Introduction to CPQCC and Friends

October 9, 2024

Webinar Logistics

All attendees are muted upon entry.

Please use the Q & A function – we will do our best to answer questions during the webinar.

We welcome your feedback and recommendations for improving future webinars.

Webinar Logistics

- 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-2023**

- If you attend as a team, please create a sign in sheet and send it to contactmccpop@stanford.edu to be eligible for contact hours/CEU's

- Attendees will be eligible for contact hours through the the Mid-Coastal California Perinatal Outreach Program (MCCPOP). MCCPOP is approved as a provider of continuing education by the California Board of Registered Nurses, Provider #3104. This course has been approved for **up to** 1.5 contact hours for the 90-minute events and 1.0 contact hours for the 60-minute events.

- Attendees must remain on the webinar for the entire time and fill out our survey in order to receive contact hours. The survey will be available immediately following this webinar.

Presenters

ANNALISA WATSON, MPH

PROGRAM MANAGER

JOCHEN PROFIT, MD, MPH
CO-CHAIR and CO-PRINCIPAL INVESTIGATOR

FULANI DAVIS

PROGRAM MANAGER LEAD

COURTNEY BREAULT, RN, MS, CPHQ

ASSOCIATE DIRECTOR OF QUALITY

Agenda

DURATION	TOPIC	PRESENTER
12:00 – 12:05 PM (5 min)	Welcome & Introductions	Annalisa Watson
12:05 – 12:15 PM (10 min)	CPQCC - Goals and Mission	Jochen Profit
12:15 – 12:50PM (35 min)	CPQCC Population – Who do We Track and Why? • Briefly, CMQCC – Maternal Data Center & QI • NICU Data and Reports • NICU Transport • RPPC • HRIF Population CPQCC Data Impact and Activities	Fulani Davis Annalisa Watson
12:50 – 1:05 PM (15 min)	QI Activities	Courtney Breault
1:05 – 1:15 PM (10 min)	Q&A Panel	Group

The California Perinatal Quality Collaborative

Jochen Profit, MD, MPH
Co-Chair CPQCC & CMQCC

CPQCC/HRIF – Mission

Our mission is to **improve** 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**.

