Illinois Perinatal Quality Collaborative: Mothers and Newborns affected by Opioids & Severe Maternal Hypertension

Presented by:
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Objectives / Purpose

- ILPQC Overview

- Supporting Hospital Teams with QI Methodologies

- Key aspects of the MNO initiative for OB Providers

- Key aspects of the Severe Maternal Hypertension Initiative for OB Providers

- Resources

Illinois Perinatal Quality Collaborative (ILPQC)

- Multi-disciplinary, multi-stakeholder Perinatal Quality Collaborative with 119 Illinois hospitals participating in 1 or more initiative

- Support participating hospitals' implementation of evidenced-based practices using quality improvement science, collaborative learning and rapid response data

>99% of IL births
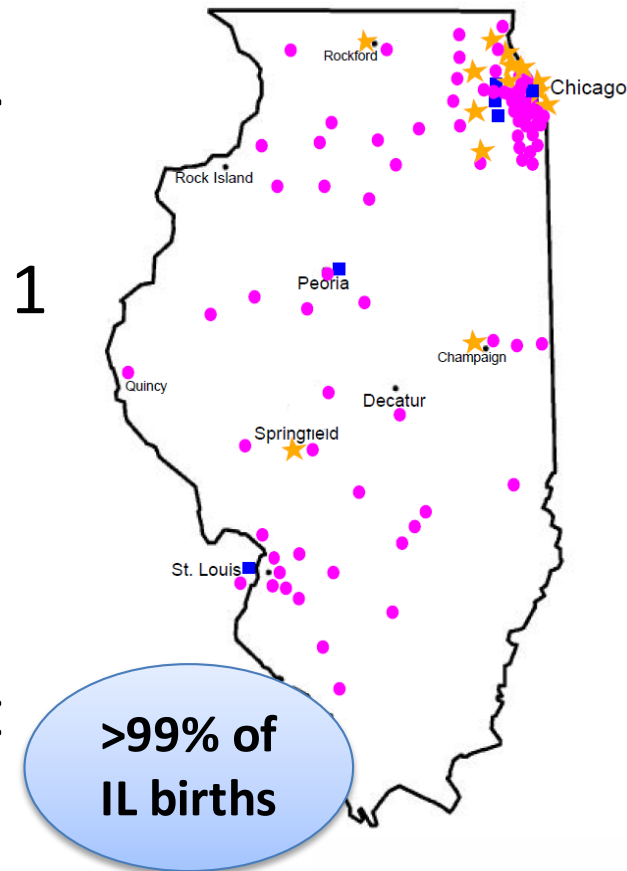
ILPQC Infrastructure
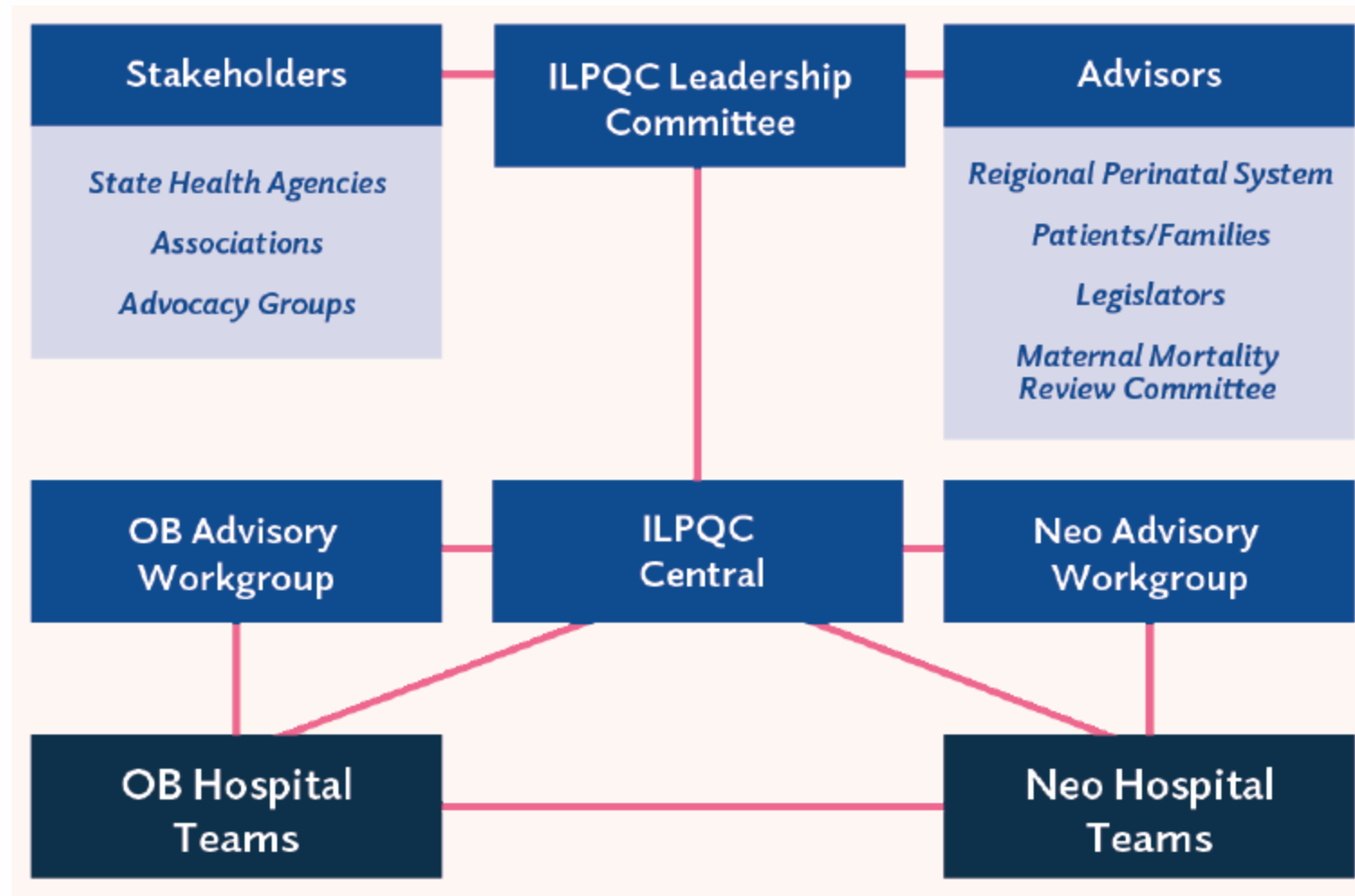
ILPQC Central Team

Ann Borders
ILPQC Executive Director, OB Lead

Leslie Caldarelli & Justin Josephsen
Neonatal Leads

Patricia Lee King
State Project Director, Quality Lead

Daniel Weiss & Danielle Young
Project Coordinators

Autumn Perrault
Nurse Quality Manager

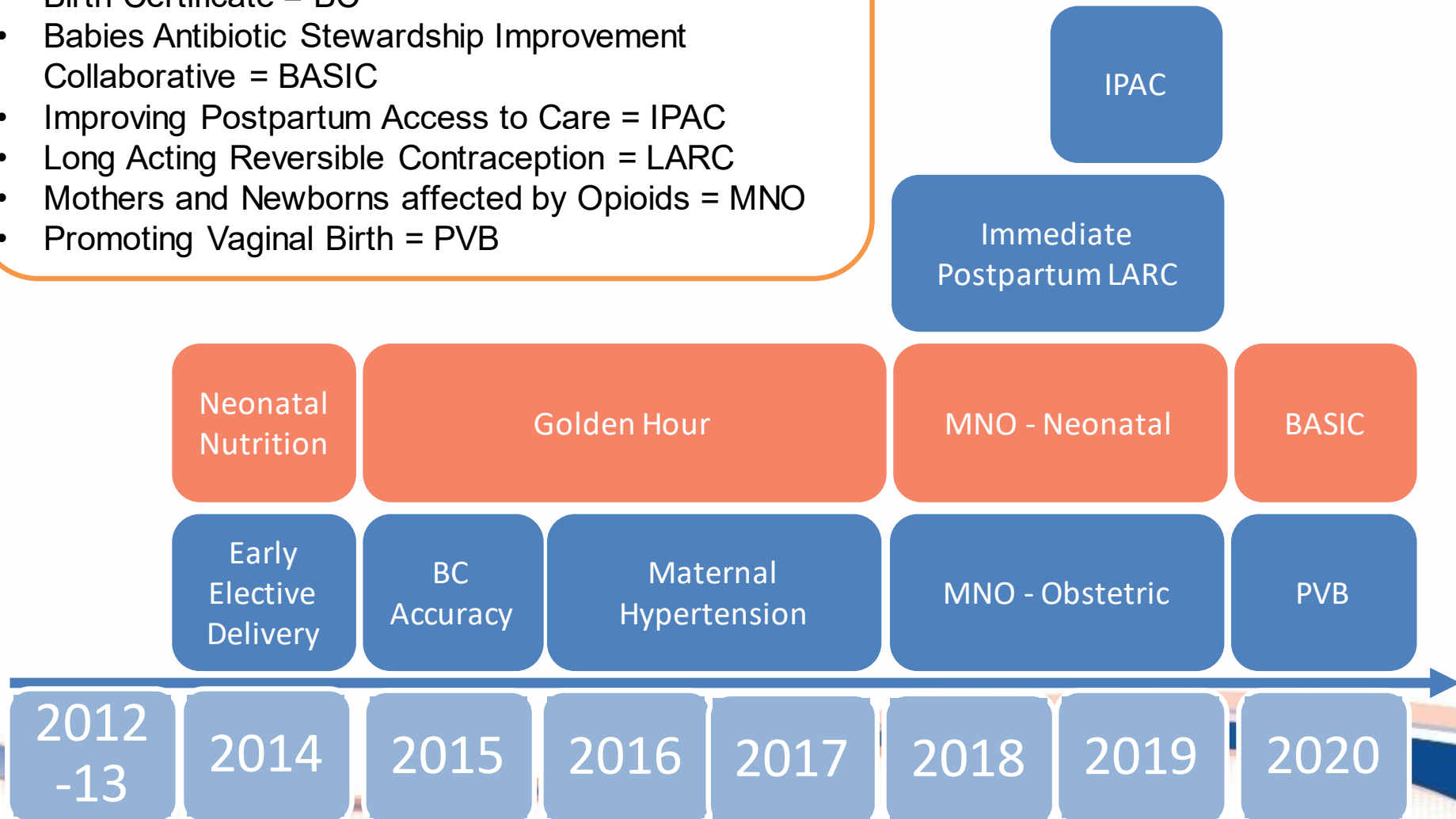info@ilpqc.org OR www.ilpqc.org
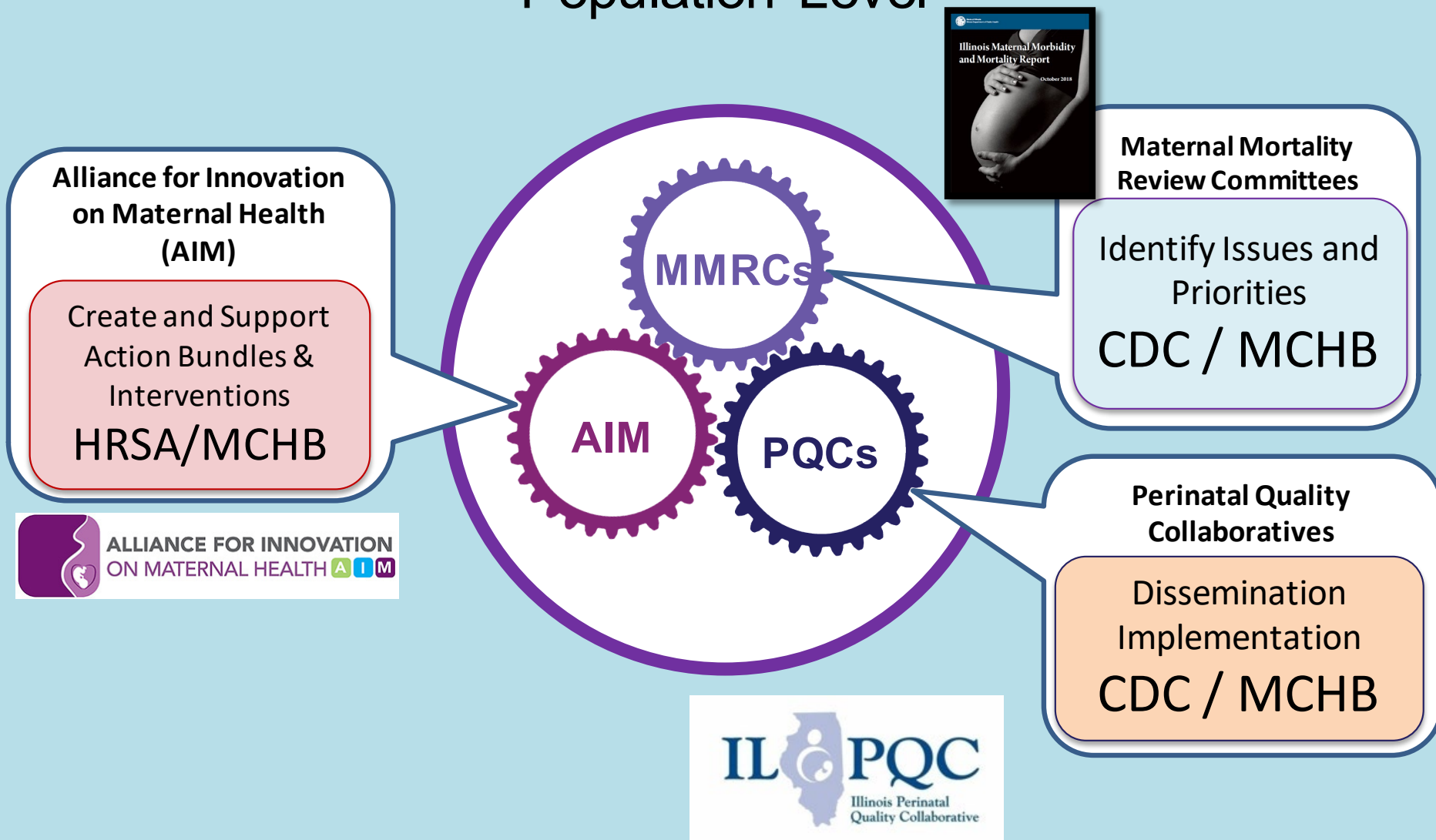
ILPQC Initiative Activity Level

Abbreviations:
- Birth Certificate = BC
- Babies Antibiotic Stewardship Improvement Collaborative = BASIC
- Improving Postpartum Access to Care = IPAC
- Long Acting Reversible Contraception = LARC
- Mothers and Newborns affected by Opioids = MNO
- Promoting Vaginal Birth = PVB

					IPAC		
					Immediate Postpartum LARC		
Neonatal Nutrition	Golden Hour				MNO - Neonatal		BASIC
Early Elective Delivery	BC Accuracy	Maternal Hypertension			MNO - Obstetric		PVB
2012-13	2014	2015	2016	2017	2018	2019	2020

Reducing Maternal Mortality and Morbidity at the Population Level

Alliance for Innovation on Maternal Health (AIM)

