outside of the hospital. (future plan – research vs provider order) • Provide each antepartum/postpartum discharged patient with <u>Save Your Life</u> magnets and <u>Save Your Life</u> flyers (implemented January 2019) • Share <u>Save Your Life</u> magnets and <u>Save Your Life</u> flyers with ED providers and staff. (December 2019) • Signage in each ED triage room to notify any patient to tell/notify ED staff if they have recently given birth. (<u>Save Your Life</u> information - December 2019)
Commonwealth Health- Moses Taylor Hospital	<ul style="list-style-type: none"> • Provide education to Labor and Mom Baby staff on use of the appropriate size BP cuff and the appropriate way to obtain a BP. • Developed scripting to help staff notify MD of severe range BPs. • Development of Hypertensive Critical Event Checklist. • Education of Labor, Mom Baby, ED, and ICU staff on the use of the Hypertensive Critical Event Checklist.
Evangelical Community Hospital	<p>Currently participating in multi-disciplinary meetings to accomplish the following:</p> <ul style="list-style-type: none"> • Patient education opportunities • Assessment, treatment, and follow-up protocols • Standardized order set and discharge instructions • Standardization of patient placement • Staff education i.e. ED providers • Data collection
Geisinger	<ul style="list-style-type: none"> • Implementing checklist for HTN Crisis • Providing simulation & drills for education • Reviewing medication access • Creating order sets to avoid unnecessary clinical variation
Lehigh Valley Health Network- Pocono	<ul style="list-style-type: none"> • All providers and nursing staff were educated with a Hypertension Disorders in Pregnancy module through GNOSIS • Clinical Practice Guidelines (CPG) related to perinatal hypertension reviewed with all OB providers and OB nursing staff with ED providers being educated in the near future • Daily interdisciplinary team rounding with reference to CPG's on HTN patients • Submitted a Grant proposal collaboratively with ESU to have the nursing students provide blood pressure equipment and education to hypertensive pregnant patients in their home. Patients will proactively self-monitor and report blood pressures to OB office.

Site Name:	Key Interventions:
Penn Medicine-Chester County Hospital	<ul style="list-style-type: none"> • Preeclampsia Pathway • Hypertensive Management Pathway • Postpartum Hypertension Pathway • Adoption of Heart Safe Motherhood
Punxsutawney Hospital	<ul style="list-style-type: none"> • Develop order sets for the ED for timely treatment of Hypertensive pregnant/postpartum patients • Education of ED staff/physicians on identifying & treating Hypertensive pregnant/postpartum patient using ACOG & AIM guidelines
St. Luke's University Health Network	<ul style="list-style-type: none"> • Verified with ED if current screening process is to determine if patient recently had a baby • Enlisted our EPIC IT team members to assist us with building a screening tool to be used in ED • Contacted WellSpan contact to get input on what they have included in their screening tool <ul style="list-style-type: none"> ○ Ordered AWHONN magnets to distribute at discharge for mothers to put on fridge
Tower Health-Reading Hospital	<ul style="list-style-type: none"> • HTN protocol in place by 7/1/20 (model after the California Quality Collaborative). • AWHONN postbirth warnings signs education for staff and for all post-partum patients prior to discharge.
UPMC Womens Health Service Line	<ul style="list-style-type: none"> • Standardized: <ul style="list-style-type: none"> ○ Diagnostic criteria, monitoring and treatment of severe preeclampsia/eclampsia, algorithms, order sets, protocols, staff and provider education, unit-based drills, debriefs. ○ Process defined for timely triage and inpatient, outpatient, and ED evaluation. ○ Medications for treatment stocked and immediately available. • Recognition and Prevention: <ul style="list-style-type: none"> ○ Protocol for measurement and assessment of BP and labs for all <i>pregnant and postpartum women</i> <ul style="list-style-type: none"> ▪ Prenatal & postpartum patient education on signs & symptoms of hypertension & preeclampsia ▪ Implemented Vivify for outpatient B/P monitoring and symptomatology • Response: <ul style="list-style-type: none"> ○ Implemented Nurse Driven Protocol for ordering remote monitoring. Program spread to community hospitals of UPMC Northwest & UPMC Horizon ○ Completed Service Line Gap Assessment ~ 2020 The Joint Commission Standards ○ Maternal Health Awareness Day January 23, 2020 Focus: Fourth Trimester ○ Provided take home toolkit for participants ○ Implemented a Service Line MMRC first meeting February 17, 2020 ○ Implemented UPMC Perinatal Quality Collaborative first meeting February 26, 2020 ○ Post birth warning sign magnets provided to all mothers upon discharge across UPMC ○ Implemented Maternal Fetal Triage Index (MFTI) obstetrical triage rapid assessment tool ○ Commercials and interviews by Medical Staff leaders on Maternal Morbidity & Mortality ○ Developing a system wide policy for assessing and managing HTN • Reporting: <ul style="list-style-type: none"> ○ Multidisciplinary review of all severe hypertension/eclampsia event cases; Post event debriefs