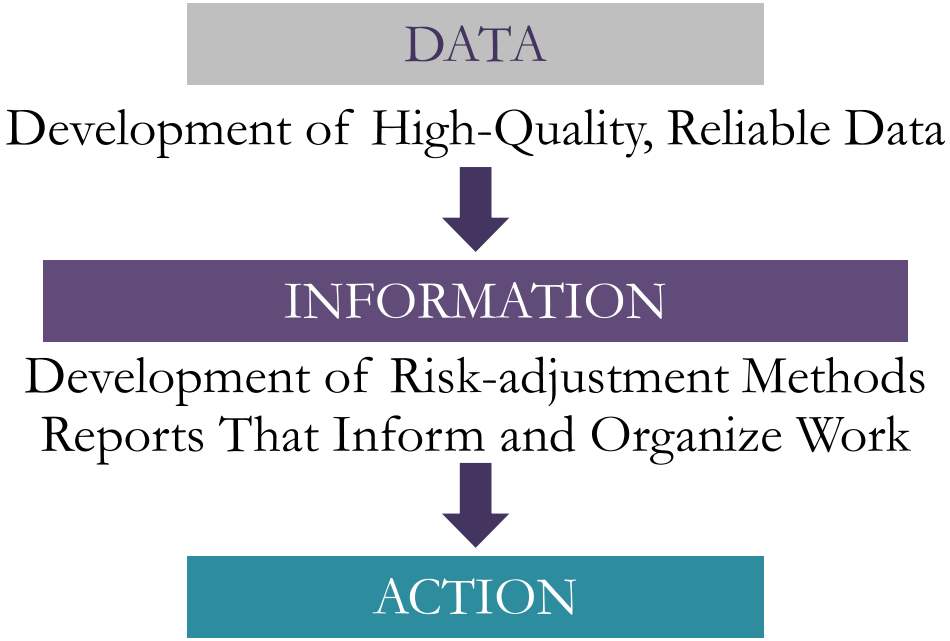
Key Activities

1. Audit and Feedback, Benchmarking
2. Quality Improvement
3. Education
4. Research

Audit and feedback

CPQCC Data Core

Turning Data into Action



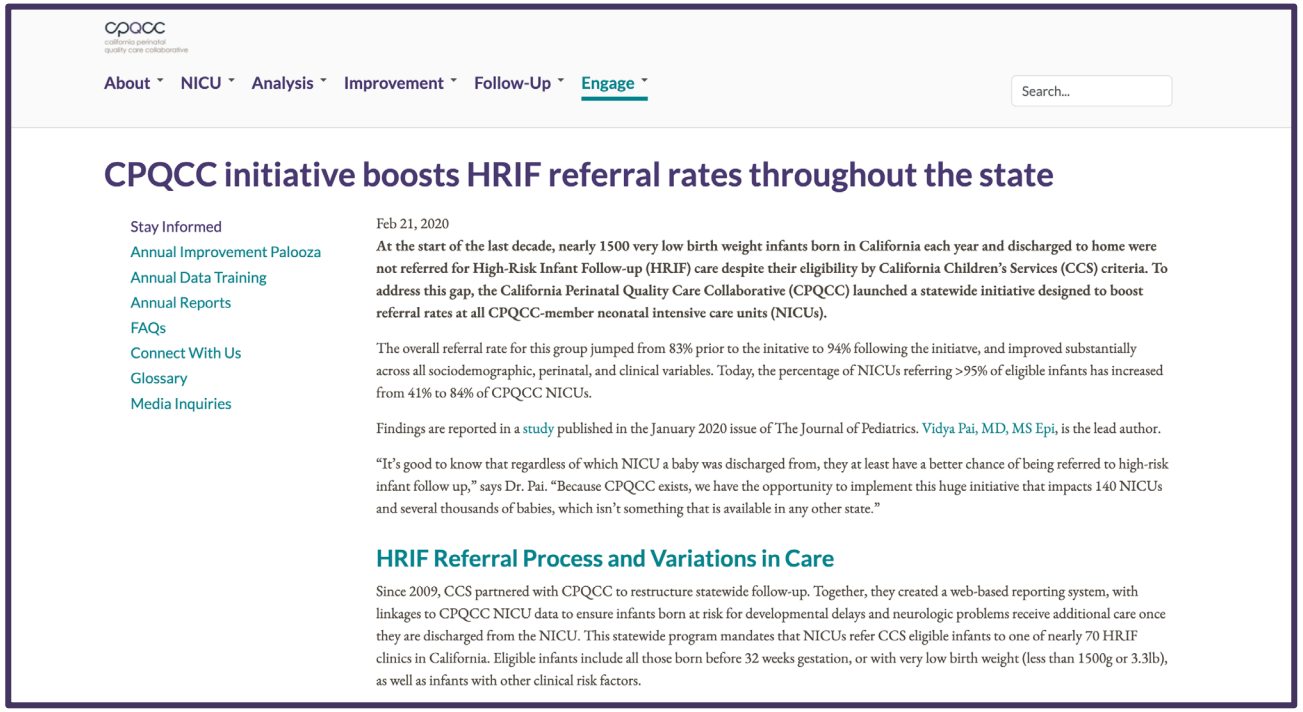
Research

CPQCC Research - Improved Referral of VLBW to HRIF

- **Pre-intervention** period - birth 1/10-6/13: **83% referred**
- **Post-intervention** period birth 7/13-12/16: **95% referred**