Create and Support Action Bundles & Interventions
HRSA/MCHB

MMRCs

AIM

PQCs

Maternal Mortality Review Committees

Identify Issues and Priorities
CDC / MCHB

Perinatal Quality Collaboratives

Dissemination Implementation
CDC / MCHB

Adapted from Zaharatos, CDC, 2018

SUPPORTING HOSPITAL TEAMS WITH QI METHODOLOGIES

ILPQC Quality Improvement Strategy
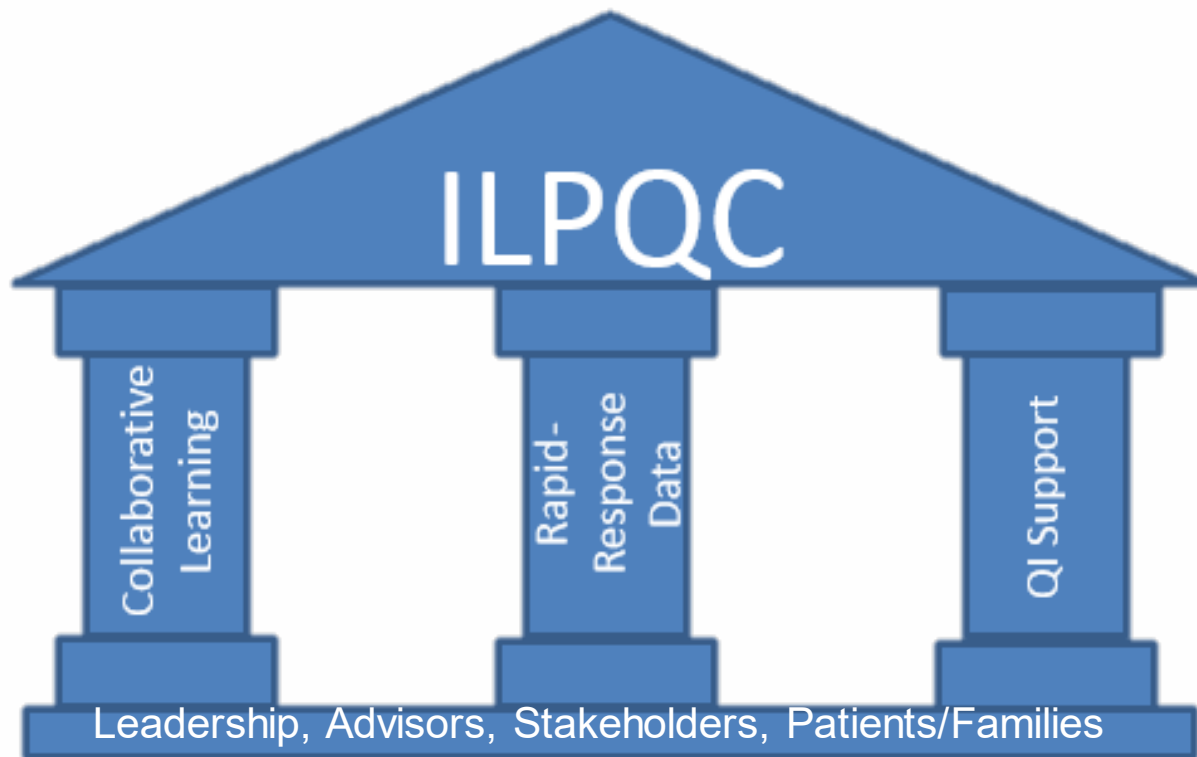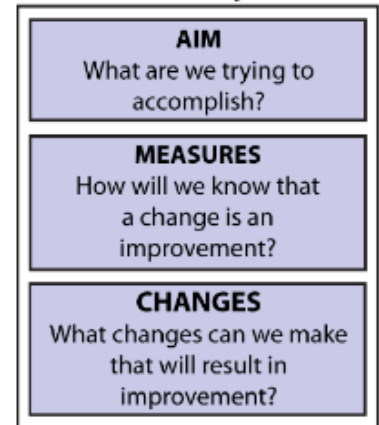
Quality Improvement Strategy

- **Engage statewide stakeholders** and **OB Advisory Workgroup** in development and implementation of QI initiative

- Facilitate development of multidisciplinary **hospital-based QI teams**

- Facilitate monthly **collaborative learning webinars** with national experts, toolkit resources and team sharing and twice annual opportunities for in-person collaborative learning

Teaching hospital teams key QI steps

- Build a multidisciplinary QI team

- Assess where starting from (baseline data)

- Plan where want to get to (30-60-90 day plan, set goals/aims)

- Try small test of change (PDSA cycle), repeat

- Collect data (structure, process and outcome measures) to track progress, challenges, success, compliance

- Review/share rapid response data reports showing change from baseline and comparison across hospitals, key for quality improvement
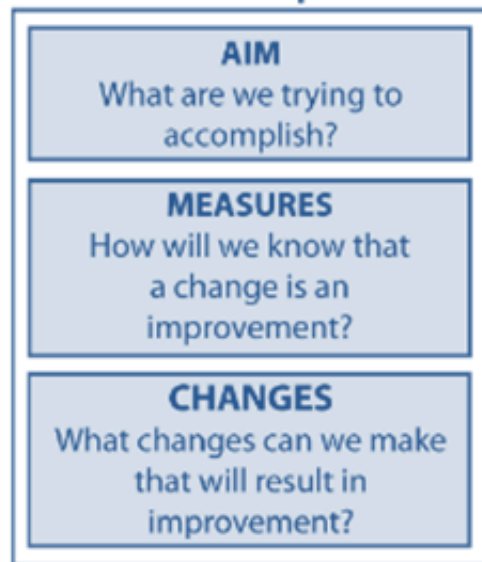
- Learn from other hospital teams

30-60-90 Day Plans or "Where should we start" Plan

- What are your **goals**?

- Where do you want to **start**?

- What would you like to accomplish in first 3 months of this initiative?

- Include plan for **1st small test of change** (PDSA cycle)

Next Steps

30 DAY	Overall Goal:	TASKS TO ACHIEVE GOAL: 1. 2. 3.	RESPONSIBLE PARTY:
60 DAY	Overall Goal:.	TASKS TO ACHIEVE GOAL: 1. 2. 3.	RESPONSIBLE PARTY:
90 DAY	Overall Goal:	TASKS TO ACHIEVE GOAL: 1. 2. 3.	RESPONSIBLE PARTY:

Plan-Do-Study-Act (PDSA) Cycle: Building Hospital-Level QI Capacity

The Model for Improvement

AIM
What are we trying to accomplish?

MEASURES
How will we know that a change is an improvement?

CHANGES
What changes can we make that will result in improvement?

Act | Plan
Study | Do

© 2012 Associates in Process Improvement

Hospital QI Work:
What changes can you make to your process/system and test with a PDSA cycle to reach initiative goals?

Applying the IHI model and PDSA Cycle

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PDSA Worksheet

*available for review on ilpqc.org

The Model for Improvement

1
AIM
What are we trying to accomplish?

2
MEASURES
How will we know that a change is an improvement?
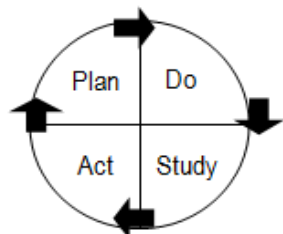
3
CHANGES
What changes can we make that will result in improvement?

PDSA WORKSHEET

Team Name: Collaboration Health	Date of test: June 26, 2018	Test Completion Date: June 29, 2018
Overall team/project aim: Improve identification of pregnant women with opioid use disorder through standardized screening and assessment for OUD		
What is the objective of the test? To implement standardized screening and assessment for OUD on admission to labor and delivery		

PLAN: After discussing how hospital current manages OB process flow and how to alter process flow to incorporate standard substance use screening and brief intervention on admission to L&D, we reviewed screening tools provided in the ILPQC MNO-OB Toolkit. Our next step was to determine which screening tool to use.

Briefly describe the test: Test the NIDA Quick Screen, 5 P's, and Institute for Health and Recovery Integrated Screening Tool for best fit for implementation as standardized screening.

How will you know that the change is an improvement? Feedback from provider on screening tool flow, scoring, format, and seamless transition to brief intervention after use – each tool tested with one patient.

What driver in the initiative key driver diagram does the change impact? "Early screening of all women"

What do you predict will happen? We predict the provider champion will prefer the 5 P's because it brief and question format is simple.

PLAN

List the tasks necessary to complete this test (what)	Person responsible (who)	When	Where
1. Prepare paper copies of 3 screening tools for Dr. Vandu.	Debbie	June 26	L&D
2. Meet with Dr. Vandu to review tools	Debbie	June 27	Dr. Vandu's Office
3. Test each screening tool once with the first three patients admitted to L&D	Dr. Vandu	June 28	L&D
4. Debrief with QI team to discuss feedback	Debbie, Derrick, Dr. Vandu	June 29	Staff meeting room
5. Develop subsequent PDSA cycle/other action.	Debbie, Derrick, Dr. Vandu	June 29	Staff meeting room

Plan for collection of data: Notes from screening tool administration on 1 patient each and qualitative discussion of experience using screening tool.

DO: Test the changes.

Was the cycle carried out as planned? X Yes   No

Record data and observations. Dr. Vandu tested all three screening tools with one patient each in L&D. Preferred Institute for Health and Recovery Integrated Screening Tool because it helped her transition to brief intervention most naturally. Thought that the format of the tool may need to be adapted for ease of provider use in L&D setting.

What did you observe that was not part of our plan? We didn't expect the Institute for Health and Recovery Integrated Screening Tool to be preferred.

STUDY:
Did the results match your predictions?   Yes   X No

Compare the result of your test to your previous performance: First test. Standardized screening not currently in place.

What did you learn? Ease of transition to brief intervention is valued when selecting a screening tool.

ACT: Decide to Adopt, Adapt, or Abandon.

■ **Adapt**: Improve the change and continue testing plan.
Plans/changes for next test: Test the Institute for Health and Recovery Integrated Screening Tool on L&D with 1 nursing champion during 1 day on L&D to determine how it works in current process flow to identify potential adjustments to process flow/adaptation of screening tool formation.

☐ 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

PDSA : implementation of SUD/OUD screening

Educate and incorporate tool In LD and expand to OB physician office

Identify a validated screening tool

Act

Plan

Study

Do

Evaluate screening tool- Adapt/Adopt/Abandon

Testing screening tool in LD

Next Steps for <Hospital> launching IPAC

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30 DAY

Overall Goal: Determine the effectiveness of utilizing the OB IPAC Outpatient Packet for engaging providers in the implementation of a 2wk pp check. Identify key learning needs for providers

TASKS TO ACHIEVE GOAL:	RESPONSIBLE PARTY:
1. Determine materials for OP Packet	Dr. Post
2. Create pre/post questionnaire	Sara
3. Collate materials and create PDF	James
4. Take notes & report key learning needs	Kelly

60 DAY

Overall Goal:. Create process flow to facilitate universal scheduling and patient education, prior to hospital discharge for IPAC

TASKS TO ACHIEVE GOAL:	RESPONSIBLE PARTY:
1. Determine pt ed materials	All
2. Meet with team to discuss key elements to include in the process flow	All
3. Create process flow for d/c to include scheduling	Kelly

90 DAY

Overall Goal: Implement system for **p**rovider & RN education on risks of the pp benefits of early pp visit, and key components of maternal health safety check

TASKS TO ACHIEVE GOAL:	RESPONSIBLE PARTY:
1. Finalize key aspects of RN & MD ed	All
2. Gather materials for RN & MD ed	James
3. Decide on system for both RN & MD ed	All
4. Create process flow of education system	Kelly
5. Implement process flow for MDs and RN ed	Sara

From 30-60-90 Plan to PDSA Cycle

Dr. Post, the outpatient provider champion, feels that provider buy-in should be a top priority . The team agrees and would like to do a small PDSA

Team discusses strategies to assess outpatient providers' understanding and readiness for implementation of a 2wk pp visit

Team decides to do a PDSA with the ILPQC IPAC Outpatient Provider Packet along with suggested materials

Team will measures understanding and readiness using a feedback tool that the team will create

Sample PDSA:

- **Plan:**

  – **Objection:** Determine the effectiveness of utilizing the OB IPAC Outpatient Packet for engaging providers in the implementation of a 2wk pp check

  – **Prediction:** We think the packet will provide enough information and move providers to implementation of a universal 2wk pp visit

  – **Tool**: The QI team created a 2 question pre/post survey asking providers to rate (scale 1-10) their understanding and likeness of implementing a 2wk pp visit scheduled before the patient is discharged after her delivery

Act

Dr. Post will create a printed Outpatient Packet and will work with his office manager to disseminate the information to providers, and nurses and collect the post-survey.

Plan

IPAC QI team met and developed their plan for their first PDSA cycle (see previous slide)

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Sample PDSA cont.:

Study

Dr. Post found that after a week his email was not read and he only received 2/10 post surveys. He identified that email communication was not effective in providing timely information to the providers in his office
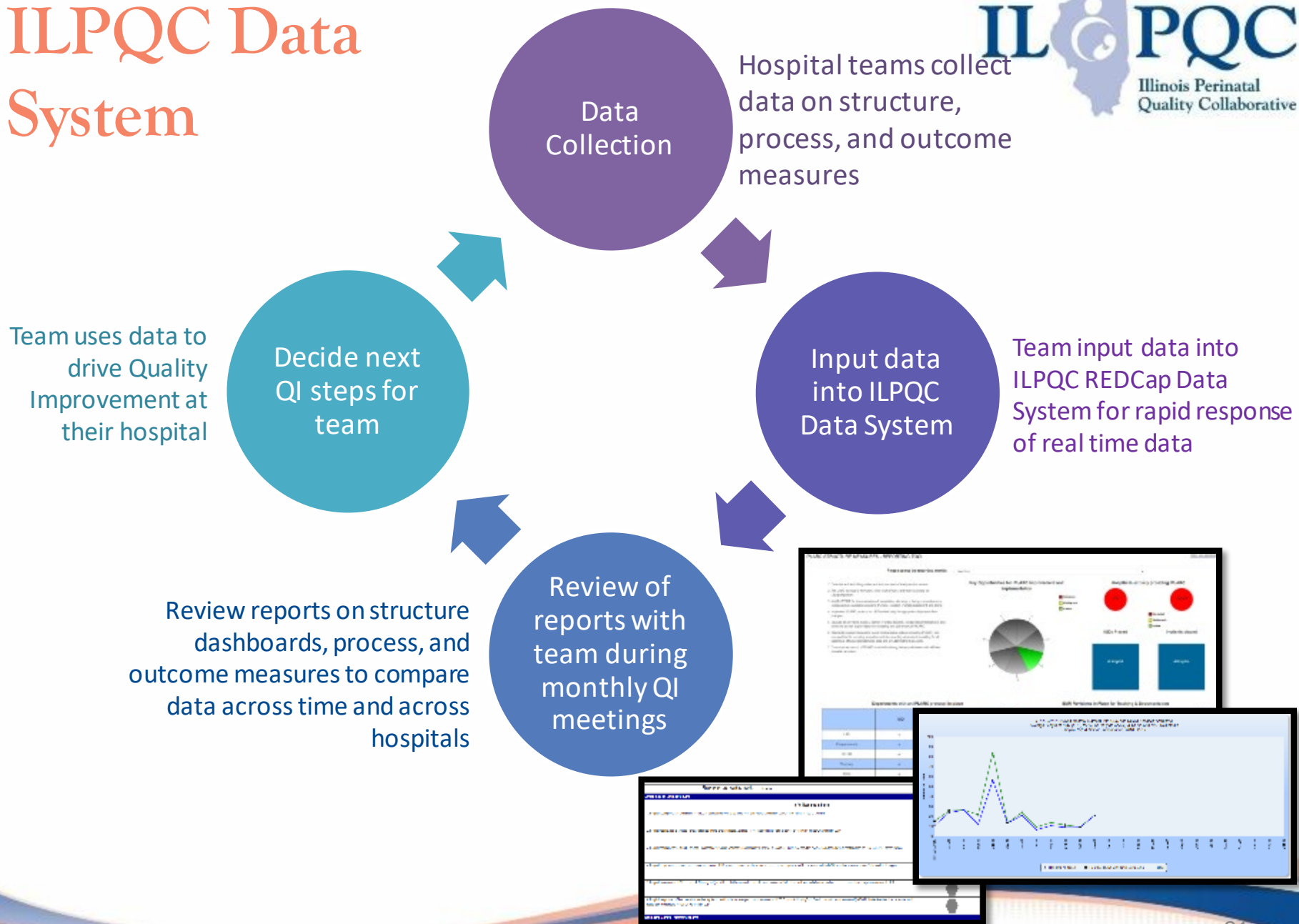
Do

Dr. Post provided the pre-survey to his team at his office and collected the surveys the same day. After he collected the surveys he emailed the Outpatient Packets to everyone in the office. The email asked providers to complete the post-survey after reading the material that day.

