

Introduction to CPQCC and Friends

September 22, 2021



Webinar Logistics

- Attendees are automatically muted upon entry
- If you attend as a team, please create a sign in sheet and share it with info@cpqcc.org to be eligible for contact hours/CEU's
- The “chat” function has been disabled. **Please utilize the Q&A box if you are having technical difficulties and to submit any questions you have for the presenters. We will answer as many questions as possible during the Q&A portion of the webinar.**
- The slides and webinar recording will be sent out after the webinar and will also be posted on the CPQCC website at <https://www.cpqcc.org/engage/annual-data-training-webinars-2021>
- Attendees will be eligible for contact hours through the Perinatal Advisory Council: Leadership, Advocacy, and Consultation (PAC/LAC) . This webinar series is being jointly provided by CPQCC and PAC/LAC. PAC/LAC is an approved provider by the California Board of Registered Nursing, Provider number CEP 5862.

Presenters

- **Jeffrey Gould** – Chief Executive Officer
- **Rebecca Robinson** – Administrative Director
- **Courtney Breault** – Associate Director of Quality



All About CPQCC

Jeffrey Gould, MD, MPH



A Bold Vision and Big Promise

1997

To create the nation's first state-wide perinatal quality improvement collaborative: **CPQCC**.

CPQCC's Mission 1997

To **optimize the health and outcomes** of California's pregnant women and their infants by developing a **collaborative network** of Public and Private, Obstetric and Neonatal Providers, Insurers, Public Health Professionals and Business Groups to support **self assessment, benchmarking, and performance improvement activities** for perinatal care.

CPQCC's Mission 2021

To optimize the quality and **equity** of health care delivery for California's most vulnerable infants and their **families**, from **birth and NICU stay to early childhood**.

Continuum of care structure – unique to California!

Neonatal
Transport
Data



All Baby Data
High Risk Data



CMQCC Data

RPPC Data

HRIF Data

CPQCC/CMQCC Data Centers

Annual Activity



Organizational Philosophy

- Quality improvement is a worthwhile activity
- Bottom up approach
- Maximize value for **families**, member NICUs, **front line staff**, and **community** as well as traditional stakeholders

Stakeholder Value 1997

CA Association of Neonatologists (CAN)

- Impact of funding restrictions
- Input on inevitable report carding
- Organized CQI as a possibility

State Maternal and Child Health Branch (MCAH)

- Need for morbidity assessment

CA Children's Health Services (CCS)

- Need for NICU medical quality assurance

Pacific Business Group on Health (PBGH)

- Consumer-oriented quality assessment

Packard/Vermont Oxford Network (VON)

- Statewide application of VON

Executive Committee 1997

California Association of
Neonatologists (CAN)

District IX, Perinatal Section, AAP

American College of Obstetricians and
Gynecologists

Maternal and Child Health Branch
(MCH)

California Children's Services (CCS)

Office of Vital Records

Office of Statewide Health Planning and
Development

Pacific Business Group on Health

Health Insurance Plans of California

Hospital Council

Vermont Oxford Network (VON)

David and Lucile Packard Foundation

Quality Improvement: The Challenge 1997

DATA

Development of High-Quality, Reliable Data



INFORMATION

Development of Risk-adjustment Methods
Reports That Inform and Organize Work



ACTION

Support Perinatal Providers in Their Work
of Improving Perinatal Care and Outcomes

Quality Improvement: The Challenge 2021

DATA

Development of High-Quality, Reliable Data **for outcomes and equity**



INFORMATION

Development of Risk-adjustment Methods
Understandable Reports That Inform and Organize Work



ACTION

Support **Front Line** Perinatal Providers in **Designing and Conducting** Their Work
of Improving Perinatal Care and Outcomes

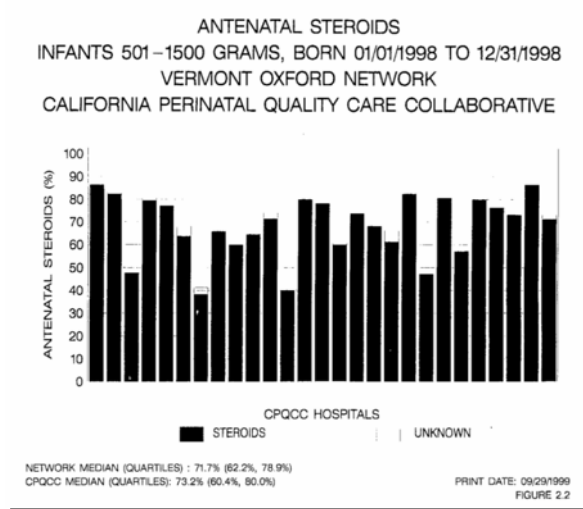
CPQCC Database Quality

- Range and logic checks
- Comparison across NICUs if infant transferred
- Audit for excessive missing data
- Yearly data training
- Data Committee Advisory Group (DCAG)

Data Committee Advisory Group

- Provide understanding of data elements and collection challenges
- Give feedback and consultation on new data items
- Participate in development and pilot new systems, e.g., online data entry system
- Provide training and peer support to new members