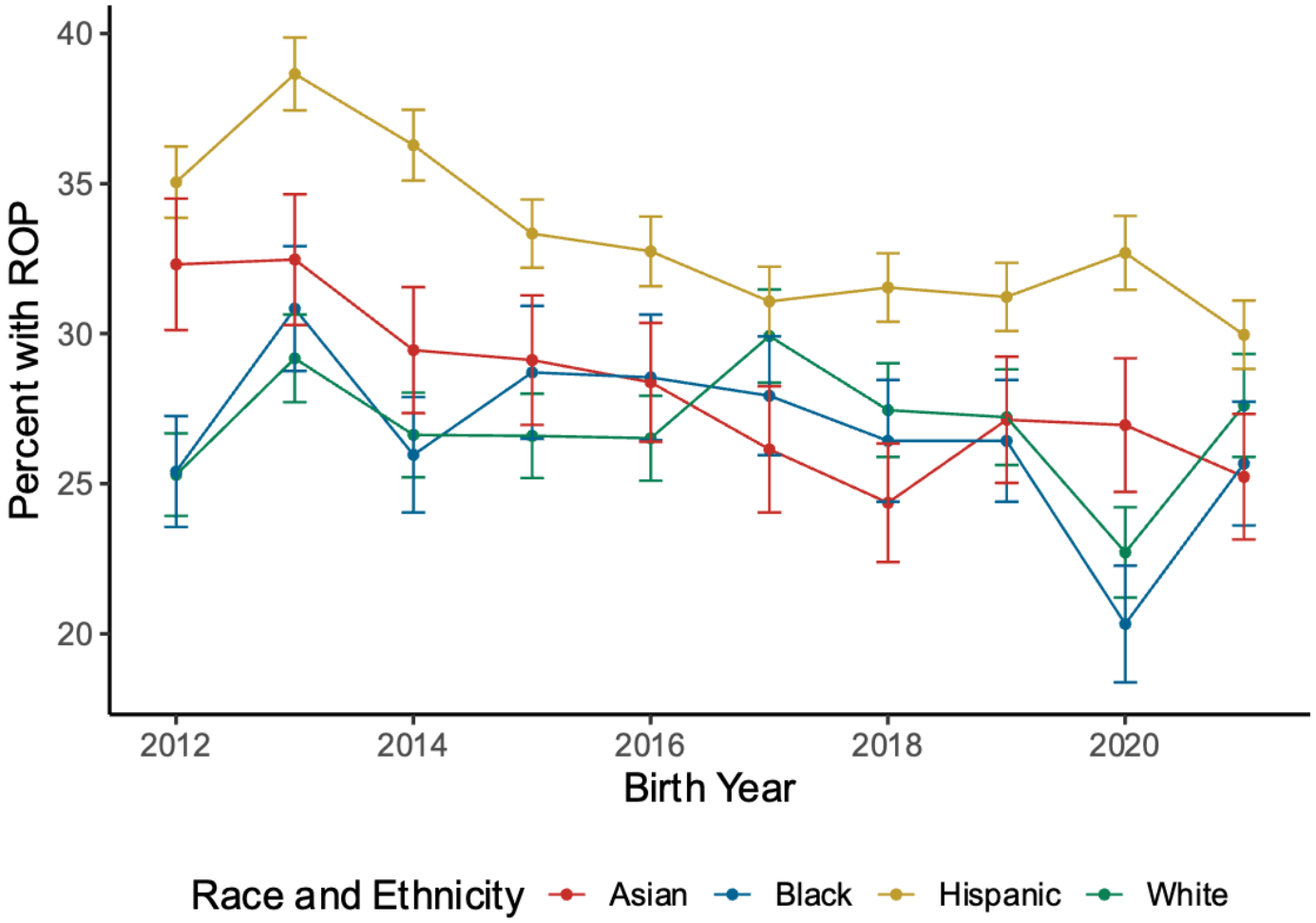
95%

83%



Pai V, et al *J Pediatrics* 2020;216:101-108.e1

Retinopathy of Prematurity (ROP) over Time in California



The prevalence of ROP decreased by 2% for Hispanic and Asian infants annually, **decreasing racial and ethnic disparities in California.**

Quinn MK, Lee HC, Profit J, Chu A. Trends in Retinopathy of Prematurity Among Preterm Infants in California, 2012 to 2021. *JAMA Ophthalmology*. Published online October 3, 2024. doi:10.1001/jamaophthalmol.2024.3909

QI Research

Publications and Grants Since 1997

Publications

~100

quality improvement related publications

Grants/Contracts

- NIH (6 R01s)
- HRSA
- CDC
- March of Dimes
- State of California
- Other foundations

Continuum of care structure – unique to California!

All NICU Admissions
Higher Acuity Admissions
Maternal Exposures
Neonatal Transport Data

RPPC Data

CMQCC Data

HRIF Data

By the numbers - 2023

400K+

BIRTHS
(provisional)