Decision: Team decides to ADAPT: Dr. Post will visit with a provider in his office to get initial feedback via discussion

ILPQC Data System

Data Collection

Hospital teams collect data on structure, process, and outcome measures

Input data into ILPQC Data System

Team input data into ILPQC REDCap Data System for rapid response of real time data

Review of reports with team during monthly QI meetings

Review reports on structure dashboards, process, and outcome measures to compare data across time and across hospitals

Decide next QI steps for team

Team uses data to drive Quality Improvement at their hospital

21

Encouraging Clinical Team Engagement in QI

- **Buy-In matters:** Sell the initiative to OB providers and nursing staff: why are we doing this work, why it matters, what they need to do, how will compliance be monitored

- **Systems change that assist clinical team doing the right thing every time**: Protocols, checklists, order sets, debriefs, EMR prompts

- **Culture change needs provider and nursing staff education:** Grand Rounds, E-modules, Simulations, Drills

- **Active monthly review and use of QI data is key:** Sharing monthly QI data progress and comparison to other participating hospitals with OB providers and nursing staff and track compliance in sustainability

Providing QI support: Leave no hospital behind

ILPQC hospital teams work to implement evidence-based care guidelines to facilitate every provider, every nurse providing optimal care to every patient, every time, in every unit
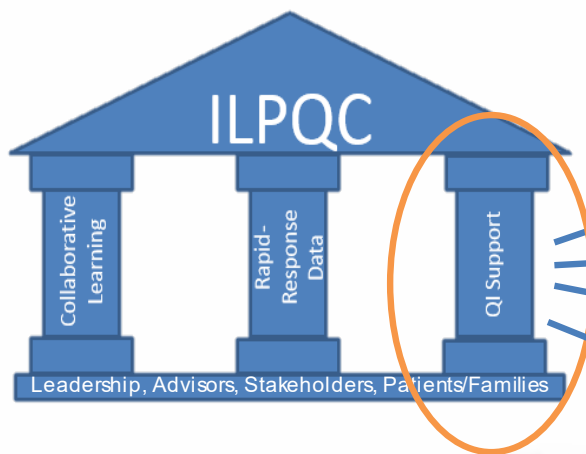
Monitor monthly QI data for teams not meeting goals

1:1 QI coaching calls with teams not reaching goals

Grand rounds speakers bureau presentations

Focused QI topic calls with mentor hospitals

# Motivating Teams to Make Culture and System Changes

- QI award banners for teams meeting initiative goals
- Certificates of achievement for hospital teams submitting timely data
- Letters to hospital leadership acknowledging teams successfully meeting initiative goals

MOTHERS AND NEWBORNS AFFECTED BY OPIOIDS

Drug Overdose Now Leading Cause of Maternal Death in IL

Rate of <u>Pregnancy-Associated Deaths</u> Due to Opioid Poisoning, Illinois Residents, 2008-2017

80%
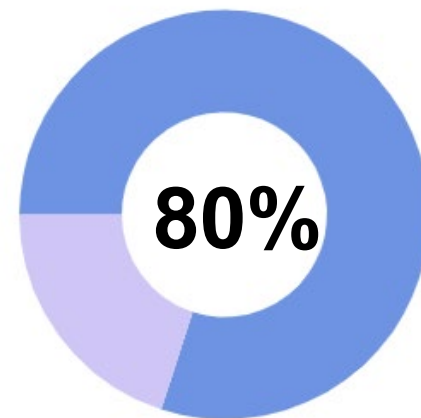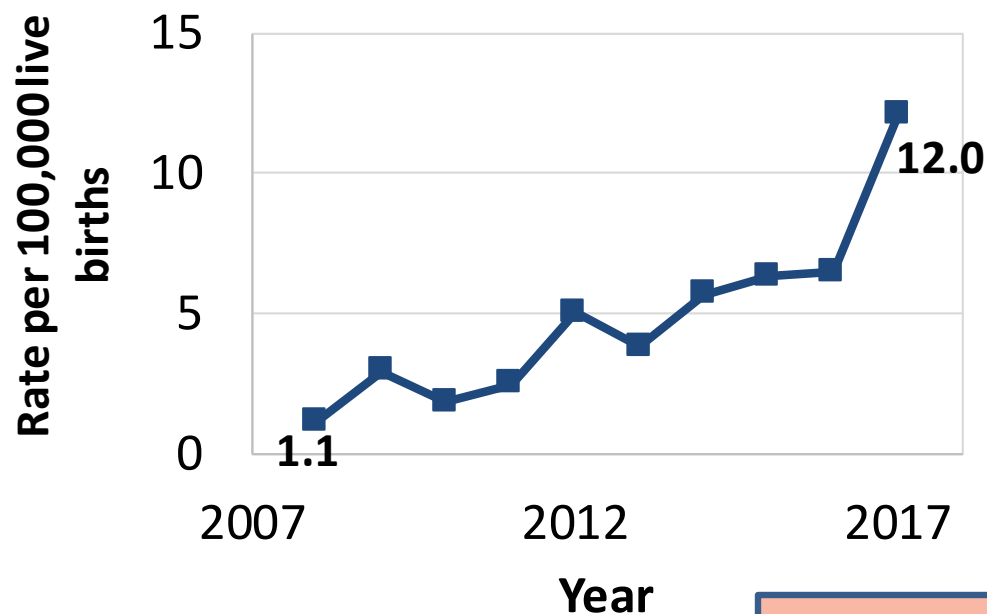
Opioids involved in over 80% of pregnancy-associated drug poisoning death (2015 – 2017)

More deaths from OUD than postpartum hemorrhage and severe hypertension combined

Data Source: Illinois death certificates, 2008-2017.

Why we do this hard work… women are losing their lives to OUD

Madelyn Linsenmeir
1988 to 2018

Anaya Rivers
1994 to 2019

The Burlington Free Press on Oct. 14, 2018
Photo Legacy.com

Daily News Philly.com on February 17, 2019
Photo Pendleton Candles Obituary Service on Facebook.com

OUD is a life threatening medical condition
Linking women with OUD to treatment/services
- Reducing overdose deaths for moms
- Improving pregnancy outcomes
- Increasing # women who can parent their baby

Decreased overdose on MAT
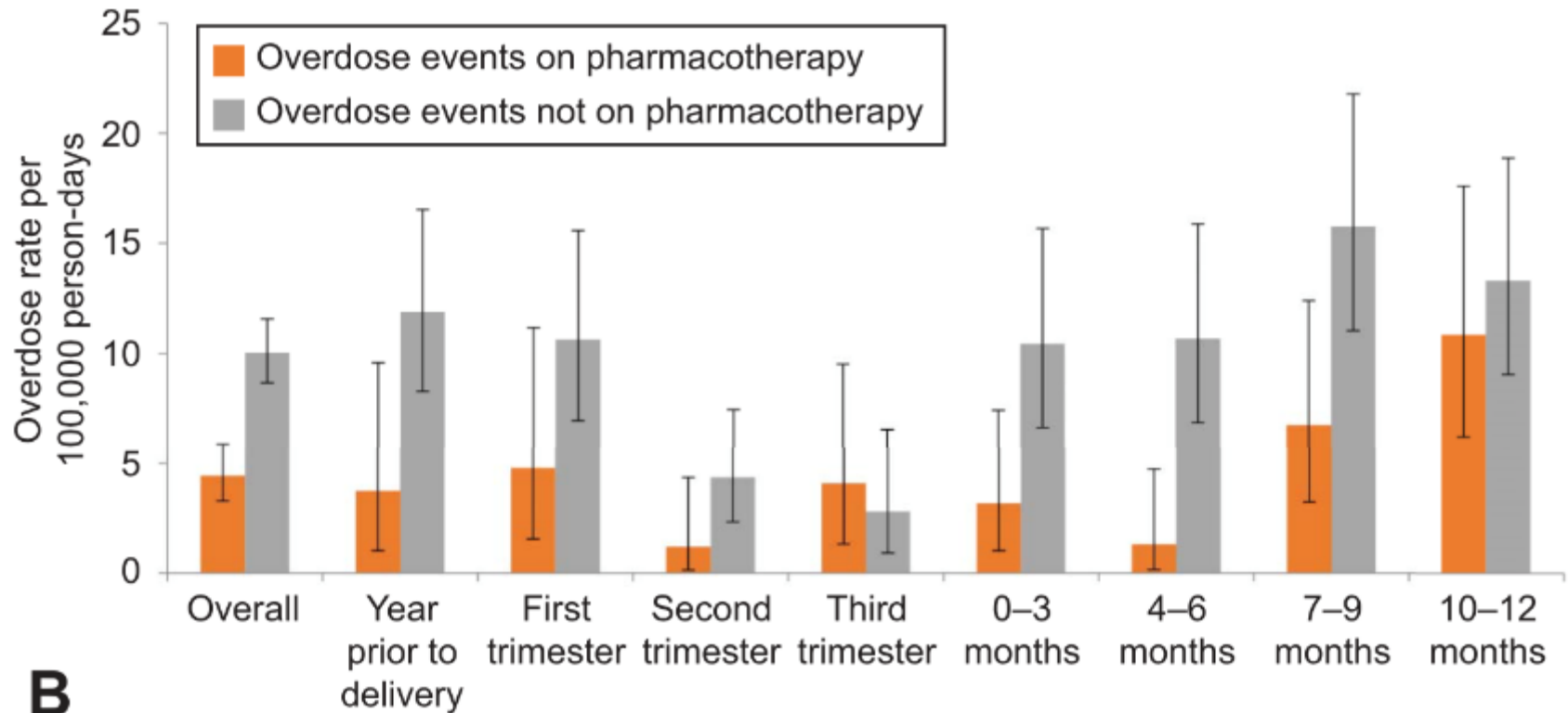
(1) MAT saves lives across pregnancy/postpartum
(2) Postpartum is a risky time for all moms with OUD

Mothers and Newborns affected by Opioids- OB Initiative

IL PQC — Illinois Perinatal Quality Collaborative

Aim: ≥70% women with OUD receive MAT and are connected to Recovery Treatment Services prenatally or by delivery discharge

Goals:

- All pregnant women
  - screened with a universal validated screener prenatally and during their L&D admission
- Women with OUD during pregnancy or by delivery discharge
  - Assessed for readiness for MAT, linked to MAT and Recovery Treatment Services
  - OUD clinical care checklist completed
  - Receive Narcan, Hep C, contraception counseling, SW Consult
  - Pediatric / neonatal consult on NAS
  - Receive OUD/NAS patient education

- 107 hospitals participating in the MNO OB & Neonatal Initiative kick off May 2018
  - 101 MNO-OB Hospital QI Teams
  - 88 MNO-Neo Hospital QI Teams
- Facilitate monthly MNO-OB & Neo collaborative learning webinars, twice a year in-person meetings
- Paper & Online MNO-OB & Neonatal QI toolkit for teams including sample protocols, guidelines, and patient & provider education

MNO-OB Initiative Aims:
What Must We Achieve to Save Lives

≥70%
Medication Assisted Treatment

≥70%
Recovery Treatment

≥80%
Universal Validated OUD Screening

Prenatal &
Labor & Delivery

≥70%
OUD Clinical Care Checklist

Narcan provided
Hepatitis C screen

≥80%
Patient Education OUD/NAS

Counseling/Materials
Neo/Peds Consult

Key implementation strategies of the MNO Initiative

What do we need every OB Provider to know about OUD?

Opioid Use Disorder is an urgent obstetric issue

Opioid Use Disorder is a life-threating chronic disease with lifesaving treatment available, reducing stigma improves outcomes

There are key steps MFM & OB providers need to take prenatally and on L&D to care for women with Opioid Use Disorder
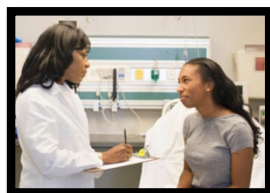
Linking moms to MAT / Recovery Services
- Reduces overdose deaths for moms
- Improves pregnancy outcomes
- Increases # women who can parent their baby

Key steps for OB Providers in the MNO OUD Protocol-

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Screen and document positive result

Provide SBIRT risk assessment and brief counseling re: benefits of treatment, next steps for linking patient to care

Activate care coordination and navigation to link woman to MAT, and behavioral health counseling/ recovery programs

Insert and complete OUD clinical care checklist in electronic medical record (or paper chart) (prenatal / L&D)

Activating the OUD protocol for every screen positive woman, every time!
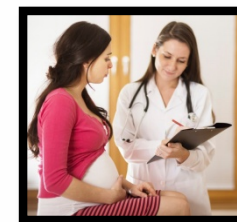
Provide patient education re: OUD and NAS, and engaging in newborn care via neonatology consult, counseling, hand-outs.

MNO in 2020

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Key system changes in place

- Screening
- SBIRT
- Mapping
- Checklist
- Education

Started in 2018

How do we make real progress?

Strategies for Culture Change: Engage MFM & OB providers

- Build trust / reduce stigma
- Provide SBIRT with navigation to MAT and recovery treatment
- Engage providers in OUD Clinical Care Checklist
- Missed Opportunities Review/Debrief
- Standardize system wide response for screen positive (OUD protocol and OUD Clinical Algorithm)
- OB Education Campaign

Improve Patient Care

Achieve AIMS

- Increase # of women screened & linked to care
- Increase # of women on MAT and recovery treatment
- Increase # women with completed checklist
- Increase # women engaged in Opioid exposed newborn Care

Steps to Engage OB Providers in Clinical Culture Change

1. **Review your hospital's DATA** and **share goals and progress** with all OB providers and staff

2. **DEBRIEF every OUD patient** with a **Missed Opportunities Review** and provide feedback to clinical teams

3. **EDUCATE all OB providers and staff** using posters, grand rounds, e-modules, simulations, OB packet
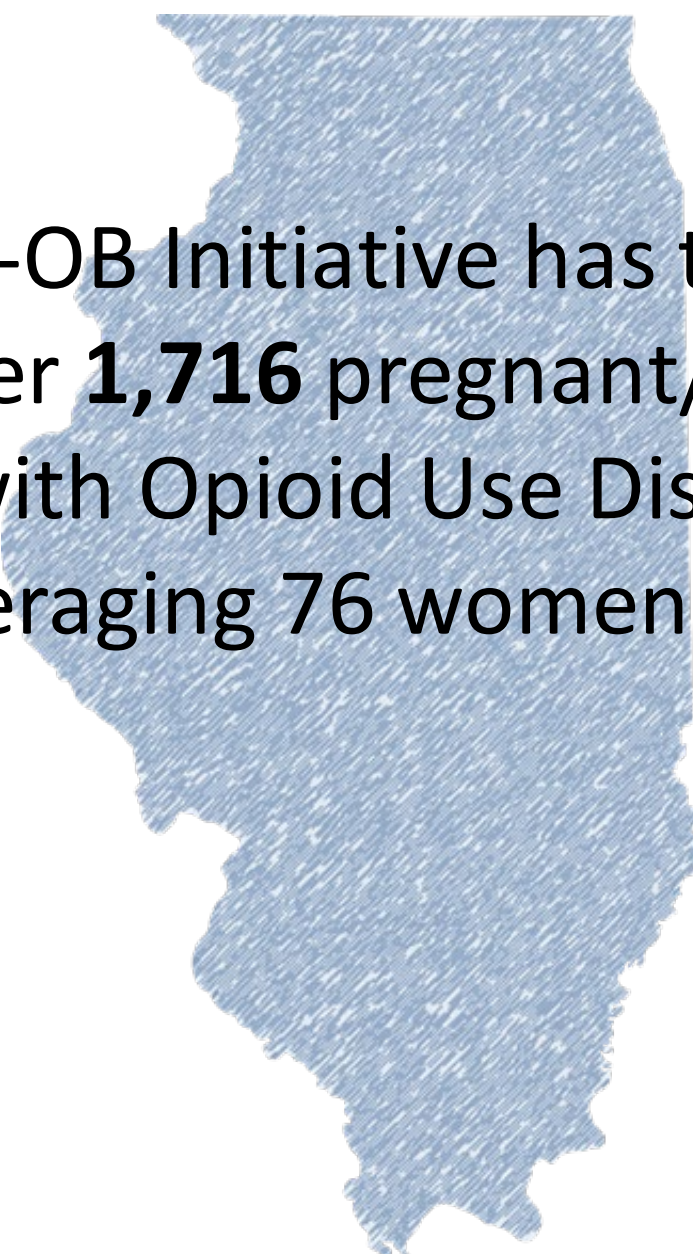
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Key Strategies for MNO Success
- What every hospital needs to achieve aims

Validated Screening Tool

- Implementation of universal validated self-reported screening for OUD for all pregnant patients prenatally and on Labor & Delivery

MNO-OB Folders

- Create MNO folders: (1) OUD Clinical Algorithm and OUD Clinical Care Checklist, (2) Narcan quick start, (3) Patient Education Material. Store L&D/prenatal clinics. Nurse pull for every OUD patient: ask OB provider to complete Algorithm/Checklist and provide materials to patient.

OB Provider Education Campaign

- Hang posters, magnets and laminated OUD Algorithm / Checklist on L&D/postpartum, hand out flyers, and provide online training, consider SBIRT Simulation Guide, Grand Rounds and MNO talks at OB provider meetings

Missed Opportunity Review/Debrief

- Implementation of a Missed Opportunity Review and Debrief with the Clinical team for every patient diagnosed with OUD.