CPQCC's NICU Database Development



1998 VON < 1500 Grams

2000 High risk > 1500 Grams

2007 Real Time Reporting + Neonatal Transport

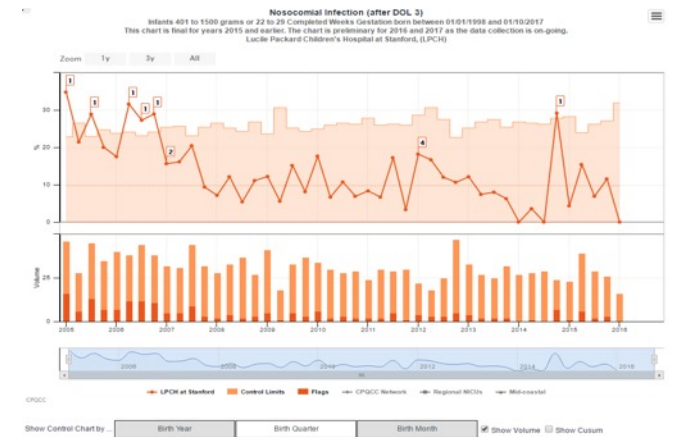
2008 Infants linked across NICUs

2009 Statewide High-Risk Follow-up till age 3

2013 NICU based Follow-up reports

2017 Real-Time Control Charts

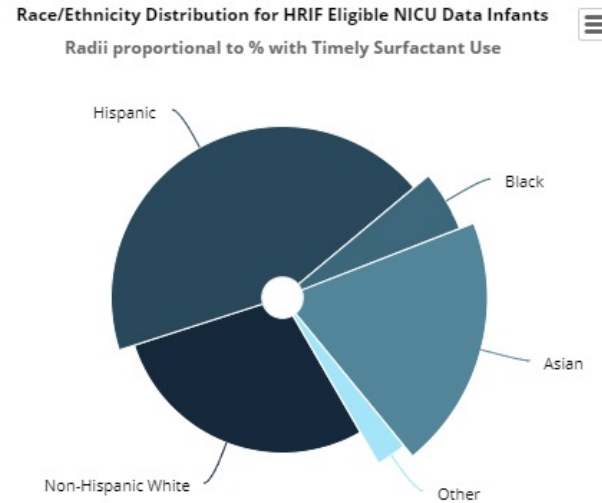
2021 All Admits Focusboard



New Resources: 1998-2020



NICU Dashboard



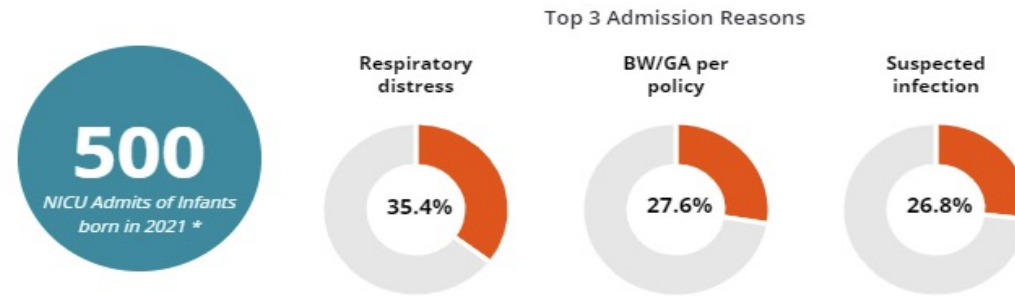
Health Equity Dashboard



Baby-MONITOR Report

New Resources: 2021

ALL NICU ADMITS



The All NICU Admits DB for Demo Center used for this focusboard includes birth dates through 12/03/2020.

* New and continuing care NICU admits included.

Explore charts of inborn or lower acuity inborn NICU admits over time ... [Go](#)

Explore charts of inborn or lower acuity inborn NICU admits by birth year ... [Go](#)

Explore heat maps of admit reasons by birth weight or gestational age, source, acuity and birth year ... [Go](#)

Explore daily occupancy charts ... [Go](#)

Explore summary tables of admit reasons or of problems during the NICU stay for NICU admits by source, acuity and year of birth ... [Go](#)

Explore summary tables of NICU admits by source, acuity, birth weight and year of birth ... [Go](#)

Explore summary tables of NICU admits by source, acuity, gestational age and year of birth ... [Go](#)