CMQCC

50K/18K

NICU/HIGHER ACUITY ADMITS

137/210

NICUs/BIRTH HOSPITALS

CPQCC/CMQCC

5K

ACUTE NEONATAL TRANSPORTS

CPeTS

9K

HIGH-RISK INFANTS REGISTERED

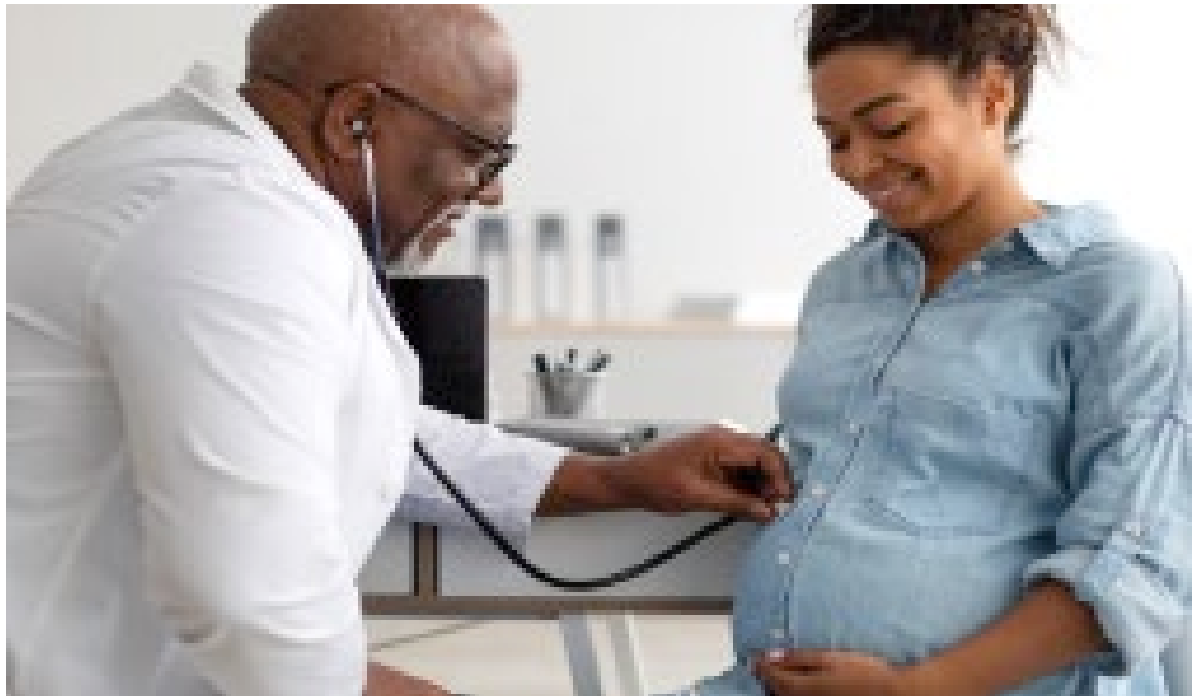
HRIF

CMQCC & CPQCC Teams

California Maternal Quality Care Collaborative (CMQCC)

Mission: End preventable morbidity, mortality, and racial disparities in maternity care

- Established in 2006
- Multi-stakeholder collaborative with a focus on hospital members
- Provides programs and tools to support hospital QI activities
- Committed to evidence-based and data-driven QI



CMQCC's Spectrum of Stakeholders/Active Partners

State Agencies

- CA Department of Public Health, MCAH
- Regional Perinatal Programs of California
- DHCS: Medi-Cal
- Office of Vital Records
- Office of Statewide Health Planning and Development
- Covered California

Membership Associations

- Hospital Quality Institute
- California Hospital Association
- Pacific Business Group on Health
- Integrated Healthcare Association

Key Medical and Nursing Leaders

- UC, Kaiser (N&S), Sutter, Sharp, Dignity Health, Scripps, Providence, Public hospitals

Professional Groups (California sections of national organizations)

- American College of Obstetrics and Gynecology
- Association of Women's Health, Obstetric and Neonatal Nurses
- American College of Nurse Midwives
- American Academy of Family Physicians
- Public Health Institute (PHI)
- The Joint Commission