MOTHERS AND NEWBORNS AFFECTED BY OPIOIDS (MNO) INITIATIVE PROGRESS

The MNO-OB Initiative has touched the lives of over **1,716** pregnant/postpartum women with Opioid Use Disorder since 2018, averaging 76 women per month

MNO-OB STRUCTURE MEASURES

Making Systems Change Happen
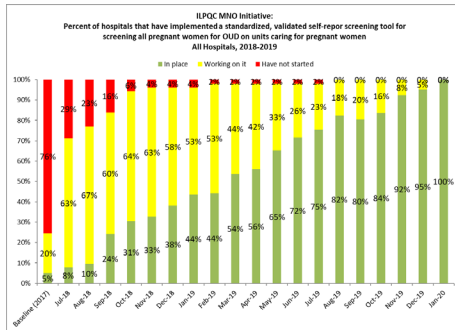
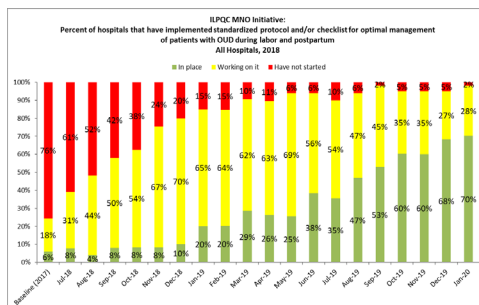100% of teams have a validated screening tool in place on L&D
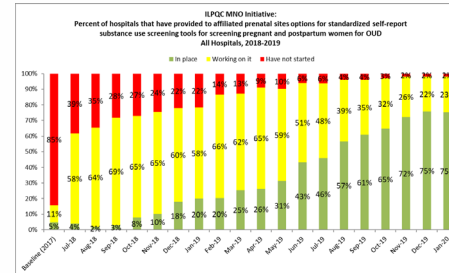
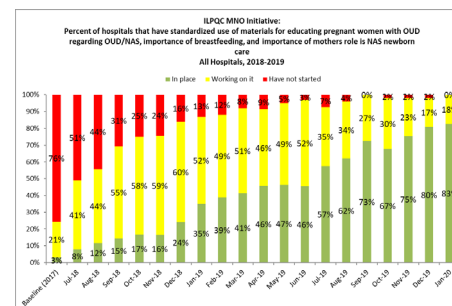75% of teams have a validated screening tool in place prenatally
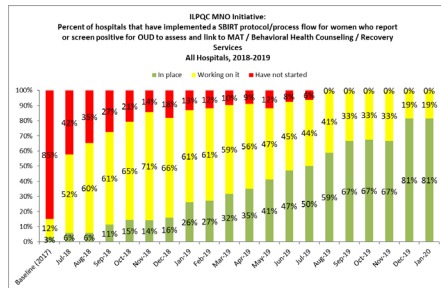
81% of teams have a SBIRT protocol/algorithm in place on L&D
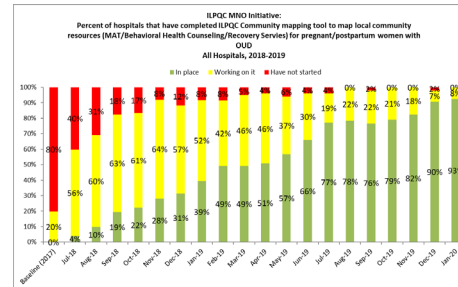
93% of teams have mapped community resources for women with OUD

70% of teams have implemented an OUD Clinical Care Checklist on L&D

83% of teams have implemented standardized patient education on L&D

Documentation of Screening for SUD/OUD with Validated Tool

MNO-OB Monthly Sample of Documentation of OUD Screening on L&D
All Hospitals, 2018-2019

Legend: Validated Self-Report Screening Tool | Non-Validated Screening Tool | Screening Not Documented/Missed Opportunity | Goal

83%

L&D
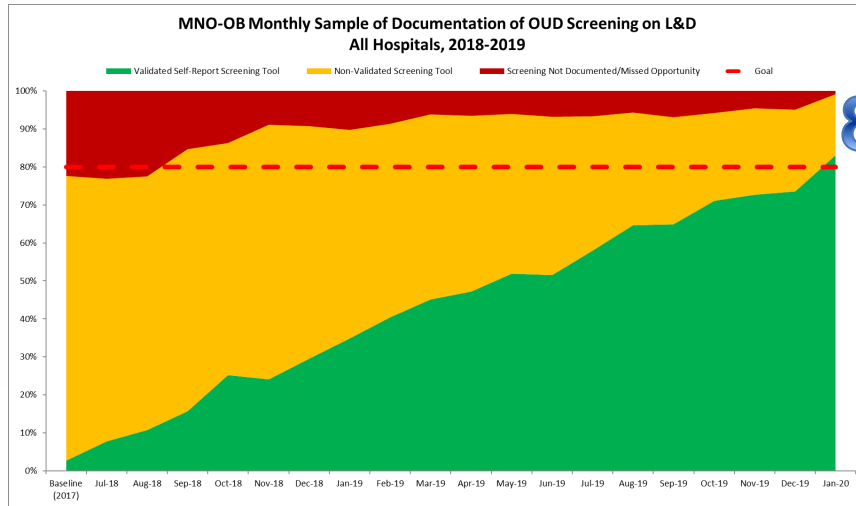
Random sample of 10 deliveries per month reviewed for documentation of SUD/OUD screening
N = 12,400 to date

Prenatal

MNO-OB Monthly Sample of Documentation of OUD Screening Prenatally
All Hospitals, 2018-2019

Legend: Validated Self-Report Screening Tool | Non-Validated Screening Tool | Screening Not Documented/Missed Opportunity | Goal

25%

Red =   No screening
Yellow =   Screened single question
Green=   Screened with validated SUD/OUD screening tool
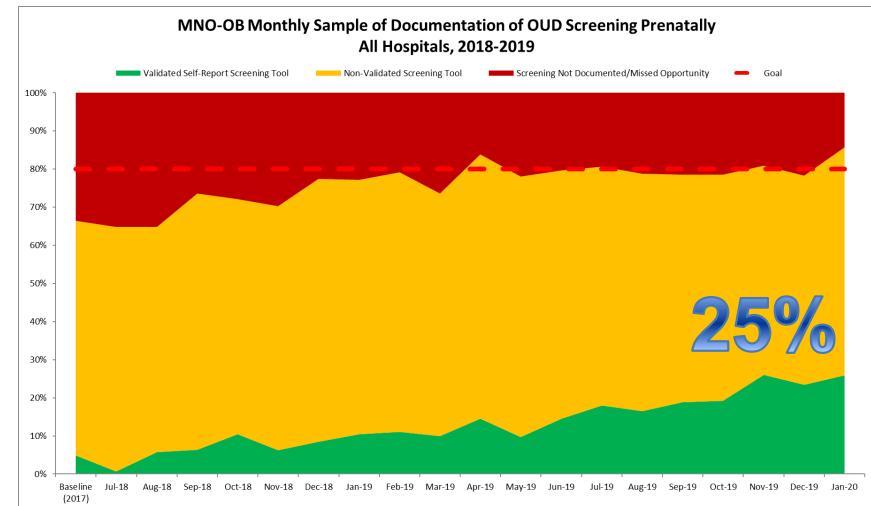
BENCHMARK = ≥ 80%

Women with OUD on MAT by Delivery Discharge
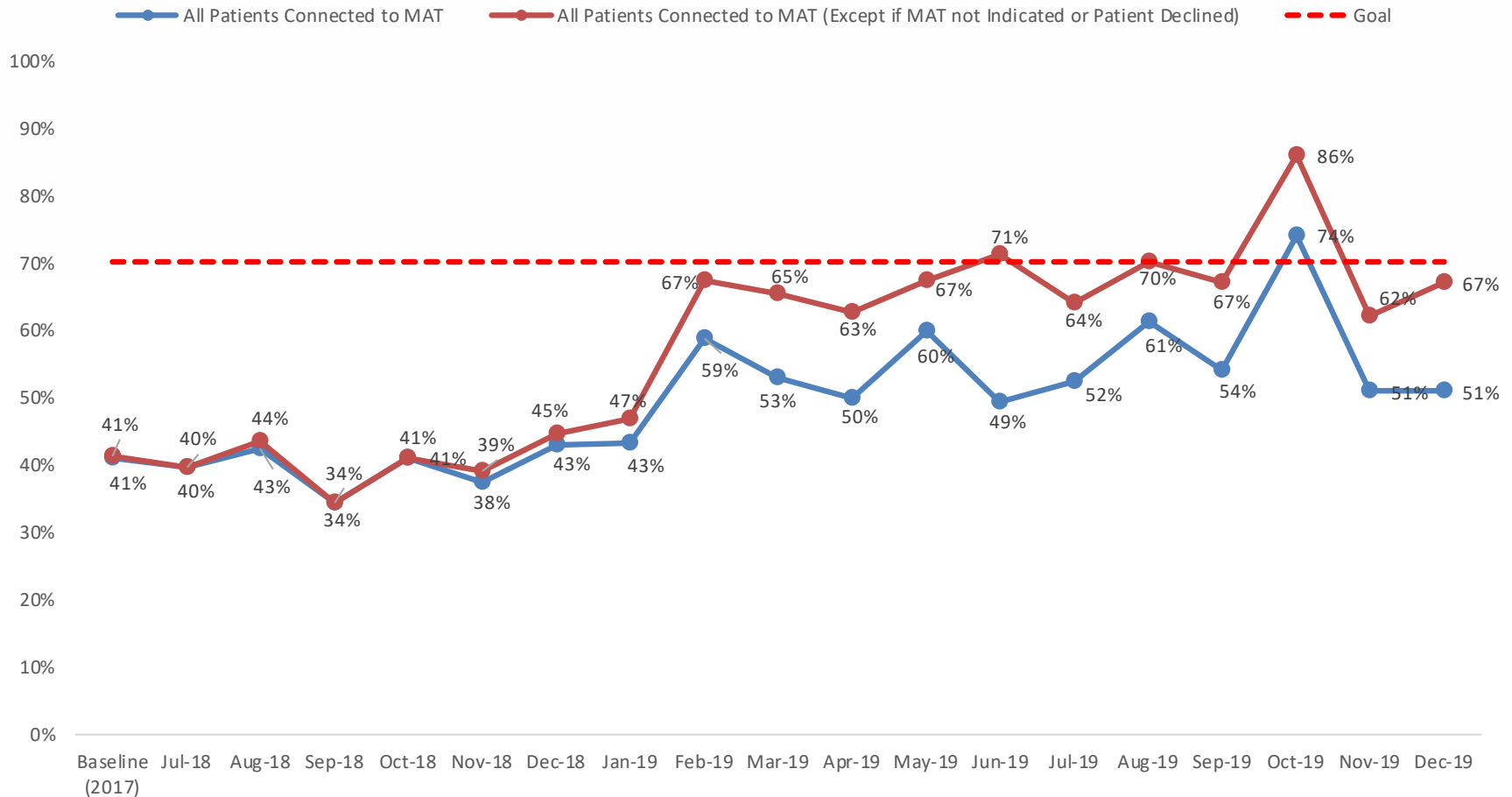
BENCHMARK = ≥ 70%

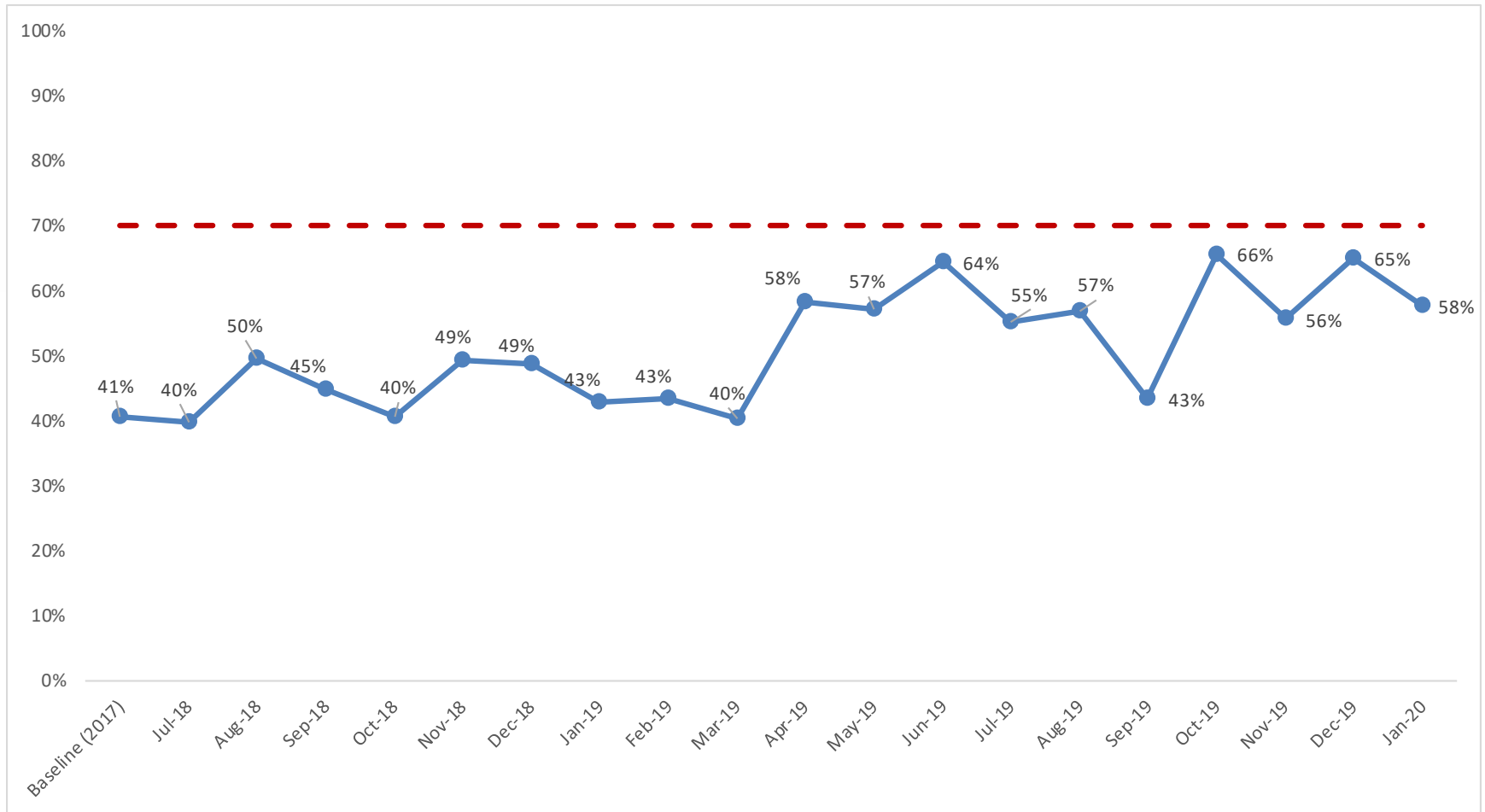# Women with OUD at Delivery Connected to Recovery Treatment
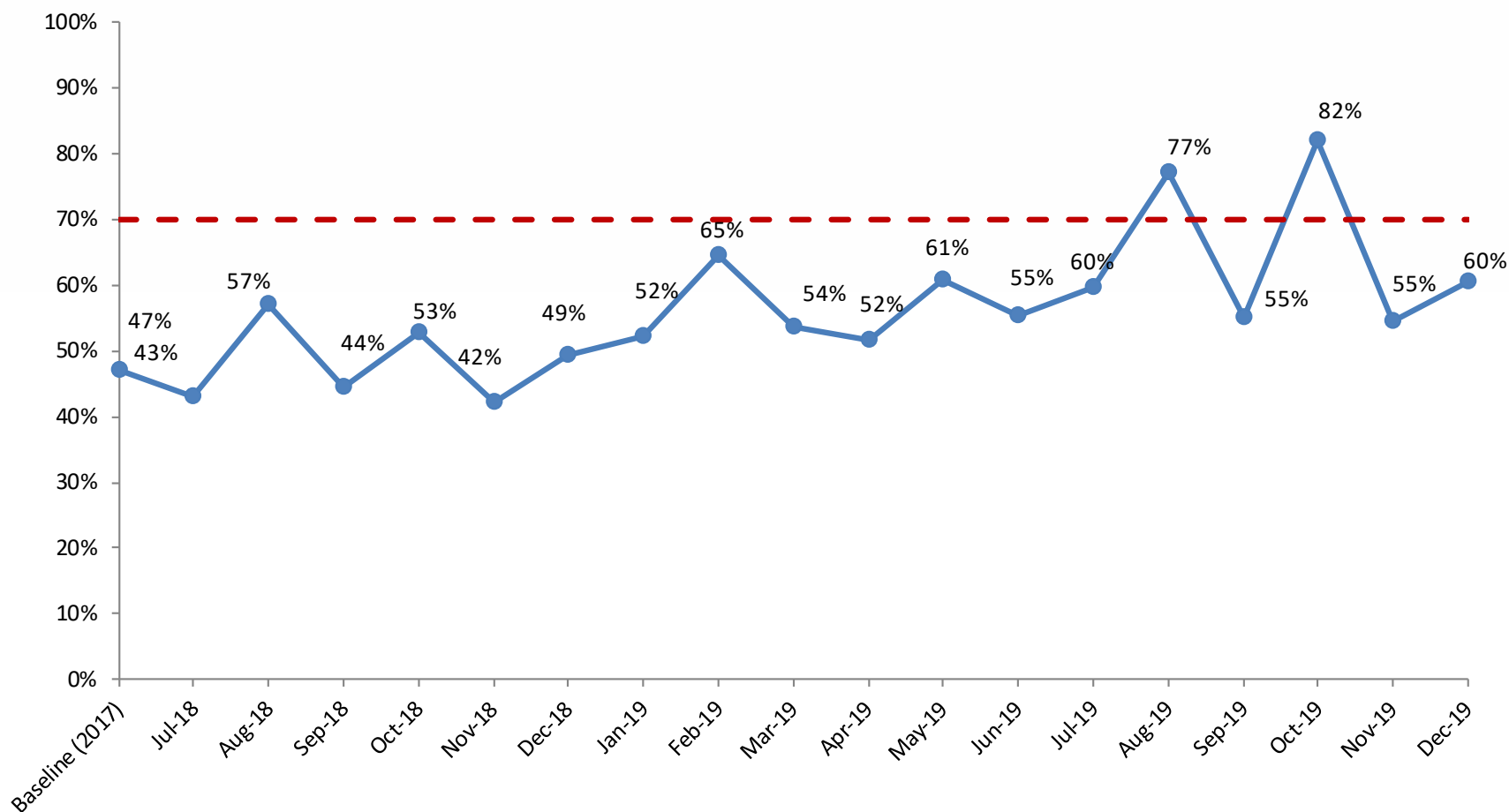
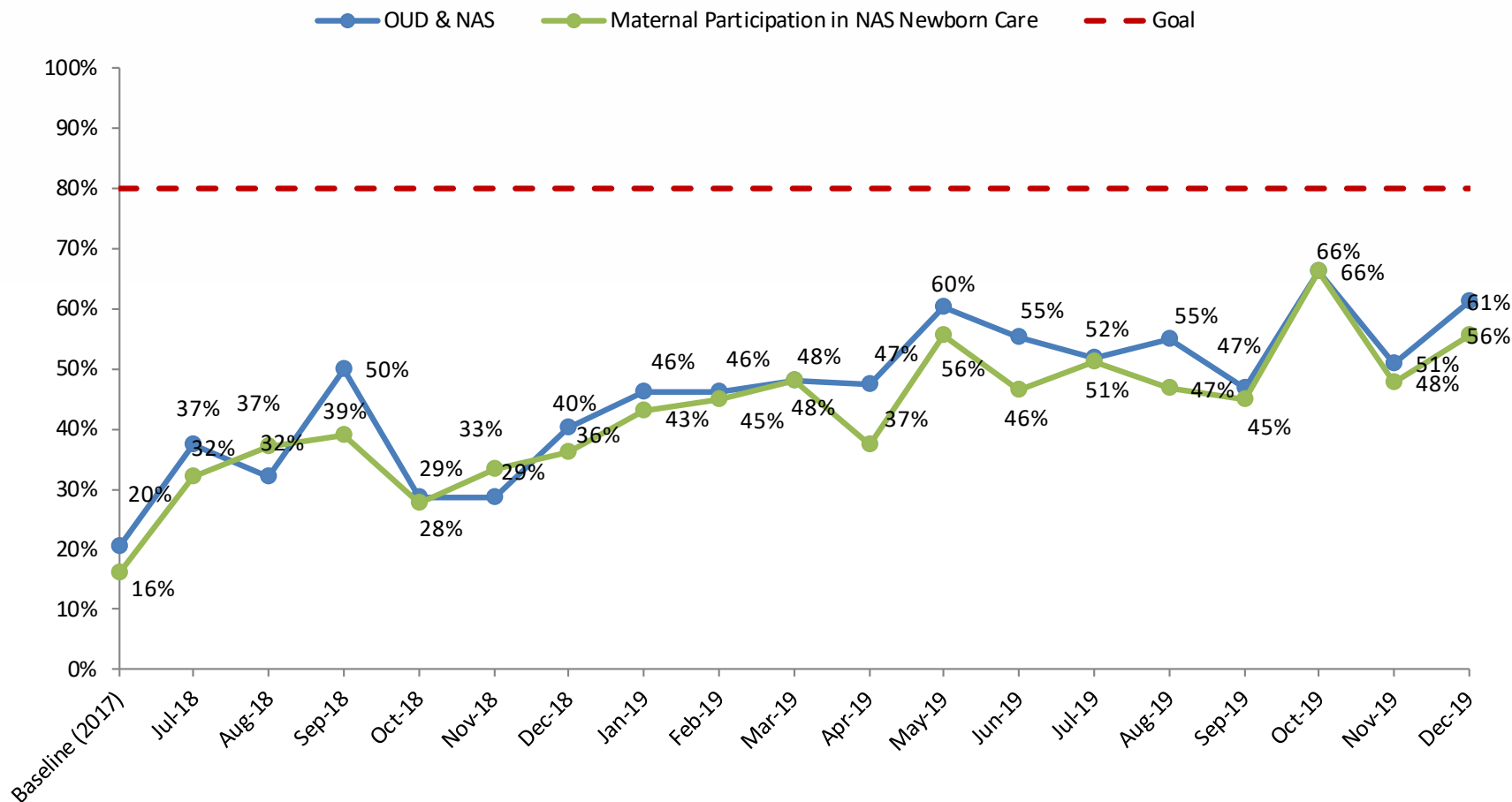**BENCHMARK = ≥ 70%**