Site Name:	Key Interventions:
WellSpan Health	<p>Completed:</p> <ul style="list-style-type: none"> • Roll out of low dose aspirin screening in epic at the first OB visit • Free aspirin provided at office • Roll out of Relias education • Roll out of Meds to Beds (YH) • Implemented new policy on severe hypertension • Implemented new physician guidelines on severe hypertension • Implemented severe maternal morbidity reviews <p>In process:</p> <ul style="list-style-type: none"> • Creation of Education for ED nurses and providers • Creation of a system wide ED policy on the care of pregnant and postpartum women • Creation of a BPA to trigger repeat BP measurement in pregnant and postpartum women with severe hypertension • Creation of a Post-Birth screen in the ED with BPA <p>Creation of drills on severe HTN and PPH</p>

Maternal Mortality: Hemorrhage

Site Name:	Key Interventions:
Jefferson Health-Thomas Jefferson University Hospital	<ul style="list-style-type: none"> • Reviewed data of hemorrhage • Calculator updated • Inservice hemorrhage and emergency cards • Simulation completed in Simulation Center October 2019 • Requested review and update to Risk Assessment in EPIC
Penn Medicine-Lancaster General/Women and Babies	<ul style="list-style-type: none"> • Train champions to facilitate QBL process <ul style="list-style-type: none"> ○ Feedback and process recommendations for clinical workflow ○ Communication/Education with teams • Implemented EMR tool for PPH risk assessment (Go-Live 12/2/19) • Inventory tools/equipment required for QBL process <ul style="list-style-type: none"> ○ Additional scale obtained for L&D • Implemented QBL with EMR calculator (Go-Live 2/2/20) • Order set changes approved by OBGYN Care Management team • Established a method for reporting and determining baseline data <ul style="list-style-type: none"> ○ OB Vaginal & Cesarean PPH reports built in EMR ○ Blood utilization and uterotonic usage reports ○ QBL report
Penn Medicine-Pennsylvania Hospital	<ul style="list-style-type: none"> • Now include the risk assessment in every pre-op huddle (seen reduction in use of massive transfusion protocol) • Increase in communication of risk assessment & decrease in the need for the massive transfusion protocol
Penn State Health-Hershey Medical Center & Children's Hospital	<p>Completed:</p> <ul style="list-style-type: none"> • Assessment by provider using an evidence-based tool • Risk Assessment score placed in EMR and on Chalk board • Postpartum Hemorrhage kit with emergency medications present at every delivery • Postpartum Hemorrhage Cart containing guideline for actions and emergency supplies immediately available • Simulation exercises (ongoing)
St. Clair Hospital	<ul style="list-style-type: none"> • Unit-standard, stage-based, obstetric hemorrhage emergency management plan with checklists • Quantification of blood loss • Standards for early warning signs, diagnostic criteria, monitoring and treatment of severe preeclampsia/eclampsia (include order sets and algorithms) • Standard protocol for measurement and assessment of BP and urine protein for all pregnant and postpartum women • Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities