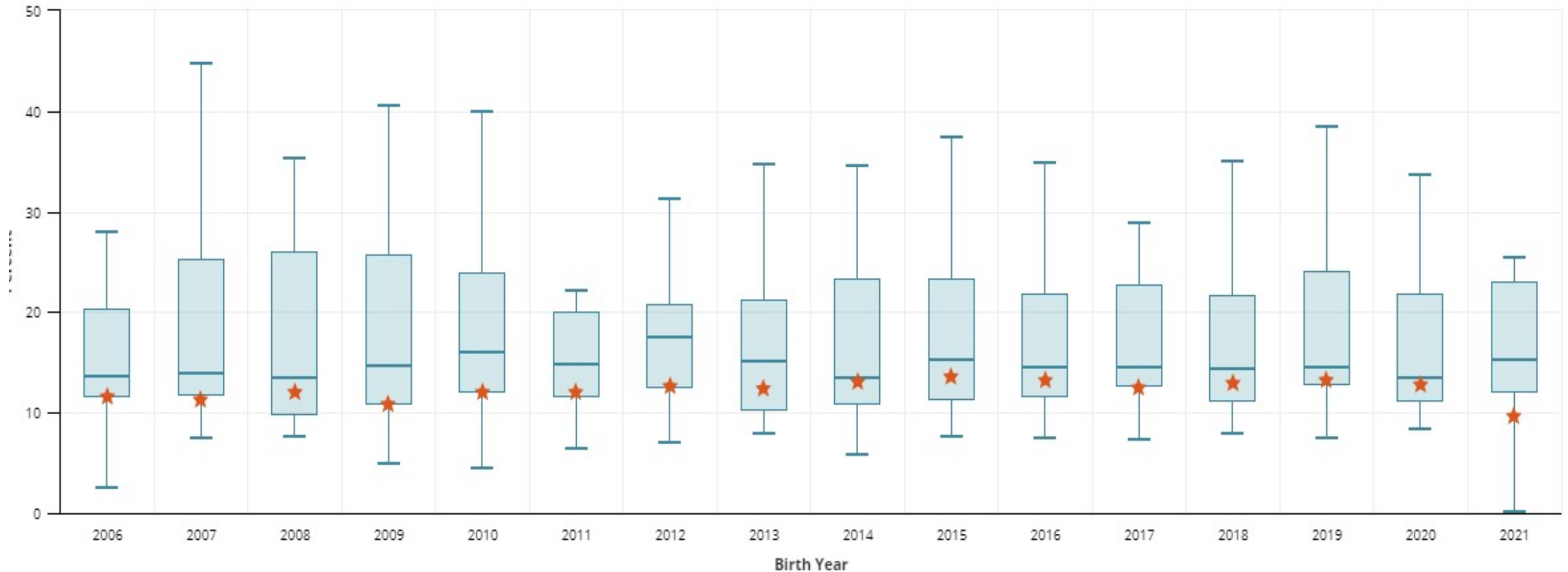
New Resources: 2021

Inborn NICU Admits relative to Births ▾

Regional NICUs ▾

Inborn NICU Admits relative to Births compared to Regional NICUs, 2006 - 2021

Demo Center Highlighted, 2006 to 2021

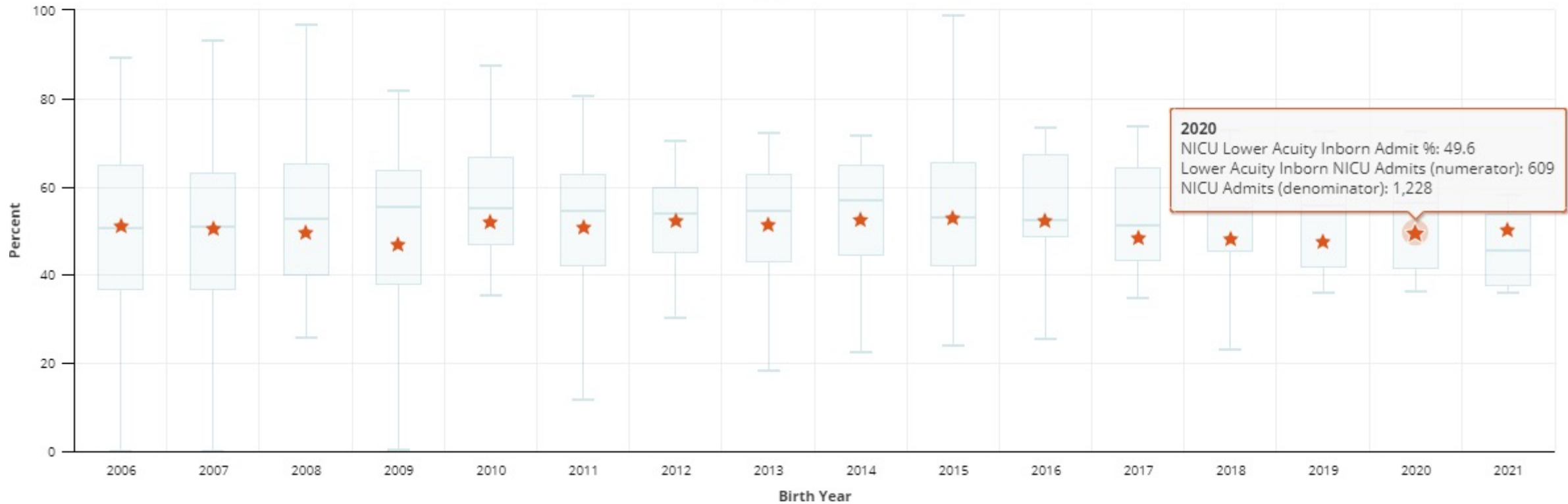


New Resources: 2021

LAINAs relative to NICU Admits

Regional NICUs

LAINAs relative to NICU Admits compared to Regional NICUs, 2006 - 2021
Demo Center Highlighted, 2006 to 2021



New Resources: 2021

Admission Reasons ▼	2021 ▼	Lower Acuity Inborn NICU Admits ▼	Demo Center (N=279)					Participating Regional NICUs (N=1,371) ▼				
Admission Reason	N	%	N w/ LOS	Mean LOS	Min LOS	Max LOS	N	%	N w/ LOS	Mean LOS	Min LOS	Max LOS
Respiratory distress	102	36.6	98	10.7	1	111	379	27.6	371	8.8	1	60
BW/GA per policy	81	29.0	78	16.3	1	111	365	26.6	354	16.3	1	92
Hypoglycemia	47	16.8	45	7.2	1	31	363	26.5	355	7.0	1	31
Suspected infection	84	30.1	84	9.9	1	37	361	26.3	359	8.7	1	47
Small for gestational age	17	6.1	17	16.4	1	36	119	8.7	118	10.9	1	56
Hyperbilirubinemia	15	5.4	15	9.1	4	23	68	5.0	68	9.0	1	34
Cardiac event	15	5.4	14	8.2	2	23	66	4.8	64	6.9	1	30
Neonatal abstinence syndrome, exposure to drugs/alcohol	18	6.5	18	13.2	2	36	52	3.8	51	12.7	2	34
Dysmorphic/chromosomal anomaly	8	2.9	8	12.5	2	23	49	3.6	48	14.2	2	60
Feeding difficulties	19	6.8	19	13.3	3	33	47	3.4	47	12.2	1	56
Temperature instability	9	3.2	9	9.9	2	31	42	3.1	42	6.1	1	31
Apnea/cyanotic event	13	4.7	13	7.5	2	27	40	2.9	40	8.7	1	32
Perinatal transitional monitoring	12	4.3	12	5.8	1	36	32	2.3	31	4.5	1	17
Neurological/seizure	2	0.7	2	9.5	2	17	9	0.7	9	8.4	2	20
Transport-In for insurance reasons	0		0				0		0			
Transport-In for bed availability reasons	0		0				0		0			
Other	35	12.5	35	9.1	1	36	111	8.1	109	8.0	1	56

New Resources: 2021



Continuum of care structure – unique to California!