Narcan Counseling & Documentation
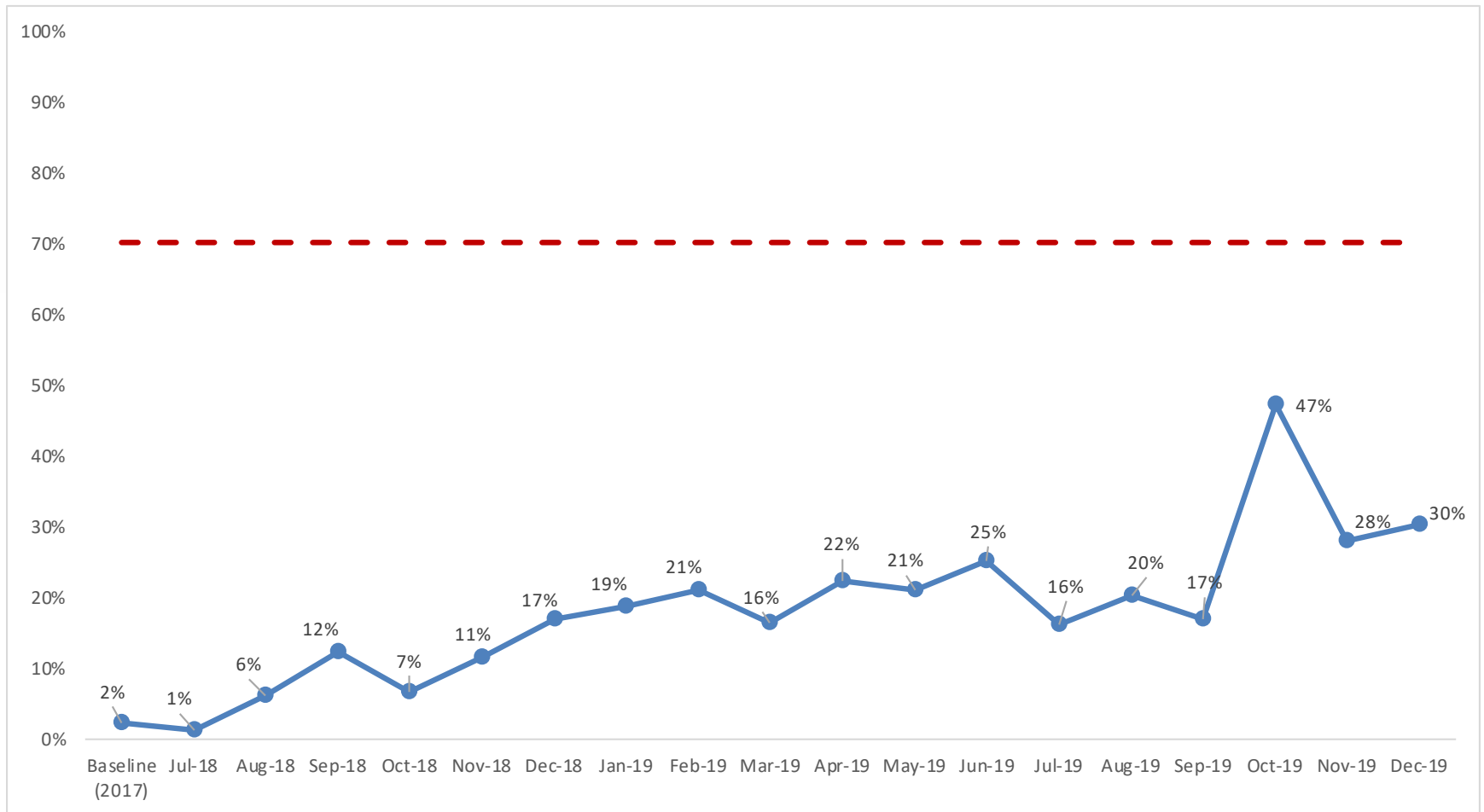
BENCHMARK = ≥ 70%

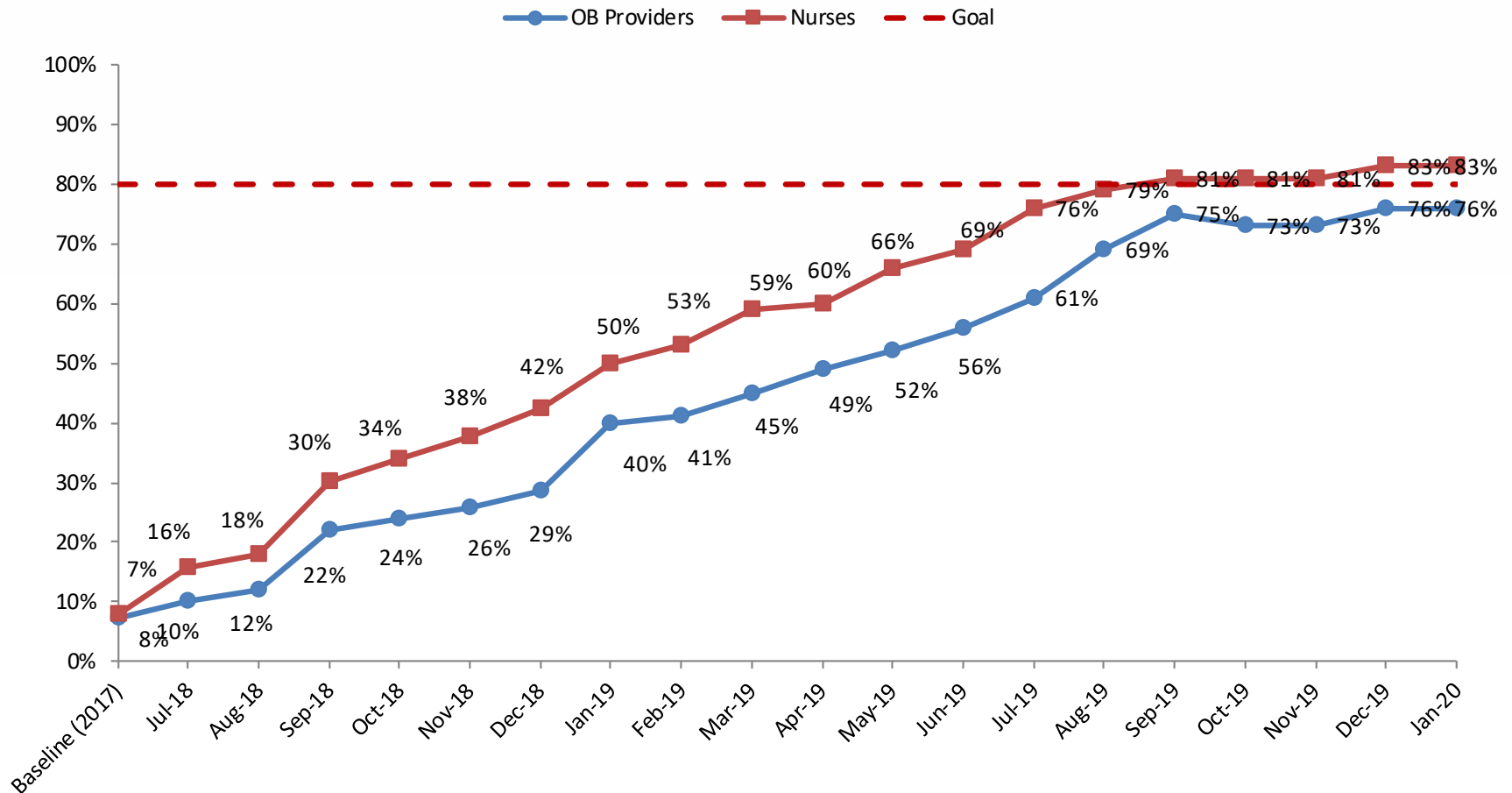# Hepatitis C Screening & Documentation

BENCHMARK = ≥ 70%

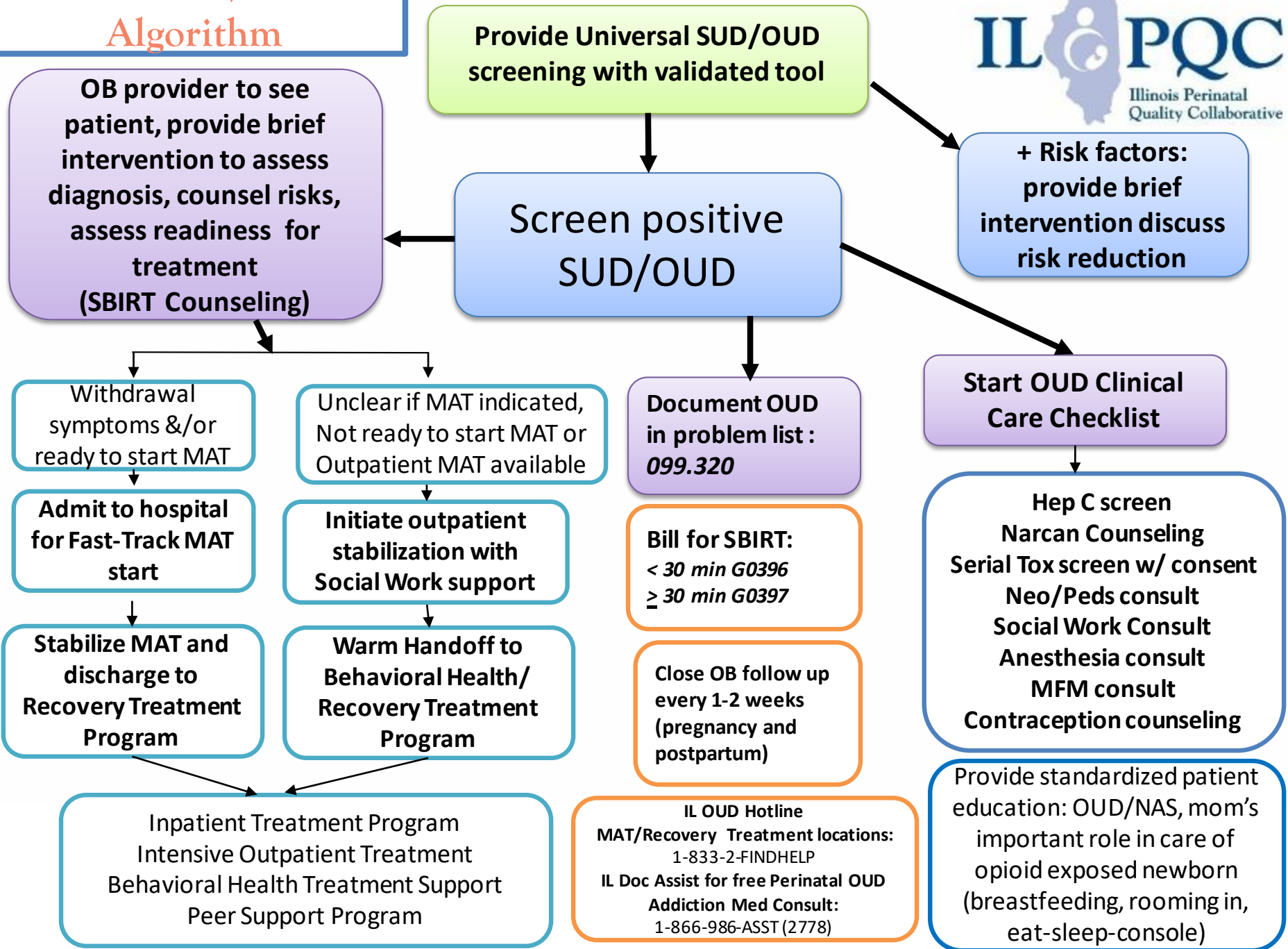# Maternal OUD/NAS Education & Documentation

BENCHMARK = ≥ 80%

OB Provider and Nursing Education

BENCHMARK = ≥ 70%

OUD SBIRT/Clinical Algorithm

Provide Universal SUD/OUD screening with validated tool

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Screen positive SUD/OUD

+ Risk factors: provide brief intervention discuss risk reduction

OB provider to see patient, provide brief intervention to assess diagnosis, counsel risks, assess readiness for treatment (SBIRT Counseling)

Withdrawal symptoms &/or ready to start MAT

Admit to hospital for Fast-Track MAT start

Stabilize MAT and discharge to Recovery Treatment Program

Unclear if MAT indicated, Not ready to start MAT or Outpatient MAT available

Initiate outpatient stabilization with Social Work support

Warm Handoff to Behavioral Health/ Recovery Treatment Program

Inpatient Treatment Program
Intensive Outpatient Treatment
Behavioral Health Treatment Support
Peer Support Program