Site Name:	Key Interventions:
Temple University Hospital	<ul style="list-style-type: none"> • Risk assessment for every patient • Implement the hemorrhage protocol (everything will be consistent) • Hemorrhage cart • Running Drills • Cultural diversity training • Pain Management protocol
Tower Health-Reading Hospital	<ul style="list-style-type: none"> • Create standard for prenatal identification of high risk patients, quantitative blood loss, and early interventions • All nurses, providers attend yearly sim. QBL roll-out scheduled for 3/7/20; Sims – yearly • Policy / protocol in place and communicated by 7/1/20
UPMC Womens Health Service Line	<ul style="list-style-type: none"> • Standardized hemorrhage cart: <ul style="list-style-type: none"> ○ Includes: supplies, checklist, algorithms, hemorrhage medication kit, response team, advanced gynecologic surgery, massive transfusion protocols, unit guidelines, unit-based drills with post-drill debriefs, and staff/provider education • Recognition and Prevention: <ul style="list-style-type: none"> ○ Standardized assessment tool. <ul style="list-style-type: none"> ▪ Prenatally, admission, other appropriate times ▪ Measurement from EBL to QBL & defined quantity • Response: <ul style="list-style-type: none"> ○ Support programs for patients, families, staff ○ Conducted Service Line Gap Assessment ~ 2020 The Joint Commission Standards planning to conduct tracers for compliance ○ Developed a Service Line MMRC ○ Developing a system wide policy for assessing and managing PPH • Reporting: <ul style="list-style-type: none"> ○ Event reporting to Risk/Quality Department ○ Multidisciplinary review for opportunities in systems and processes ○ Monitor outcomes and metrics ○ Report as appropriate to various committees

Maternal Mortality: Timely Fourth Trimester Contact

Site Name:	Key Interventions:
Jefferson Health-Abington Hospital	<ul style="list-style-type: none"> Standardized guidelines for PP follow-up (current focus on Htn and PPD) Interprofessional postpartum rounding on inpatient Mother-baby units Developing standardized guidelines for postpartum follow-up

Maternal OUD

Site Name:	Key Interventions:
Allegheny Health Network- Forbes Hospital	<ul style="list-style-type: none"> Screen pregnant women for substance misuse and physical and behavioral health co-morbidities using validated screens in office and upon admission if not previously completed. Social work will connect women to treatment and supportive resources.
Allegheny Health Network- Jefferson Hospital	<ul style="list-style-type: none"> JWH and AHM practices will implement a validated screening tool for SUD (5Ps) at all NOB visits starting April 1, 2020. Any patient who has not been screened in their pregnancy will be screened with the 5P tool on admission to labor and delivery by their labor nurse. Patients who screen positive on the 5P screening tool will be referred for appropriate next steps based on a system-wide algorithm for further assessment and possible treatment.
Allegheny Health Network- Saint Vincent Hospital	<ul style="list-style-type: none"> Staff Education – See NAS QI update Provider documentation education Incorporate information on Growing Hope program and support available for addicted moms-to-be
Geisinger	<ul style="list-style-type: none"> Implementing universal NIDA screening Implementing a clinical pathway for positive screens Re-educating on urine toxicology protocol
Guthrie Hospital	<ul style="list-style-type: none"> Finding a validated screening tool- chose 4P's tool Educating staff and training on chosen tool Implement screening of all pregnant women at least once during prenatal care (to start)
Jefferson Health-Abington Hospital	<ul style="list-style-type: none"> Universal Screening with 5Ps tool at first prenatal visit & all triage & inpatient admissions to L&D
Lehigh Valley Health Network- Pocono	<ul style="list-style-type: none"> Educate all Prenatal Care Providers on the 4P's and scripting Educate on the referral process to the LSW Provide educational materials to pregnant women with OUD Created an OB nurse navigator position to follow at risk patients from prenatal through post-partum for compliance