Neonatal
Transport
Data



All Baby Data
High Risk Data



CMQCC Data

RPPC Data

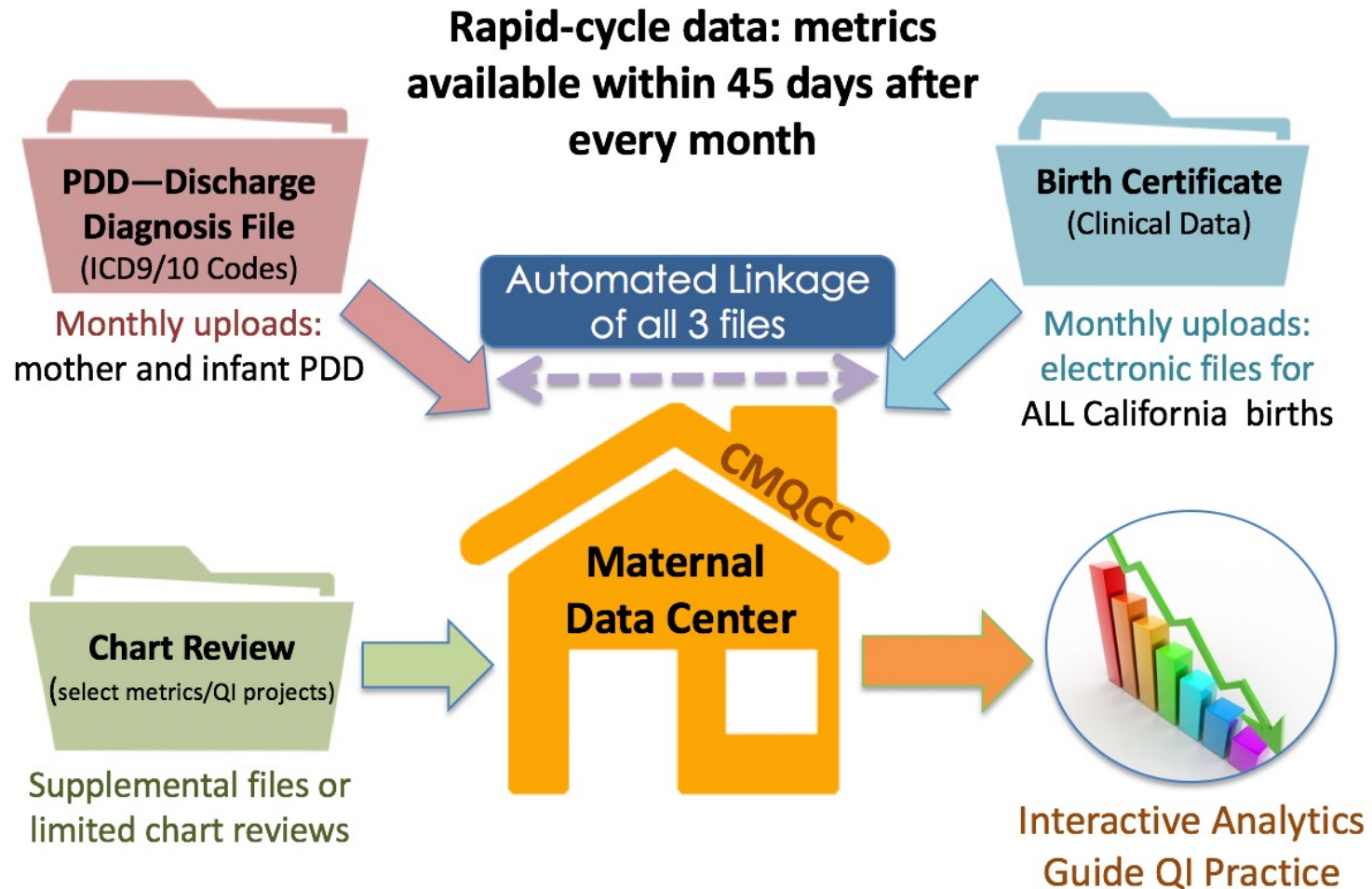
HRIF Data

California Maternal Quality Care Collaborative (CMQCC)

Mission: Improving care for all California moms and newborns

- Established in 2006
- Real time maternal data analysis to drive quality improvement
- Develop and validate the effectiveness of QI toolkits
- Promote the adaption of maternal QI through education
- Design and conduct large scale QI based on a mentor approach

CMQCC Maternal Data Center



Links over 1,000,000 mother/baby records each year!

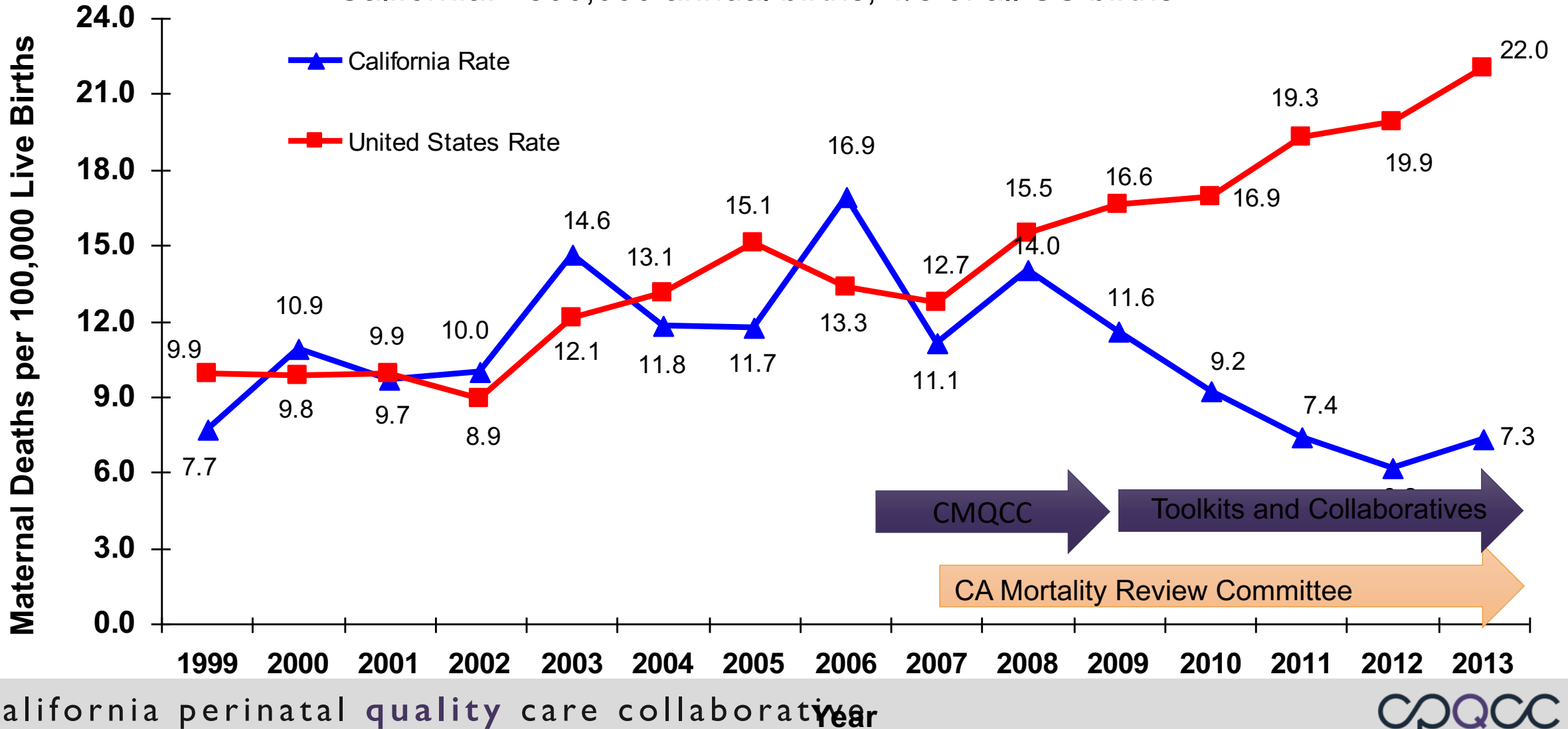
CMQCC Quality Improvement Activities

Year	QI Toolkits
2010	Eliminating Early Elective Deliveries
2010	Obstetric Hemorrhage
2014	Preeclampsia
2015	Obstetric Hemorrhage (2 nd Ed)
2016	Reducing Primary Cesarean Birth (CHCF funded)
2017	Cardiovascular Disease
2018	Venous Thromboembolism
2019	Maternal Sepsis (CMQCC funded)
2020	Mother-Baby Substance Use (CA DHCS funded) – <i>joint with CPQCC</i>
2020	Birth Equity (CHCF funded)