Document OUD in problem list :
099.320

Bill for SBIRT:
< 30 min G0396
≥ 30 min G0397

Close OB follow up every 1-2 weeks (pregnancy and postpartum)

IL OUD Hotline
MAT/Recovery Treatment locations:
1-833-2-FINDHELP
IL Doc Assist for free Perinatal OUD Addiction Med Consult:
1-866-986-ASST (2778)

Start OUD Clinical Care Checklist

Hep C screen
Narcan Counseling
Serial Tox screen w/ consent
Neo/Peds consult
Social Work Consult
Anesthesia consult
MFM consult
Contraception counseling

Provide standardized patient education: OUD/NAS, mom's important role in care of opioid exposed newborn (breastfeeding, rooming in, eat-sleep-console)

MNO-OB Folder

- ✓ Make folders & store on L&D
- ✓ Train charge nurses to get folder when OUD screen + identified, engage OB providers, review material with patient
- ✓ Share folders with outpatient sites

Patient Education Materials

- Prescription Pain Medicines and Pregnant Women
- NAS- You are the Treatment
- NAS: What you Need to Know
- Contraception Counseling for Women with OUD

Give to and review with Moms

Clinical Team Resources

- OUD/SBIRT Clinical Algorithm
- OUD Clinical Care Checklist
- Narcan- Quick start guide for OB to review and prescribe to patient
- OUD Protocol
- Nurse Workflow *NEW

Give to OB to complete

For nurse

IL PQC
Illinois Perinatal Quality Collaborative

ILPQC OUD Clinical Care Checklist

Examples of checklist items:
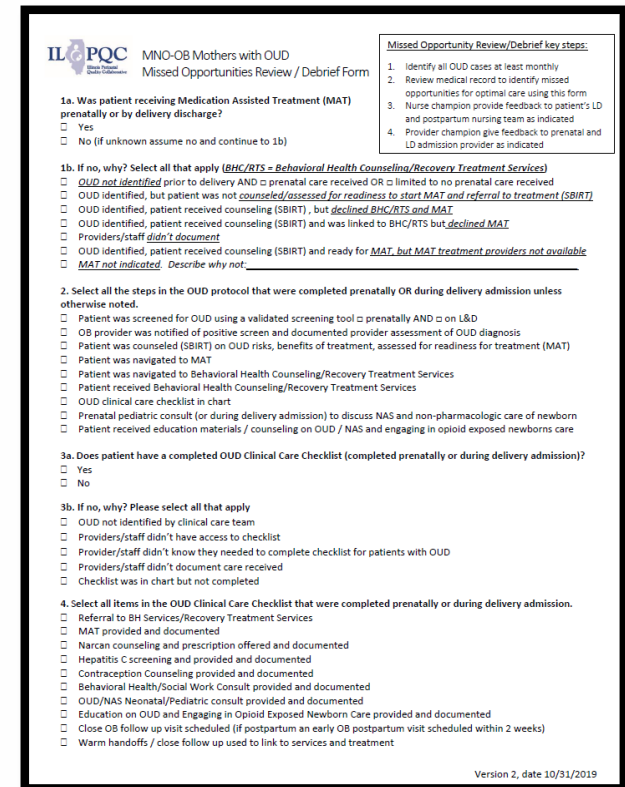
1. **Assessed for readiness for MAT**
2. **Link to Recovery Treatment Program**
3. **Narcan counseling and prescription**
4. **Contraception counseling and plan**
5. **Hep C screening**
6. Pediatric/neo consult completed
7. Social work consult completed
8. Standardized education provided on NAS and role in newborn non-pharmacologic care

Monthly Case Review of All OUD Cases in 4 Easy Steps

1. **Identify** all OUD cases at least monthly

2. QI Team **reviews medical record** to identify missed opportunities for optimal care using the form

3. Nurse champion **provides feedback** to patient's L&D and postpartum nursing team as indicated

4. Provider champion **provides feedback** to prenatal and L&D admission provider as indicated

OB Provider & Nursing Education Campaign

1. Provider Education Posters / Flyers and OUD/SBIRT Clinical Algorithm on Units

2. eModules for Providers, Nurses, and Staff. [Words Matter: How Language Choice Can Reduce Stigma](#) (30 Min)

   - Upcoming 30 min ILPQC comprehensive eModule with key strategies and finishing strong for sustainability

3. ILPQC MNO-OB Simulation Guide

4. Request a Grand Rounds or OB Provider Meeting
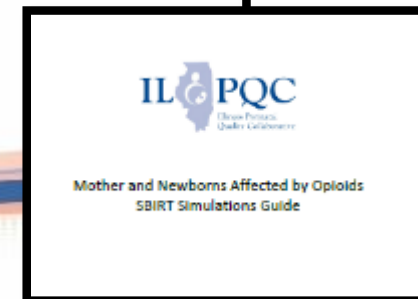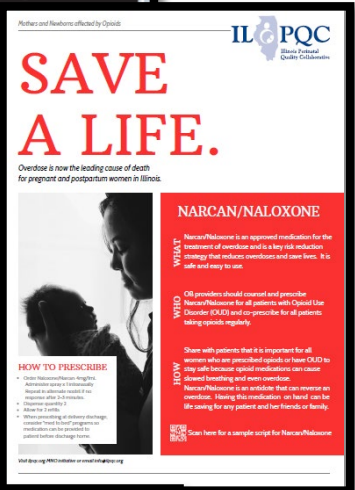
How IL is Making it Easier for OB Providers to Care for Pregnant Women with OUD

Illinois Helpline for Opioids

- Statewide, public resource for finding substance use treatment and recovery services in Illinois

- Open 24 hours a day, 365 days a year

- Refers to hundreds of treatment and recovery

833–2FINDHELP · HelplineIL.org

ILLINOIS HELPLINE
for Opioids & Other Substances
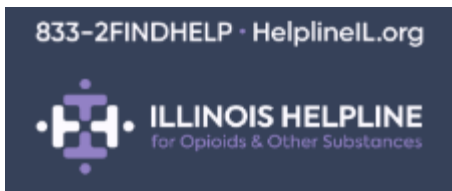
Illinois DocAssist Warmline

- **Free addiction medicine phone consult service for OB providers c**aring for pregnant/ postpartum women with OUD regarding medication-assisted treatment (MAT) during the perinatal period.

- Available Mon – Fri, 9AM to 5PM   **1-866-986-ASST (2778)**

IllinoisDocAssist
Answering primary care behavioral health questions about children, adolescents, and perinatal patients

SEVERE MATERNAL HYPERTENSION

Why we do this work

Severe Maternal Hypertension Preeclampsia:
4-10% US pregnancies

9% of maternal deaths in the United States

1/3 of severe obstetric complications

IUGR, oligohydramnios, placental abruption, NICU admission, stillbirth, neonatal death

6% of preterm births, and 19% of medically-indicated induced preterm births

Why we do this work

Importance of Timely Treatment of Severe Maternal Hypertension

- Primary cause of maternal death is hemorrhagic stroke caused by untreated severe hypertension

- National guidelines recommend timely treatment of severe hypertension < 60 min to reduce maternal stroke and severe maternal morbidity, endorsed by ACOG

- Alliance for Innovation on Maternal Health (AIM) Severe Hypertension in Pregnancy Maternal Safety Bundle

ILPQC Maternal Hypertension Initiative

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

Approach: 4 key goals
1. **Reduce time to treatment**
2. **Improve postpartum patient education**
3. **Improve postpartum patient follow up**
4. **Improve provider & RN debrief**

- 110 hospital teams - May 2016 kick off to December 2017
- 106 Hospitals submitted data for over 17,000 women who experienced severe maternal HTN across the initiative
- Sustainability started January 2018
- 86 teams have submitted sustainability data

Project Aims

By December 2017, for all women with confirmed severe maternal HTN across participating hospitals:	Goal
Increase the proportion of women treated for severe HTN in < 60 minutes	≥ 80%
Increase the proportion of women receiving preeclampsia education at discharge	≥ 80%
Increase the proportion of women with follow-up appointments scheduled within 10 day of discharge	≥ 80%
Increase the proportion of cases with provider / nurse debriefs	≥ 50%
Reduce the rate of severe maternal morbidity (SMM)	↓20%

How do we improve care?

- Early recognition of hypertension and correct diagnosis during and after pregnancy

- Reduce time to treatment of severe range blood pressure, 160/110(105)

- Provide patient education and appropriately timed follow up

- Implementation of evidence based protocols for treatment and management of severe HTN / preeclampsia / eclampsia

Key Clinical Pearl: 160/110 vs. 160/105

Controlling blood pressure
is the optimal intervention
to prevent deaths due to stroke
in women with preeclampsia.

The critical initial step in decreasing maternal morbidity and mortality is to administer **anti-hypertensive** medications as soon as possible (< 60 minutes) of documentation of persistent (retested within 15 minutes) BP ≥160 systolic, and/or ≥105-110 diastolic

Clark SL, Hankins GD. Preventing maternal death: 10 clinical diamonds. Obstet Gynecol 2012;119:360–4.

CMQCC
CALIFORNIA MATERNAL
QUALITY CARE COLLABORATIVE

California Department of
PublicHealth
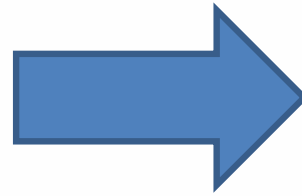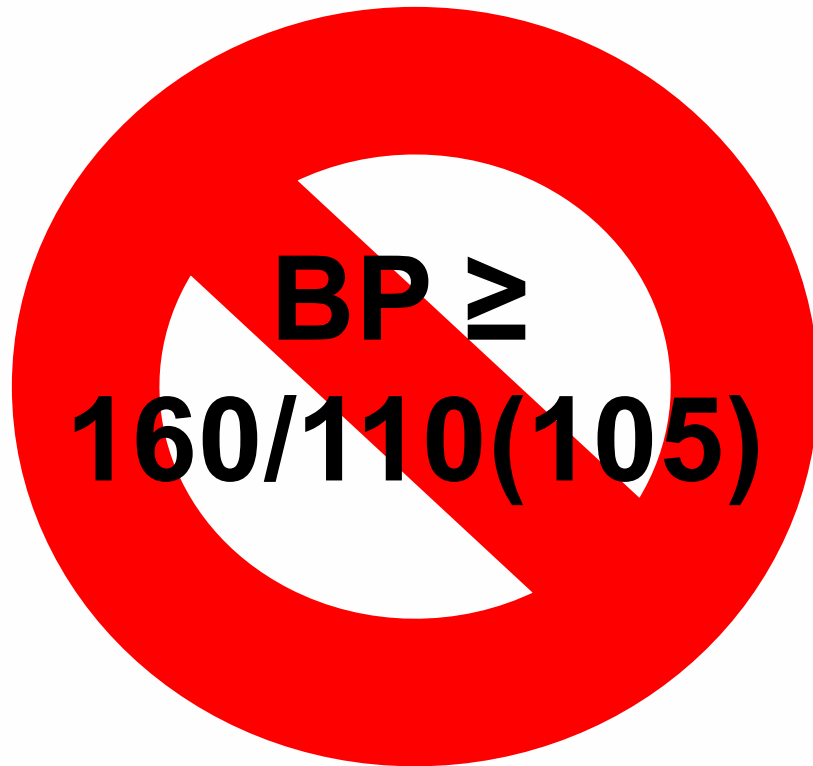
BP ≥ 160/110(105) → **Need To Treat***

*BP persistent 15 minutes, activate treatment algorithm with IV therapy ASAP, < 30-60 minutes

Quality Improvement Focus

- Provider / staff education and standardized BP measurement

- Rapid access to medications

- IV treatment of BP's ≥ 160mmHg systolic or ≥ 110(105) mmHg diastolic within 30-60 min

- Standardize treatment algorithms / order sets

- Provider / nurse debrief time to treatment

- Early postpartum follow-up

- Standardized postpartum patient education

Severe Hypertension Treatment Algorithm

IL PQC
Illinois Perinatal
Quality Collaborative

**SBP ≥ 155 and/or DBP ≥ 105
Provider Notified**

**Blood Pressure Triggers
SBP ≥ 160 and/or DBP ≥ 110**
Repeat in 15 minutes.
Notify Provider and Proceed

IV Anti-Hypertension Meds
First Line Medications

**IV Access
FHR monitoring
Labs per PIH Order Set
Pulse Oximeter**

Seizure Prophylaxis

**IV Labetalol
20 mg** (over 2 min)

**IV Hydralazine
5 or 10mg** (over 1-2 min)
Per physician's order

Magnesium Sulfate

Repeat BP in 10 min
If elevated, administer
IV Labetalol 40 mg

Repeat BP in 20 min
If elevated, administer
IV Hydralazine 10 mg

Bolus Dose: 4gm over 20 minutes
Maintenance Dose: 2gm per hour

Repeat BP in 10-15 min
If elevated, administer
IV Labetalol 80 mg

Repeat BP in 20 min
If elevated, administer
IV Hydralazine 10 mg

Repeat BP in 20 min
If elevated,
IV Hydralazine
pre algorithm
anesthesia consult

Repeat BP in 20 min
If elevated, **IV
Labetalol 20 mg**
pre algorithm
anesthesia consult

PO Nifedipine If no IV access
Initial Dose: 10 mg
May repeat dose at 20 minute
intervals for a maximum of
5 doses.

CMQCC
CALIFORNIA MATERNAL
QUALITY CARE COLLABORATIVE

Data Collection

- Process and outcome measures collected by ongoing monthly chart review by hospital teams
- Inclusion criteria
  - All first cases of severe maternal HTN during pregnancy through 6 weeks postpartum in participating hospitals
  - Severe Maternal HTN defined as BP ≥ 160/110 persistent for ≥ 15 minutes
- Timeline
  - Baseline: October – December 2015
  - Initiative Launch May 2016
  - Monthly data collection through December 2017
  - Monthly compliance data collection ongoing

Hospital Team HTN Retrospective Case Identification Process

- **ICD-10 codes** for Preeclampsia Diagnosis codes in L&D, ED, Triage, Antepartum, Postpartum (last tab of AIM SMM excel file - [download here](#))

- **EMR searches/reports** using keywords for pregnant/postpartum patients such as: chronic HTN, preeclampsia, eclampsia, superimposed preeclampsia, preeclampsia with severe features, systolic BP ≥ 160, diastolic BP ≥ 110(105), etc.