Site Name:	Key Interventions:
Main Line Health	<ul style="list-style-type: none"> • Working with MLH Clinical Informatics regarding enhancement of Risk Assessment • Completed Social Work Evaluation of Outpatient Resources Across 4 Hospitals and 4 Geographic Counties: Goal to Optimize & Standardize • Developed Education Plan and 2020 Timeline to include: <ul style="list-style-type: none"> ○ NAS Education Brochure for Parents ○ Computer Based Training Education for All Providers ○ Grand Rounds with Dr. Gary Stoner ○ Lunch and Learns • Plan to analyze PA PQC Baseline Survey Results & Best Practices to identify Gaps in Care/Education
Penn Medicine-Chester County Hospital	<ul style="list-style-type: none"> • Completed process mapping, gap analysis, Affinity Diagram, & brainstorming • Evaluated screening tools; Agreed to use 5P's screening tool • Engaged County & Community representatives
Penn Medicine-Hospital of the University of Pennsylvania	<ul style="list-style-type: none"> • Creation of a template for a prenatal consult for pregnant women in OUD • Educate/email OB staff about need for prenatal consultation when able (& why) • Assigned EI referral (through EMR) to neonatal NP who tracks all OENs in our hospital
Penn State Health-Hershey Medical Center & Children's Hospital	<p>Completed:</p> <ul style="list-style-type: none"> • Gain consensus and approval on a validated screening tool to screen all pregnant women for substance use • Draft a paper patient-friendly form to screen patients at the time of the first prenatal appointment • Develop workflow to identify: who will respond to patients who screened positive; who will refer patients to treatment; and to whom can we refer our patients • Provide unbiased non-judgmental, trauma-informed care: <ul style="list-style-type: none"> ○ Complete baseline attitudes measurement staff survey ○ Provide education/intervention ○ Complete reassessment through the attitude's measurement staff survey • Complete staff education regarding: <ul style="list-style-type: none"> ○ The 5Ps tool and screening rationale ○ The 5Ps screening process and SBIRT- Done at main Women's Health office (Hope Drive)
St. Clair Hospital	<ul style="list-style-type: none"> • Began using 5Ps tool for outpatient prenatal visits & inpatient admissions to our hospital in June 2019 • Coordinated with affiliated OB offices for them to utilize 5Ps tool for screening their pregnant patients in the office setting, starting with the 1st prenatal visit & then again in the 2nd & 3rd trimester. • Provided OB offices with referral forms to be faxed to our Level 2 Nursery Coordinator for follow-up care. When our nursery coordinator receives a referral, she reaches out to the family to discuss the care they can expect when they arrive for their delivery. • Educated inpatient nursing staff on 5Ps screening tool & implemented it to be utilized on all patients admitted.

Site Name:	Key Interventions:
Tower Health-Reading Hospital	<ul style="list-style-type: none"> • Clinical pathway for pregnant women with OUD <ul style="list-style-type: none"> ○ Screening for SUD ○ Hospital observation for MAT induction, methadone and buprenorphine offered ○ Connection with methadone program in county. ○ Suboxone maintenance program at Women’s Health Center for pregnant women with OUD. <ul style="list-style-type: none"> ▪ Intensive case management with the COE, drug and alcohol treatment, social services, prenatal development of Plan of Safe Care, connection with Early Intervention, prenatal parent education on NAS.
UPMC Womens Health Service Line	<ul style="list-style-type: none"> • Access: <ul style="list-style-type: none"> ○ Maternal medical support to prevent withdrawal during pregnancy ○ On call service for all UPMC hospitals 24/7 ○ Provide regular prenatal and other medical appointments ○ 4 Outreach Community Centers ○ Same day on next day within 24-hour appointments • Prevention: <ul style="list-style-type: none"> ○ Community education ○ Obstetrical provider education ○ Minimize fetal exposure to Opioid substances ○ Early engage mother as a leader in her recovery ○ Narcan “to go” • Response: <ul style="list-style-type: none"> ○ Pregnancy Recovery Center (Prenatal & Postpartum) ○ UPMC Healthplan engagement <ul style="list-style-type: none"> ▪ Support programs for patients, families, staff ○ Multidisciplinary team OB, MFM, SW, Nurses, Mental Health therapists ○ Methadone Conversion to buprenorphine from inpt. to outpt. ○ Outpatient buprenorphine medication treatment ○ Warm hand overs ○ ED Physician and APP trained in buprenorphine treatment • Reporting: Centers of Excellence <ul style="list-style-type: none"> ○ State, Allegheny County, UPMC Healthplan ○ Report as appropriate to various committees
Wayne Memorial Hospital	<ul style="list-style-type: none"> • Use of standardized codes & documentation for SEN’s and NAS. Including specific ICD codes for OEN’s • Educate staff re: OEN and NAS, trauma informed care and MD wise guidelines. • Develop screening criteria for prenatal ID of infants at risk • Provide family education about NAS and what to expect.

Neonatal Abstinence Syndrome (NAS)