Years	QI Collaboratives
2009-10	CMQCC Hemorrhage QI collaboratives I and II
2010-11	CMQCC/CDPH Preeclampsia Task Force and QI collaborative
2011-14	HEN/CMQCC/CHA-HQI QI collaborative focused on hemorrhage and preeclampsia
2015-16	CMQCC/Merck for Mothers QI collaborative for hemorrhage and hypertension severe morbidity
2016-19	CMQCC QI collaboratives (3 cohorts) for Supporting Vaginal Birth and Reducing Primary Cesarean Delivery
2018--	CMQCC QI Academies (new multi-hospital cohort every 6 months: QI science “work-study”)
2019--	CMQCC/CPQCC/HMA QI collaboratives (3 cohorts) for Mothers and Babies with Substance Use Disorder (focus on Opioids)
2019--	CMQCC Birth Equity QI collaborative (Pilot)

Maternal Mortality Rate California and United States; 1999-2013

California: ~500,000 annual births, 1/8 of all US births



Have we forgotten about our 7000 high risk neonatal transports ?

2007



CORE CPETS ACUTE INTER-FACILITY- NEONATAL TRANSPORT FORM

REFERRAL		
C.1 Transport type <input type="checkbox"/> Requested Delivery Attendance <input type="checkbox"/> Emergent <input type="checkbox"/> Urgent <input type="checkbox"/> Scheduled <input type="checkbox"/> Other		
C.2 Indication <input type="checkbox"/> Medical Services <input type="checkbox"/> Surgery <input type="checkbox"/> Insurance <input type="checkbox"/> Bed Availability		
PATIENT IDENTIFICATION/HISTORY:		
C.3 Birth weight ___ ___ ___ grams C.4 Gestational Age ___ weeks ___ days C.5 <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Unknown		
C.6 Prenatally Diagnosed Congenital Anomalies <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Describe:		
C.7 Maternal Gravida C. 8 Steroids <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		
C.9 Surfactant Given <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/> Delivery Room <input type="checkbox"/> Nursery		
TIME SEQUENCE	Date	Time
C.10 Maternal Admission to Perinatal Unit or Labor & Delivery		at
C.11 Last Antenatal Steroid Administration (last dose)		at
C.12 Infant Birth		at
C.13 Surfactant (first dose)		at
C.14 Referral (and Referring Hospital Evaluation)		at
C.15 Acceptance		at
C.16 Transport Team Departure from Transport Team Office/NICU for Referring Hospital		at
C.17 Arrival of Team at Referring Hospital/Patient Bedside and Initial Transport Evaluation		at
C.18 Initial Transport Team Evaluation		at
C.19 Arrival at Receiving NICU and Initial Evaluation		at

Acute Infant Transport Database

2005 Focus Groups & Key Informants:
Major Issues/ examples of 2007 Indicators

- **Underutilization of maternal transport**
 - Percentage of births that were transferred
- **Delayed decision to transport infant**
 - Birth to initiation of transport interval
- **Difficult to obtain transport**
 - Initiation of transport to acceptance interval
- **Too long a wait for the team to arrive**
 - Acceptance to out the door time
- **Team competency not always optimal**
 - Arrival to completion change in clinical status

HRIF Database



HRIF Visits: Number and Timing



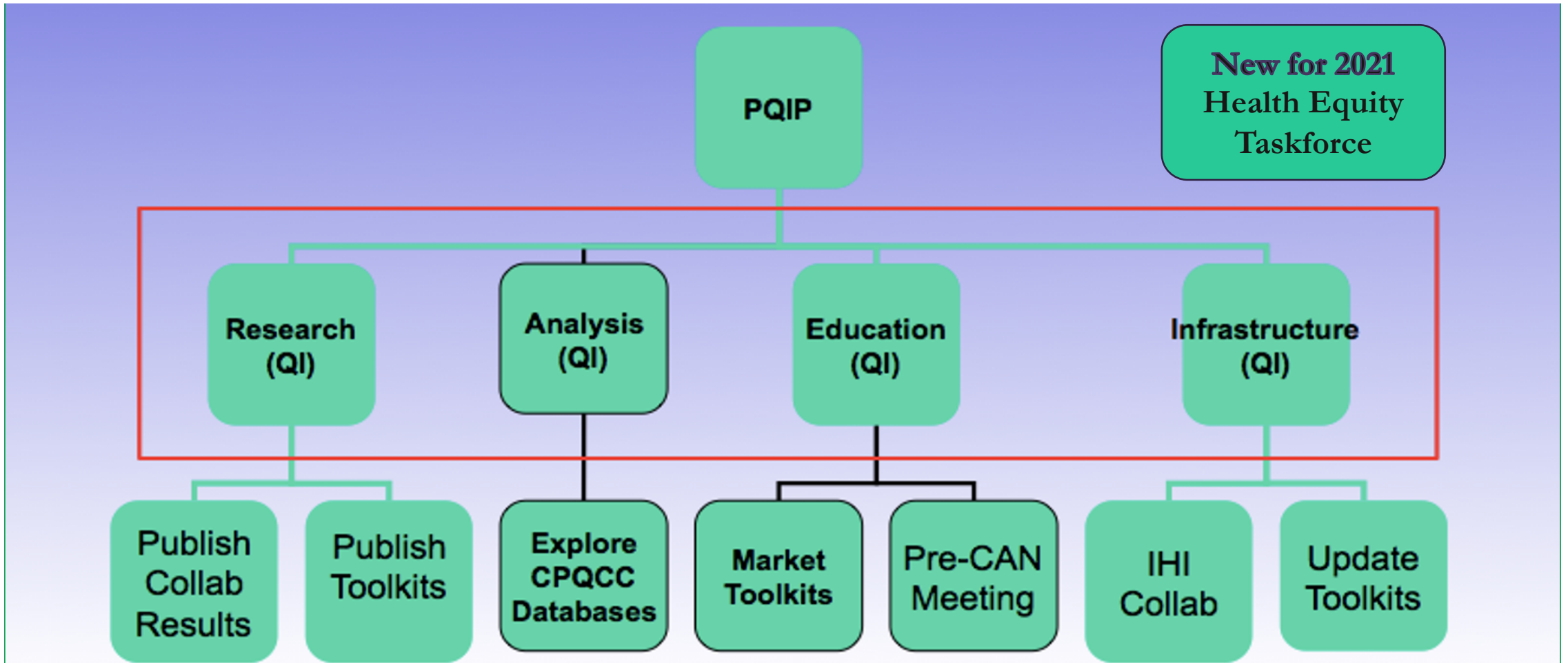
- Provides for 3 “standard” or core visits
 - #1 – 4 - 8 months
 - #2 – 12 - 16 months
 - #3 – 18 - 36 months
 - Additional visits covered by CCS as determined to be needed by HRIF team
- There is **no financial eligibility requirement** for HRIF services if the patient is medically-eligible.