- **Delivery logs**

- **Pharmacy records** for Labetalol, Hyrdalazine, Nifedipine, and Magnesium Sulfate

Key Measures

- **Outcome:** Severe Maternal Morbidity

- **Process:** Time to treatment, Patient discharge education, Patient follow up visit< 10 days, Debrief

- **Balancing:** Hypotension, Fetal heart rate

- **Structure:**

  – Facility-wide protocols for timely identification and treatment of severe maternal hypertension

  – Provider /nurse education on HTN protocols

  – Rapid access to IV medications

  – System plan for escalation of care

  – Facility-wide protocols for patient education

Reducing Time To Treatment

Elements of Maternal Hypertensive Bundle Most Effective in Reducing Time to Treatment
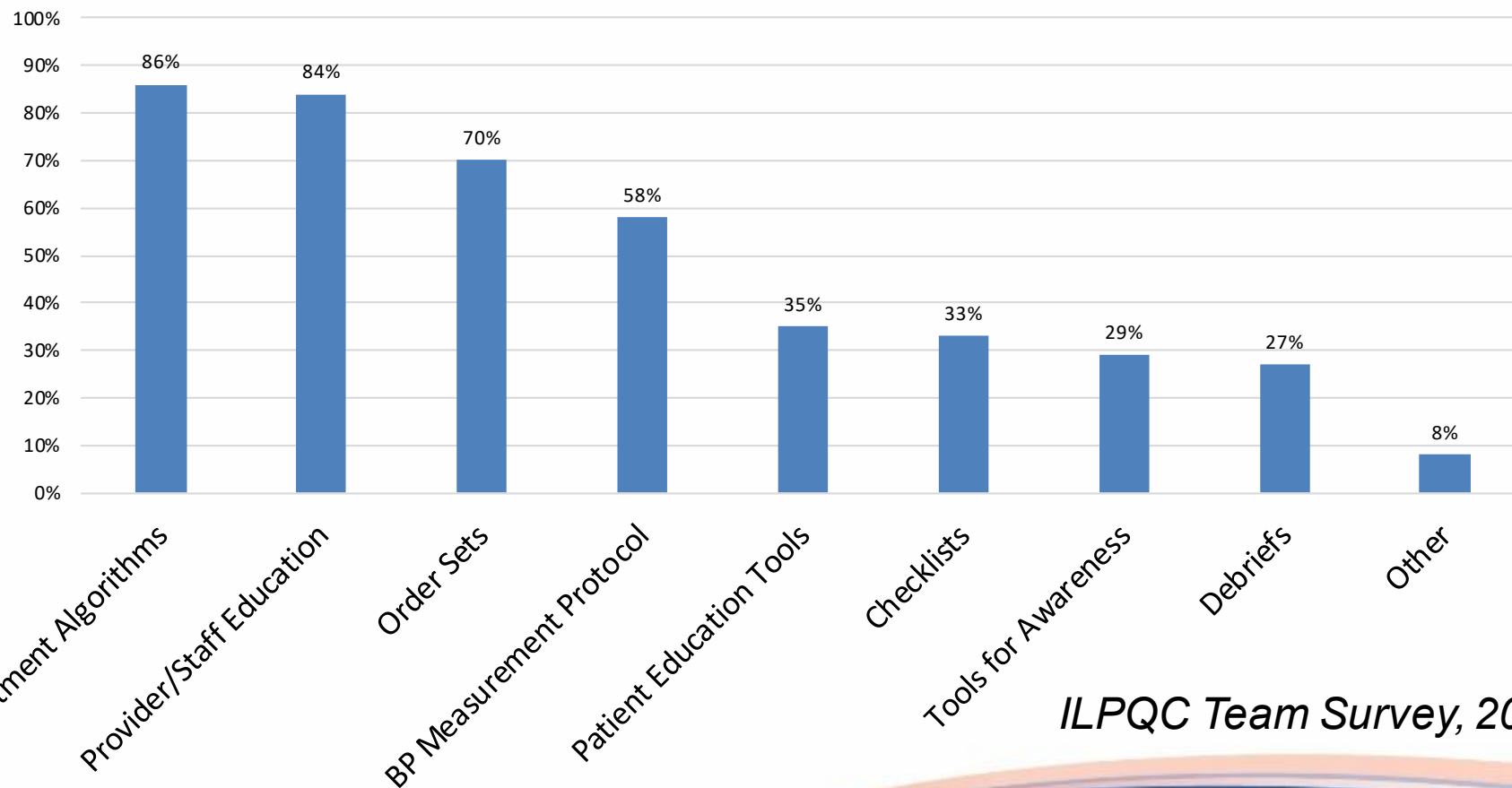
ILPQC Team Survey, 2017

Strategies to Reduce Time to Treatment

- Partner with pharmacy for quicker access to IV HTN meds in all units using: standing orders, availability in PYXIS & override of antihypertensives

- Changing policies on telemetry with IV meds, labetalol

- Facilitate consistent and timely interdepartmental communication using: nurse champions to carry to all units; debriefs, huddles, daily rounds, individual feedback to discuss cases; share REDCap data with staff and providers

- Adapt and implement protocols, checklists, and standard order sets across units

- Actively implement debriefs between nurses and providers after treatment

Structure Measure:
Standard Policies / Protocols Across Units

Percent of hospitals with standard protocols for early warning signs, updated diagnostic criteria, monitoring and treatment of severe preeclampsia/eclampsia (include order sets and algorithms)
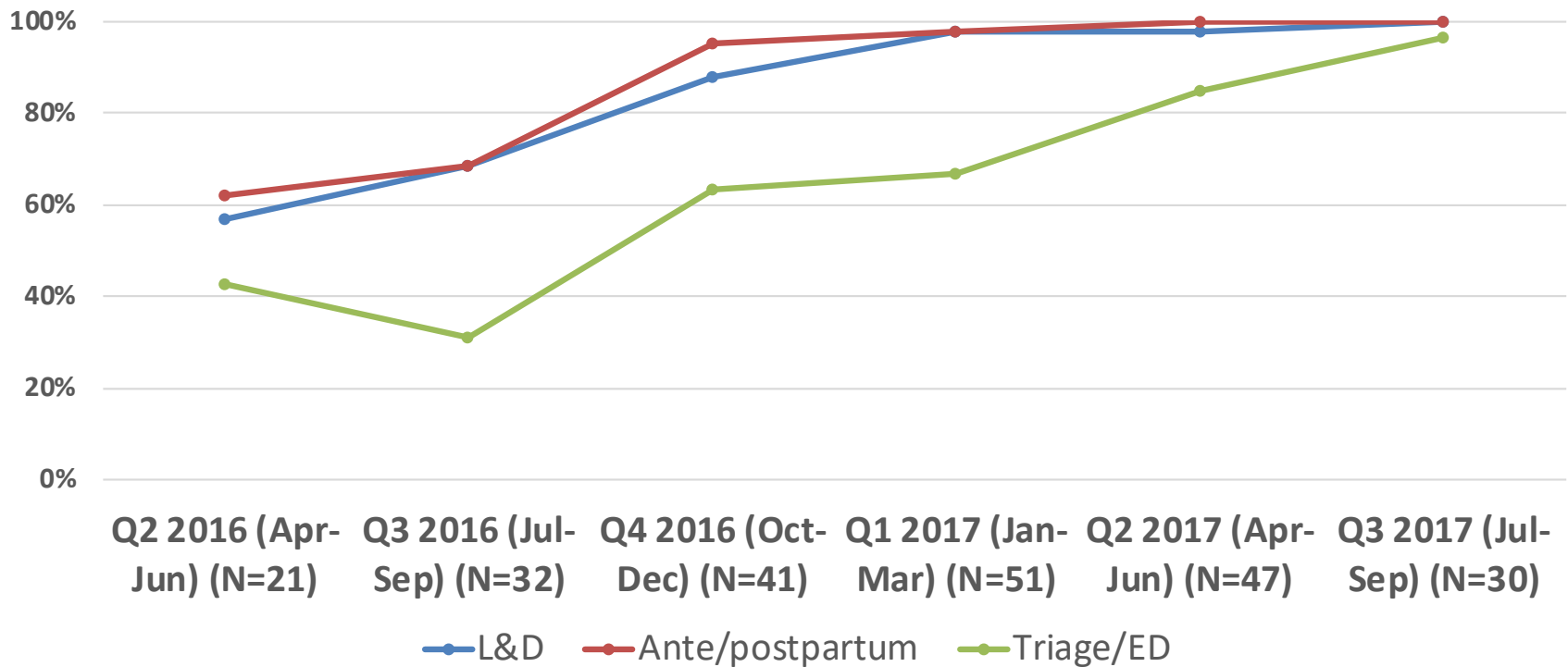
Strategies to Implement Protocols / Order Sets

- Develop interdisciplinary committee to review algorithms and order sets for implementation using Plan/Do / Study / Act = small test of change = test 1 provider, 1 patient, 1 day or test 1 unit for 1 week

- Integrate into EMR

- Develop easily accessible printed algorithms & order sets (e.g. bedside clipboard, pocket card order sets)

- Use key words in nurse provider communications: "*your patient has severe range hypertension", report BPs, "I would like to activate severe HTN protocol*"

- Post severe HTN time to treatment sign across units

Effective Steps to Implement Standard Protocols

ILPQC Team Survey, 2017

New Order Project Treatment Board HTN OB Providers Policy
Medical Algorithms Order Sets Available Education
Instructions Staff EPIC Protocols Posters Meetings Room
Department

We reiterate what the goal is at physician OB department meetings and work closely with OB chair to promote an overall culture of safety where the chain of command is used and event reporting is done to determine trends.

We have updated policies and created a protocol for management of severe HTN that is posted in all rooms with other visual aides.

We use common order set for all units. ED knows that they have the full support of the OB unit and can call at anytime for us to facilitate the treatment of possible patient

Structure Measure: Provider & Nurse Education

Culumative percent of OB providers and nurses completed (within the last 2 years) implementation education on the Severe HTN/Preeclampsia bundle elments and unit-standard protocol
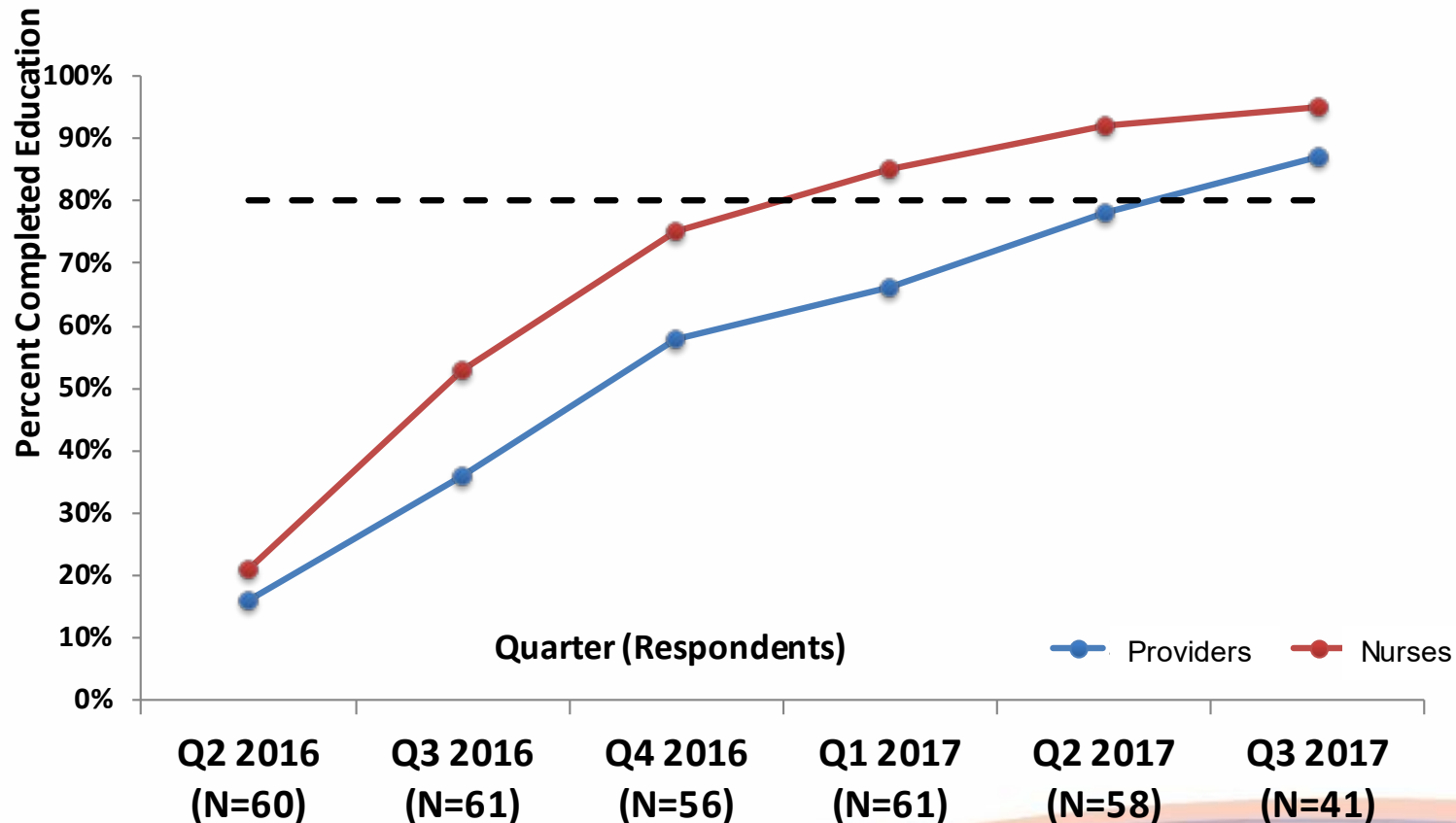
Education Tools for Physician/Nurse Buy In

AIM eModules

Severe Maternal HTN Grand Rounds

AIM eModules	Severe Maternal HTN Grand Rounds
Available on AIM website. Quiz at end with certificate - can ask providers/staff to submit certificate. View eModules here.	Available to download from ILPQC website (or click here). Speakers group available to provide Grand Rounds across the state. Email info@ilpqc.org for more information.

Effective Steps to Implement Education Program

ILPQC Team Survey, 2017

AIM Education In-service Skills Day Drills Huddles Formal Education
Providers Champion Meetings On-line Staff
Education Department Nursing Competencies Modules
BP Measurement Order Sets Ongoing ILPQC Healthstream
Reinforcement

We used consistent reminders after education in huddles and unit meetings and audited charts.

We have included the education into our computer modules and have made it an annual requirement. We have also included maternal hypertension simulations

We identified RN and MD champions for the whole hospital along with unit champions and have the support of nursing administration

We incorporated HTN education as part of nursing skills day yearly. All new staff and physicians will be educated using the comprehensive slide set.

Maternal Hypertension Data: Time to Treatment

ILPQC: Maternal Hypertension Initiative
Percent of Cases with New Onset Severe Hypertension Treated in <30, 30-60, ≥60 minutes or Not Treated
All Hospitals, 2016-2018
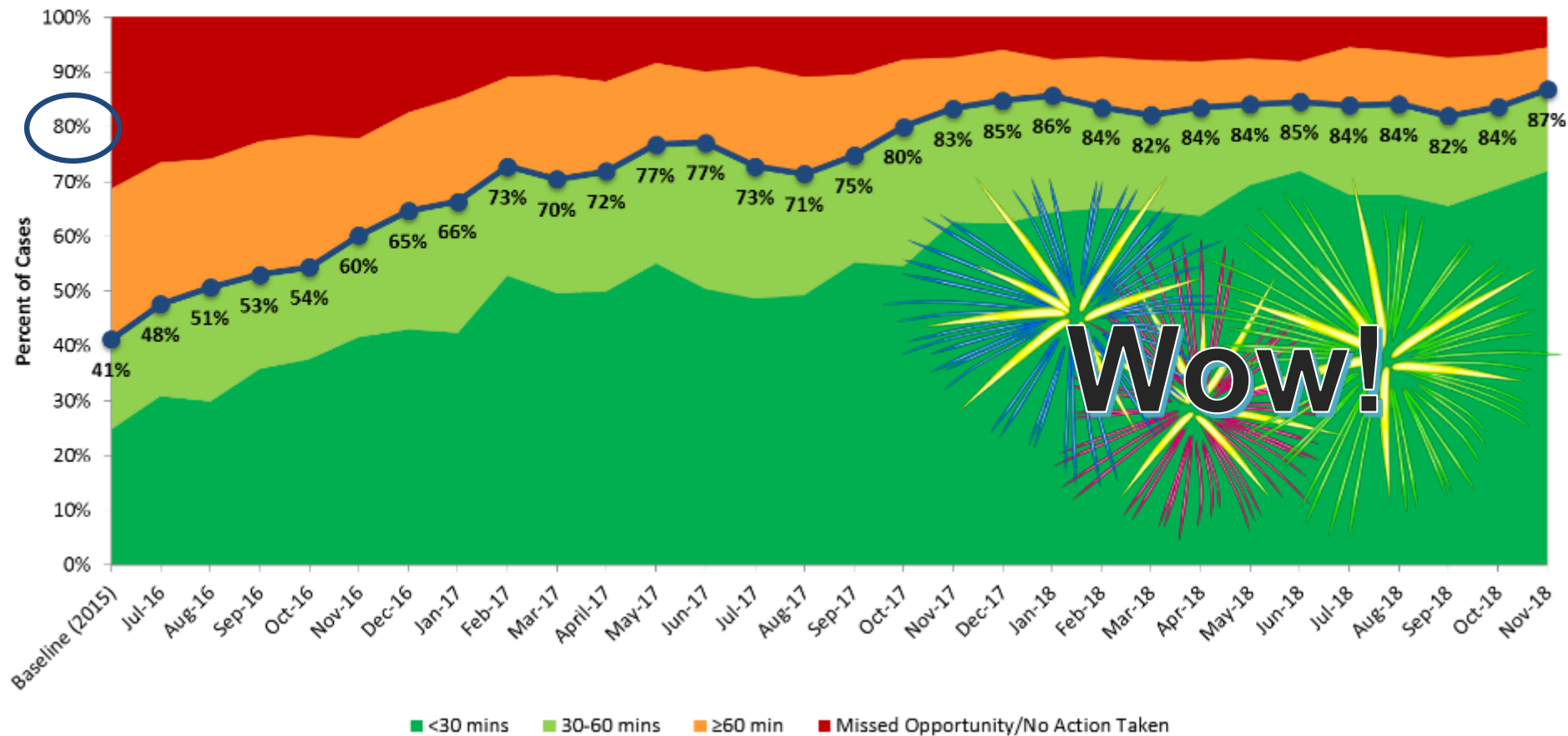
Maternal Hypertension Data: Patient Education

ILPQC: Maternal Hypertension Initiative
Percent of Women with New Onset Severe Hypertension Who Received Discharge Education Materials and Proportion of Hospitals in Collaborative Giving Discharge Education to Women
All Hospitals, 2016-2018