Site Name:	Key Interventions:
Allegheny Health Network-Saint Vincent Hospital	<ul style="list-style-type: none"> • Two NICU RN's researched & developed education in classroom format to teach all WAIC staff proper methods & tips to use when assessing neonates for withdrawal using Modified Finnegan Assessment • Upon completion of education, skill validation will be done by core group of 6 NICU RN's. • Each staff RN must perform 10 assessments proficiently for skill validation • Comparison of retrospective RN assessment scores and post-education/validation scores by each RN
Allegheny Health Network- West Penn Hospital	<ul style="list-style-type: none"> • Decrease rate of smoking & un-prescribed drug use in mothers enrolled in Perinatal HOPE Program • Implementation of the Eat-Sleep-Console strategy for the management of NAS • Improve communication and provide education to referring PCP's
Doylestown Hospital	<ul style="list-style-type: none"> • Educated all staff on Eat, Sleep, Console Approach, will perform inter-rater reliability assessment. • Created and currently use NAS Order Sets with standardized medication dosing and faster weaning. • Educated staff and parents regarding non-pharmacological interventions. Empower parents to provide these interventions to their baby. • Reaching out to obstetric providers to refer pregnant women with OUD to hospital team in order to begin prenatal education, tour unit and discuss care of infant prior to delivery.
Einstein Medical Center Philadelphia	<ul style="list-style-type: none"> • Create pamphlet for families • Provide anticipatory guidance to families during prenatal visits • Chart review for adherence to NAS protocols • Create OB trigger at 28 weeks for NICU consult • Obtain prenatal joint medicine/nursing consult: Create template for this team consult • Add Picker-type question to discharge phone calls
Einstein Medical Center Montgomery	<ul style="list-style-type: none"> • Multidisciplinary monthly meetings to improve all 3 focus areas • NAS pamphlets for OB; presenting info at their monthly meeting • Transportation and Food Vouchers for parents to stay with infants • Actively educating staff to transition to Eat, Sleep, Console • Supportive care equipment (blankets, MamaRoos, Ergo Baby, etc) • Attending Plan of Safe Care meetings • Developing both EMCM hospital and CHOP Network policy for ESC • Breastfeeding "Traffic Lights" • Community outreach to Methadone Clinic • Infant massage training • Facility enhancements
Jefferson Health – Abington Hospital	<ul style="list-style-type: none"> • Implementation of Eat, Sleep, Console tool for NAS assessment

Site Name:	Key Interventions:
Mount Nittany Health System- Mount Nittany Medical Center	<ul style="list-style-type: none"> • Help mothers recognize they are the treatment with new welcoming brochure • Increase staff interest and knowledge with VON training • Maximize non-pharmacologic treatments for NAS, consider implementation of Eat-Sleep-Console; standardize medication usage and/or consider PRN use
Penn Medicine- Pennsylvania Hospital, Newborn Medicine	<ul style="list-style-type: none"> • Review pharmacologic treatment for every OED newborn from 3/1/2019 - 8/31/2019 to determine total medication use & weaning process
Penn State Health- Hershey Medical Center & Children's Hospital	<p>Completed:</p> <ul style="list-style-type: none"> • IRR Baseline Assessment • Refresher education • IRR Reassessment <p>In progress:</p> <ul style="list-style-type: none"> • Development and availability of a Finnegan NAS Scoring Resource Card at each bedside in NICU and WHU • Plan for huddles / collaboration of scoring at times of key decisions- In progress <ul style="list-style-type: none"> ○ Identification of champions/ team members to be included in huddles ○ Additional education for huddle team members
St. Luke's University Health Network	<ul style="list-style-type: none"> • Working with IT to create an EPIC report to accurately identify any babies with NAS & who are affected by OUD • PA PQC core team: working on completing the required NAS education to build competence & consistency within our NAS scoring throughout the network
Temple University Hospital	<ul style="list-style-type: none"> • Education to Moms pre/post delivery • Getting OUD screening into EPIC • Research for what is currently available for Eat, Sleep, Console
Tower Health- Reading Hospital	<ul style="list-style-type: none"> • Implement "Eat Sleep Console" program on Specialty care unit. (Moms will room-in with newborns.) Transfer family to pediatrics when mother is discharged. • Staff education, music therapy, cuddlers, OT, patient/family education, community education

Site Name:	Key Interventions:
UPMC Womens Health Service Line	<ul style="list-style-type: none">• Access:<ul style="list-style-type: none">○ Maternal medical support to prevent withdrawal during pregnancy○ Provide regular prenatal & other medical appts.• Prevention:<ul style="list-style-type: none">○ Minimize fetal exposure to illicit substances○ Engage mother as a leader in her recovery• Response:<ul style="list-style-type: none">○ Parent Partnership Unit (PPU)<ul style="list-style-type: none">▪ Eat, Sleep, Console (ESC) implemented and spreading across system• Reporting:<ul style="list-style-type: none">○ PA DOH of all NAS occurrences;○ Internal leadership & appropriate committees, e.g. NICU