2021:

- Interface re-design
- COVID tele-medicine protocols
- COVID Family Impact Study

From Data to Action

Perinatal Quality Improvement Panel (PQIP)



Toolkits

- Antenatal Steroids(ANS)
- Care and Management of the Late Preterm Infant
- Delivery Room Management
- Early Screening and Identification of Candidates for Neonatal Therapeutic Hypothermia
- Hospital Acquired Infection
- Improving Initial Lung Function: Early CPAP, Surfactant and Other Means
- Nutritional Support of the VLBW Infant
- Postnatal Steroid Administration
- Prevention of Perinatal HIV Toolkit
- Severe Hyperbilirubinemia Prevention
- Neonatal Therapeutic Hypothermia
- Neonatal Disaster Preparedness
- Mother and Baby Substance Exposure
- Primary Care for Preterm Infants and Children

CPQCC Collaboratives

1. CABS I Reduction
2. Breastmilk Nutrition
3. Delivery Room Management
4. Optimizing LOS
5. Antibiotic Stewardship
6. Grow, Babies, Grow
7. Simulating Success
8. Optimizing Antibiotic Stewardship for California NICUs (OASCN) – *ongoing currently*
9. Growth Advancement in the NICU: Ten Point Nine – *ongoing currently*
10. Growth Advancement in the NICU: Surgical Patients – *ongoing currently*

New Resources

How-to Videos

- Baby-MONITOR
- Health Equity Dashboard
- All NICU Admits Focusboards
- Using NICU Reports to Answer a Clinical Question
- MatEx – Data Entry & Reports
- Annotating Control Charts

Maternal Exposure Inventory

Data collection tool for babies of substance-exposed mothers seen anywhere in your hospital

Mother & Baby Substance Exposure Toolkit

- Launched in March 2020
- Joint effort with CMQCC
- Available at cpqcc.org

Member Led Initiatives

- **Health Equity Taskforce**
 - Subgroups on disparities: within NICUs, between NICUs, during transition to home
- **Maternal Substance Exposure Workgroup**
 - Collecting data on babies exposed to substance in-utero
- **HRIF-CVICU Expansion Project**
 - Locating HRIF-eligible cardiac patients and referring to follow-up care
- **Children's Hospitals Workgroup**
 - Recently released new reports on surgical patients available on NICU Reports
- **Ten Point Nine Workgroup**
 - Focusing on the needs of CPQCC's smaller member NICUs with average daily census of ≤ 10.9

Member-Led Initiatives to Action

2021 CPQCC Launches Three New QI Collaboratives

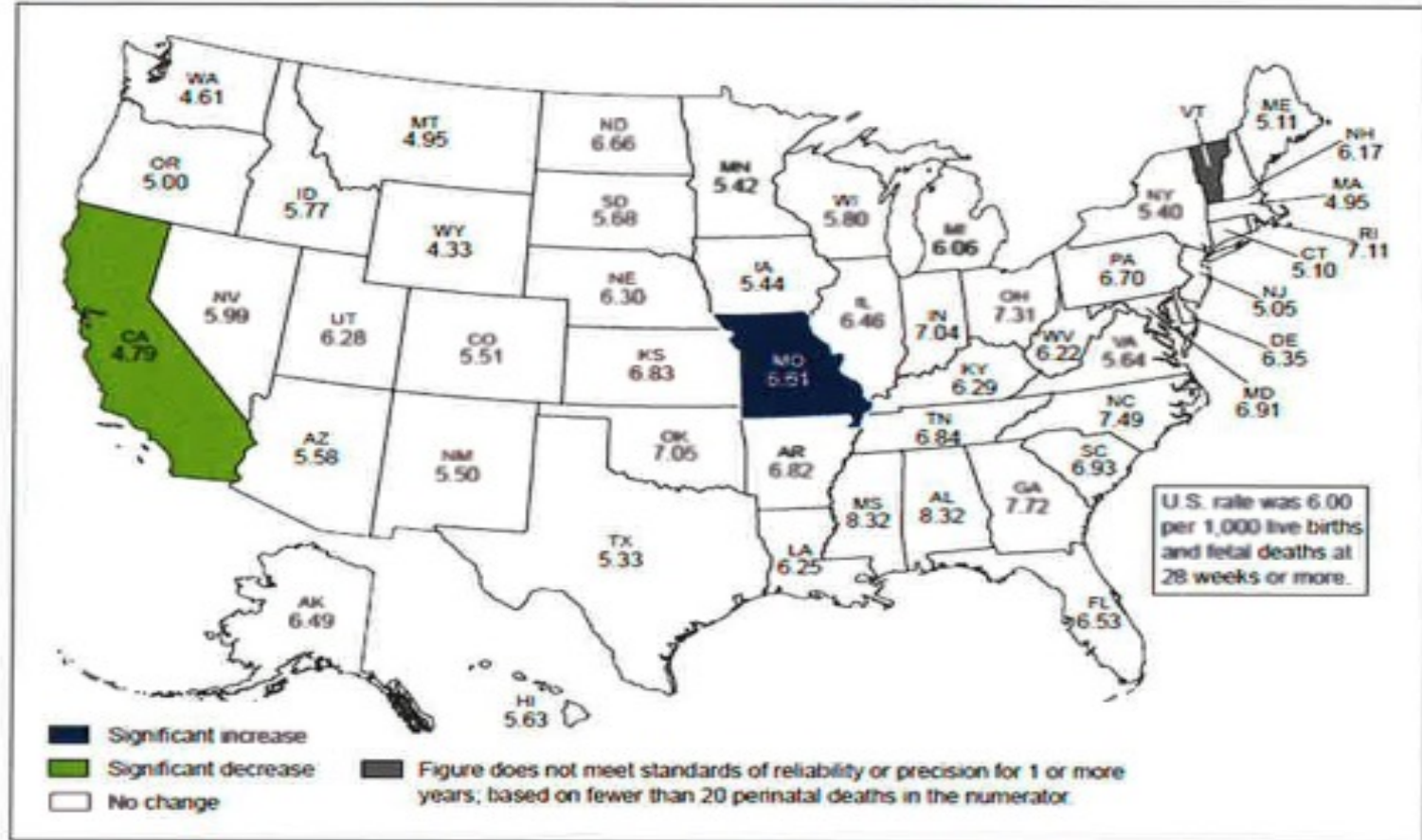
- Optimizing Antibiotic Stewardship for California NICUs (OASCN)
- Growth Advancement in the NICU (GAIN): Ten Point Nine
- Growth Advancement in the NICU (GAIN): Surgical Patients