All Hospitals, 2016-2018

Legend:
- Proportion of Hospitals with 80% of women who received discharge materials
- Proportion of Hospitals with 0-79% of women who received discharge materials
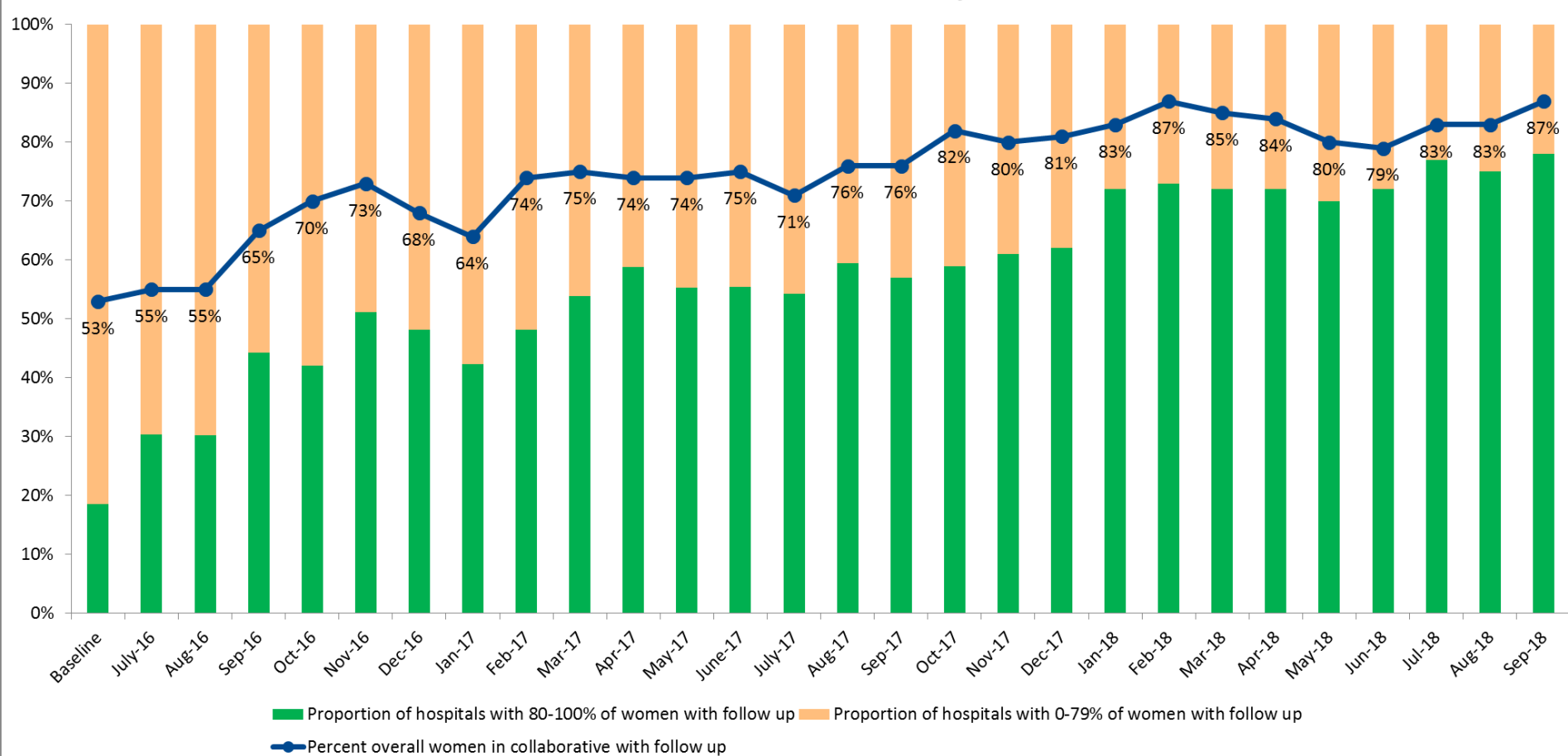- Percent overall women in collaborative who received discharge materials
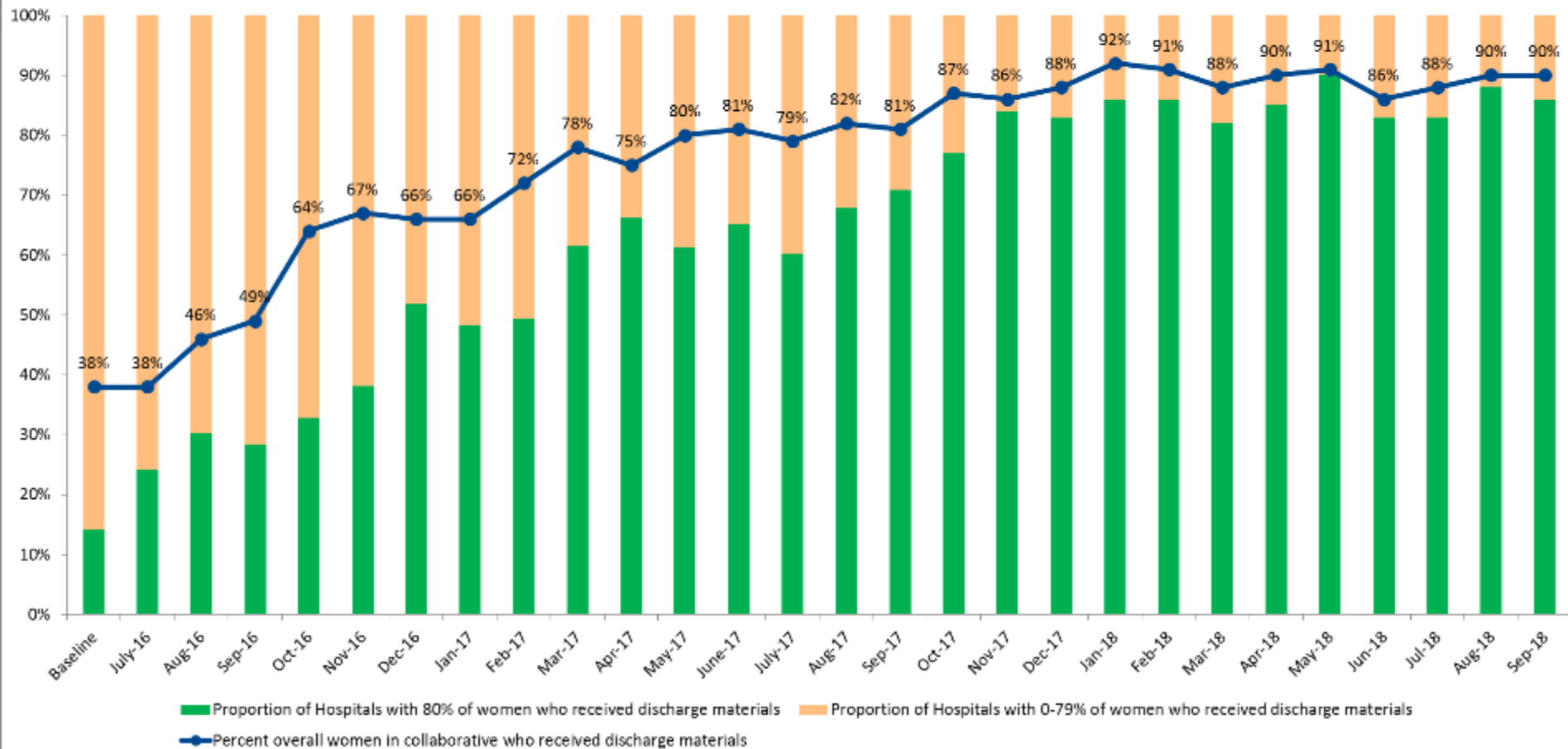
Maternal Hypertension Data: Patient Follow-up

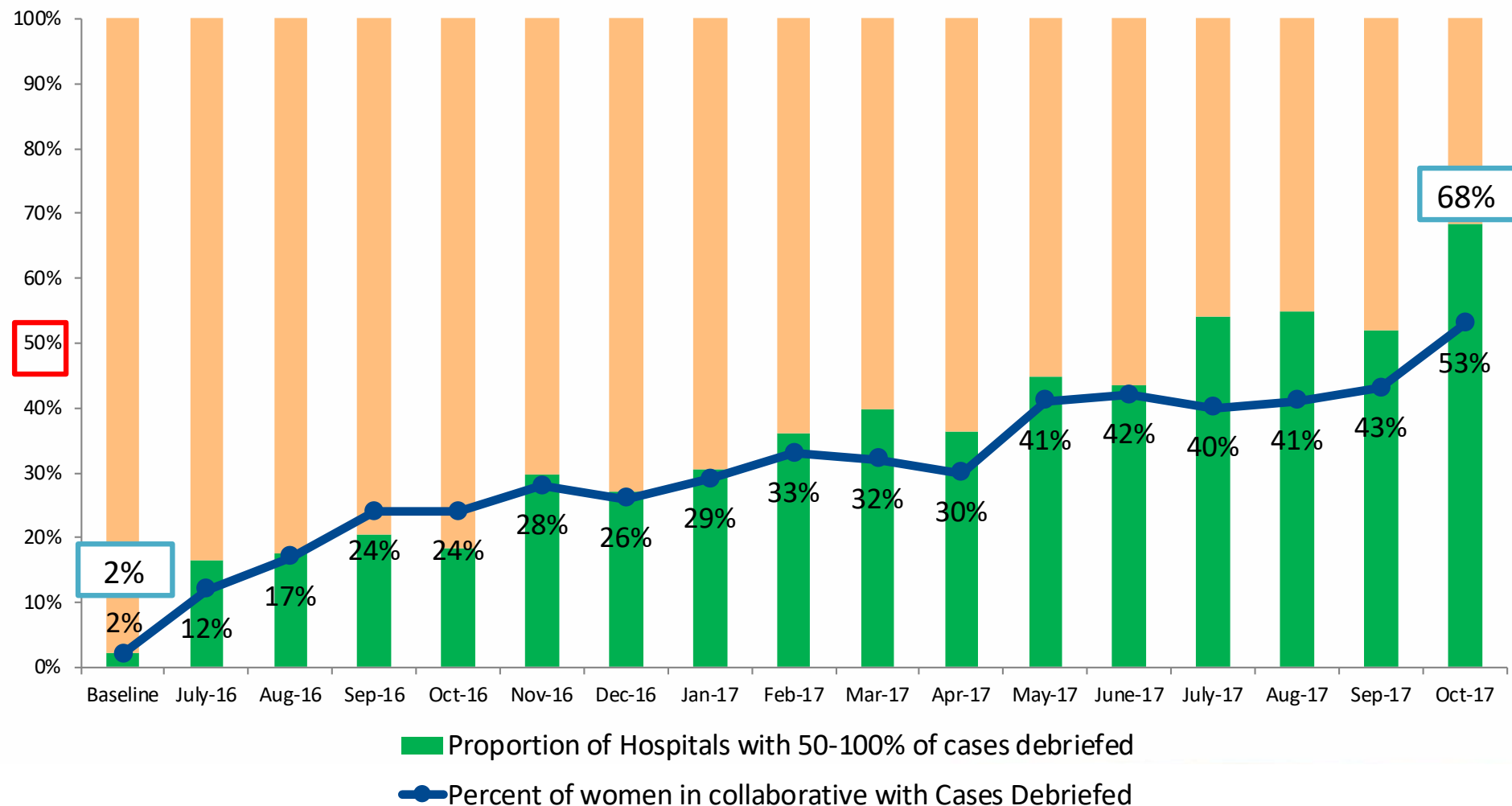**ILPQC: Maternal Hypertension Initiative**
Percent of Women with New Onset Severe Hypertension Where Follow-up Appointments were Scheduled within 10 Days and Proportion of Hospitals in Collaborative Where Follow-Up Appointments were Scheduled within 10 Days All Hospitals, 2016-2018

All Hospitals, 2016-2018

Legend:
- Proportion of hospitals with 80-100% of women with follow up
- Proportion of hospitals with 0-79% of women with follow up
- Percent overall women in collaborative with follow up

Data points (Percent overall women in collaborative with follow up):
Baseline: 53%, July-16: 55%, Aug-16: 55%, Sep-16: 65%, Oct-16: 70%, Nov-16: 73%, Dec-16: 68%, Jan-17: 64%, Feb-17: 74%, Mar-17: 75%, Apr-17: 74%, May-17: 74%, June-17: 75%, July-17: 71%, Aug-17: 76%, Sep-17: 76%, Oct-17: 82%, Nov-17: 80%, Dec-17: 81%, Jan-18: 83%, Feb-18: 87%, Mar-18: 85%, Apr-18: 84%, May-18: 80%, Jun-18: 79%, Jul-18: 83%, Aug-18: 83%, Sep-18: 87%

Severe Maternal Hypertension Time To Treatment Debriefed

Severe Maternal Morbidity Rate
Deliveries with Hypertension,
Hospital Discharge Data, All Illinois Hospitals
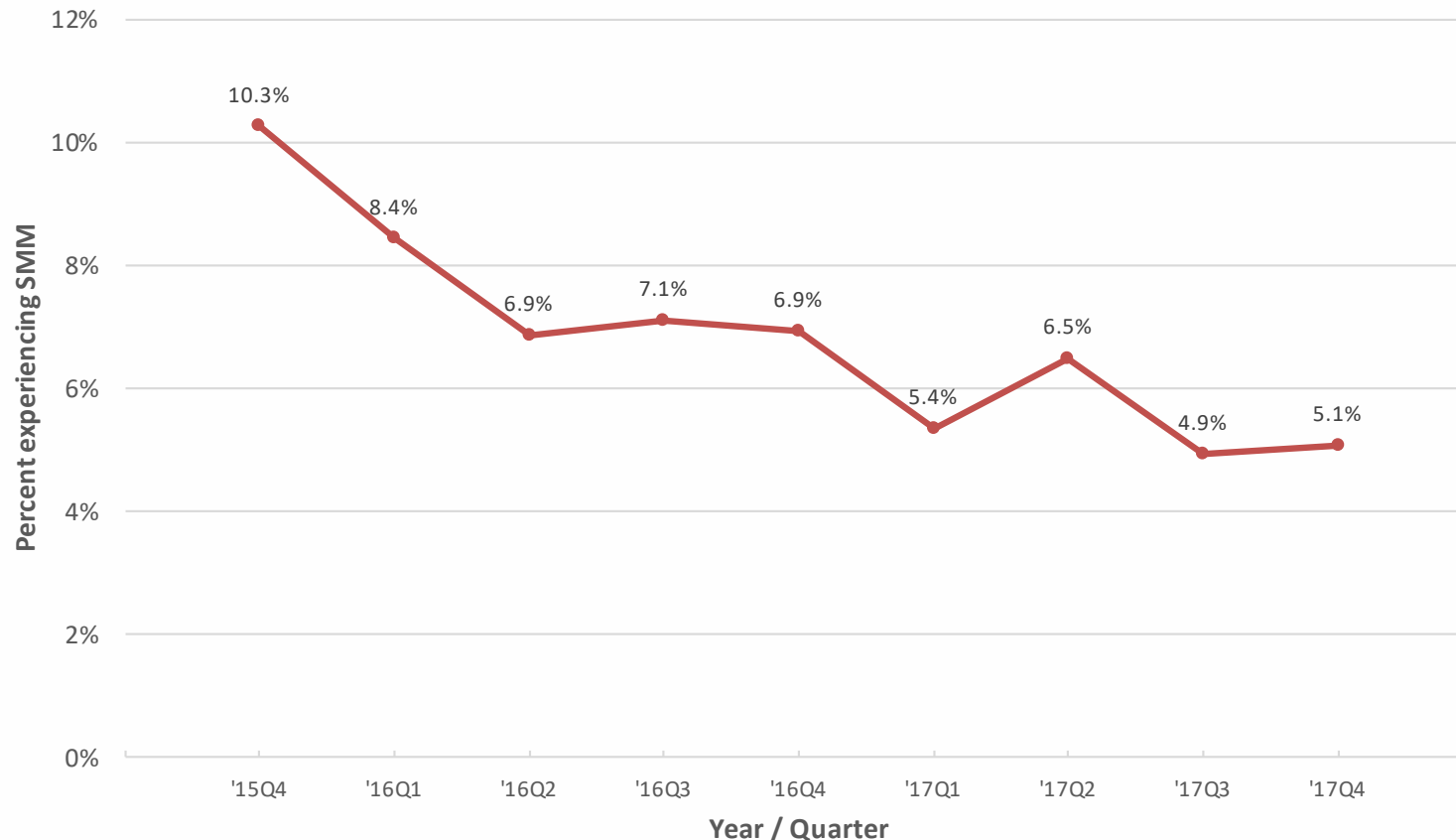
Between 2015-Q4 and 2017-Q4, the SMM rate among women experiencing hypertension at delivery was <u>cut in half.</u>

Hypertension Sustainability

Sustainability Plan

Compliance Monitoring

New Hire Education

Ongoing Staff/Provider Education

RESOURCES

Contact

- Email info@ilpqc.org

- Visit us at www.ilpqc.org

THANKS TO OUR

FUNDERS