**Lots of activity but has it made a
difference?**

Our Impact

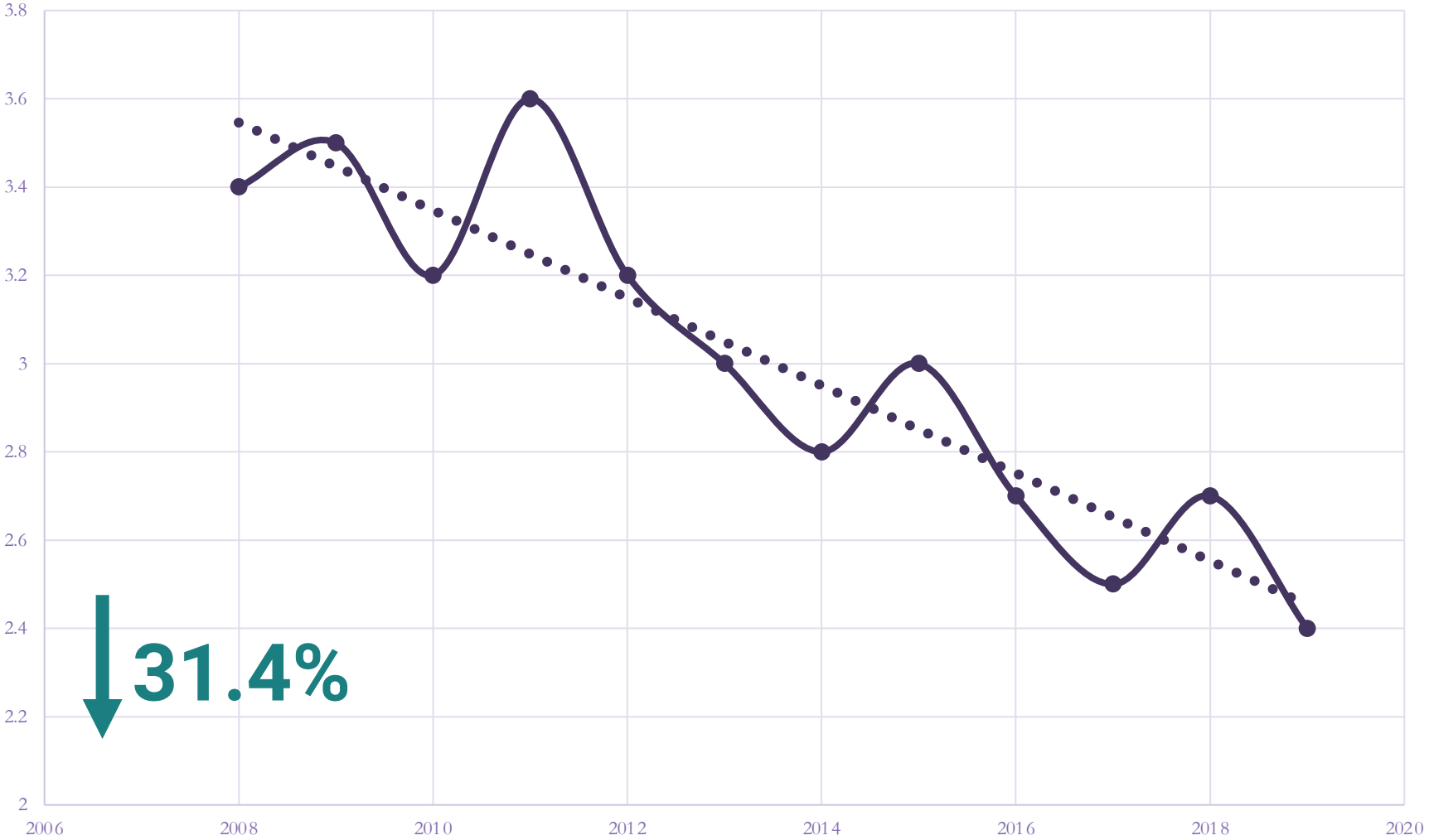
CDC report shows California as the *only state to significantly decrease perinatal mortality* between 2014 to 2016.

Figure 4. Perinatal mortality rates by state for 2016 and change in 2016 compared with 2014



NOTES: Rate per 1,000 live births and fetal deaths at 28 weeks or more. Significant increase or decrease at $p < 0.05$. Access data table for Figure 4 at https://www.cdc.gov/nchs/data/databriefs/db316_table.pdf#4. SOURCE: NCHS, National Vital Statistics System.

Mortality (> 1500 G)



% Improvement

GA 22-29 weeks, 2008-2017

• NEC	5.9%	→	3.2%
• Nosocomial infection	15.4%	→	8.5%
• Severe ROP	10.3%	→	6.6%
• sIVH	9.4 %	→	7.5%
• Infant death	9.8%	→	8.3%
• Cystic PVL	2.5%		Stable
• Chronic lung disease	20.6%		Stable



Elliott Main



Jochen Profit

Jeff Gould

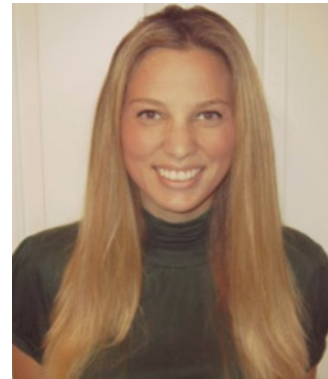
Susan Hintz

Henry Lee

CPQCC Team



CMQCC Team



What's Next
for CPQCC?



Vision Statement

We are committed to improving the **quality and equity of care, centering the voices of lived experience** and collaborating with **families** and with **all interdisciplinary members of the health care team.**

Our vision is to consider both the infant's stay in the NICU and broader health improvement by extending our vision to the **family** and to the **continuum of care** from **pregnancy** through **early childhood.**

We do this by focusing on these three pillars:

- Vital Voices: Families and Healthcare Team
- Pregnancy to Pre-K
- Equitable Foundations: Patients, Families, Healthcare Team

Strategic Initiatives: Three Pillars

NICU INFANTS AND FAMILIES

PILLAR ONE:
Vital Voices

Elevating the voices of families
and all members of the
healthcare team

PILLAR TWO:
Pregnancy to Pre-K

Improving quality along the
continuum of care

PILLAR THREE:
Equitable Foundations

Ensuring equity as the bedrock
of perinatal care

QUALITY IMPROVEMENT

Upcoming CPQCC QI Opportunities

Courtney Breault, RN, MS, CPHQ
Associate Director of Quality, CPQCC



CPQCC's 6-Month Improvement Palooza Check In: Equity Focused (EF) QI

September 2021

Goal

Given CPQCC's focus of health equity and antiracism and a movement within QI to promote health equity, we want to hear how you are doing this in your NICU.

Format

Read an article on EF QI and complete a self-directed worksheet aimed at re-engaging team members on their journey to creating an antiracist NICU.

Timeframe

Activity will be released by September 30th.

CPQCC's 9-Month Post-Palooza Check-In: Implicit Bias in the NICU

January 2022

Goals

- Increase awareness of implicit bias in your NICU
- Reflect on your own implicit biases

Format

- Live Zoom
- Nurse moderated
- Breakout sessions for discussion

Continued Growth

We will continue the discussion of implicit bias at CPQCC's Improvement Palooza 2022

Improvement Palooza 2022

Families as the Foundation of High Quality, Inclusive NICU Care

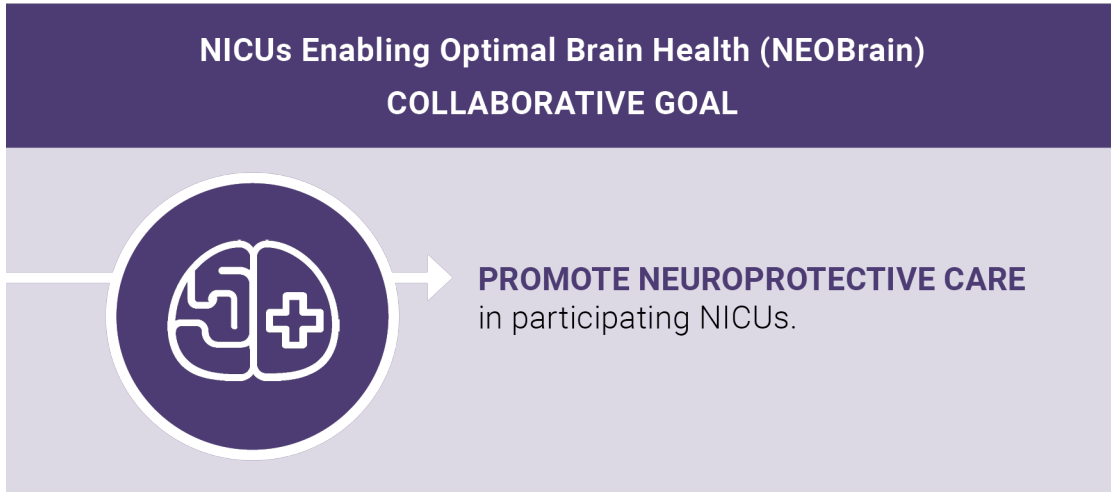
***** SAVE THE DATE – March 4, 2022 *****



Program includes:

- Parent-led experiential learning for NICU teams
- Success stories from NICUs with successful family-centered care initiatives
- Session on trauma informed care in the NICU
- Session on implicit bias and Neonatal Abstinence Syndrome (NAS)
- QI Stories from CPQCC member NICUs
- NICU family panel discussion

NICUs Enabling Optimal Brain Health Collaborative (NEOBrain)



- **Registration:** January 2022
- **Launch:** April 2022
- **Goal:** Promote neuroprotective care in participating NICUs
- **Target population:** TBD
- **Eligible NICUs:** All CPQCC NICUs
- **Fee:** \$8,500
- **For more info:** Email Courtney Breault at courtney@cpqcc.org

CPQCC QI Fundamentals Course

General release March 2022, currently being pilot tested

GOALS

1. Provide CPQCC members with **practical knowledge about QI**— on their own time, at their own pace
2. Ensure that all CPQCC members attain the **QI knowledge, attitudes, and competencies required to successfully improve the quality of care in their NICU**

Modules

1. Understanding Basics of QI Using the Model for Improvement
2. Getting Your NICU QI Ready
3. Using Tools & Data to Put QI into Practice
4. Optional Additional Content (Using CPQCC Data and Reports for QI and Building an Anti-Racist NICU)

QI Deep Dives

Dive deeper into QI by listening to CPQCC members explain how they put the fundamentals of QI into practice in their NICU.

1. Using PDSA Cycles to Test Change Ideas
2. Assessing NICU Culture
3. Building a QI Team
4. Sustaining the Gains
5. Using SPC Charts



Q&A

Panelists

- **Jeffrey Gould** – Chief Executive Officer
- **Rebecca Robinson** – Administrative Director
- **Courtney Breault** – Associate Director of Quality

Closing

Recording and Webinar Evaluation

- An email will be sent out after the webinar with a link to:
 - The slides and webinar recording
 - An evaluation survey
- CEU's will be accumulated and distributed after all data training sessions have been completed (for live sessions only)
- The webinar recording and slides will also be posted at:
<https://www.cpqcc.org/engage/annual-data-training-webinars-2021>

Upcoming Data Trainings



September 29th –
What's New with Quality
Improvement &
Research



October 6th - What's
New with CPeTS Data



October 13th - What's
New with NICU Data



October 20th - What's
New with HRIF Data

CPQC