Public, Consumer and Community Groups

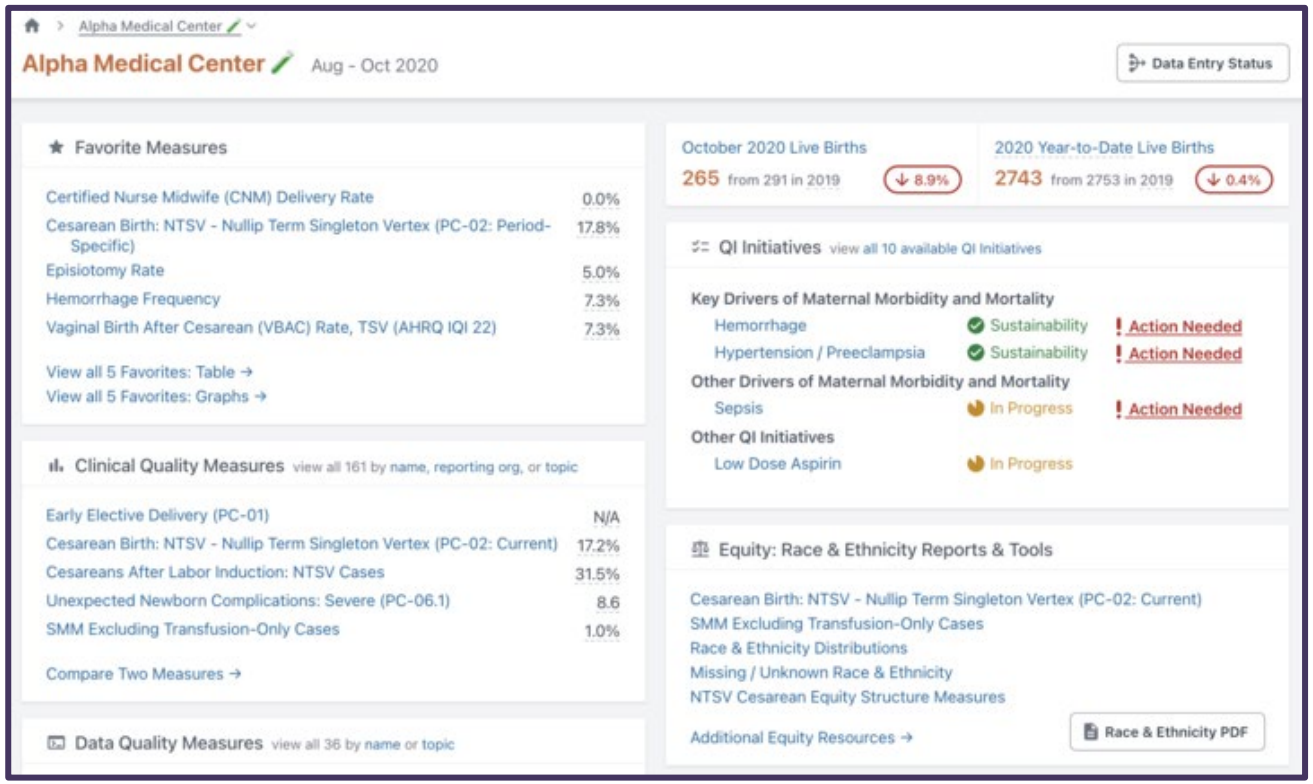
- Patients with Lived Experience
- Consumers' Union
- March of Dimes
- California HealthCare Foundation
- Cal Hospital Compare
- Community groups and organizations

Health Plans

- Commercial and Managed Medi-Cal Plans

CMQCC Maternal Data Center (MDC)

- Online tool developed by CMQCC in 2012
- Primary Goal: Support Hospital Quality Improvement
- Key Principles:
  - Rapid-cycle metrics
  - Leverage existing data sources
  - Align measures for performance reporting
  - Intuitive and easy to navigate
  - Exceptional customer support



CMQCC Maternal Data Center (MDC)

The Maternal Data Center: 2024 Hospital Members

Launched 2014
38 Hospitals
~70% of Delivery Volume

Launched in 2015
29 Hospitals
~75% of Delivery Volume

Launched in 2012
209 Hospitals
~ 99% of CA Delivery Volume

NEW! National MDC
5 Hospitals to Date
Hawaii (1) New Mexico (1) Texas (3)

281 Hospitals

500,000 deliveries per year

~15% of births nationally

Counts as of 2/28/24

CMQCC Quality Improvement Activities

CMQCC
California Maternal
Quality Care Collaborative

FOR FAMILIES | CMQCC Accounts LogIn | Contact Us

ABOUT CMQCC | MATERNAL DATA CENTER | QI INITIATIVES | RESEARCH | RESOURCES & TOOLKITS

RESOURCE LIBRARY

TOOLKITS

- Early Elective Deliveries Toolkit
- OB Hemorrhage Toolkit, V3.0
- Hypertensive Disorders of Pregnancy Toolkit

WEBINARS

Toolkits

CMQCC Maternal Quality Improvement Toolkits aim to improve the health care response to leading causes of preventable death among pregnant and postpartum women as well as to reduce harm to infants and women from overuse of obstetric procedures. All Toolkits include a compendium of best practice tools and articles, care guidelines in multiple formats, hospital-level implementation guide, and professional education slide set. The Toolkits are developed in partnership with key experts from across California, representing the diverse professionals and institutions that care for pregnant and postpartum women. CMQCC is grateful to the volunteers who make this work possible.

Maternal Quality Improvement Toolkits:

- Toolkit to Support Vaginal Birth and Reduce Primary Cesareans, Addended Part V (2022)
- Improving Health Care Response to Obstetric Hemorrhage, V3.0, 2022
- Improving Health Care Response to Hypertensive Disorders of Pregnancy, V2.0, 2021
- Mother & Baby Substance Exposure Initiative Toolkit, 2020
- Improving Diagnosis and Treatment of Maternal Sepsis, 2020
- Improving Health Care Response to Maternal Venous Thromboembolism, 2018
- Improving Health Care Response to Cardiovascular Disease in Pregnancy and Postpartum, 2017
- Elimination of Non-medically Indicated (Elective) Deliveries Before 39 Weeks Gestational Age, 2010 (Licensed to March of Dimes)

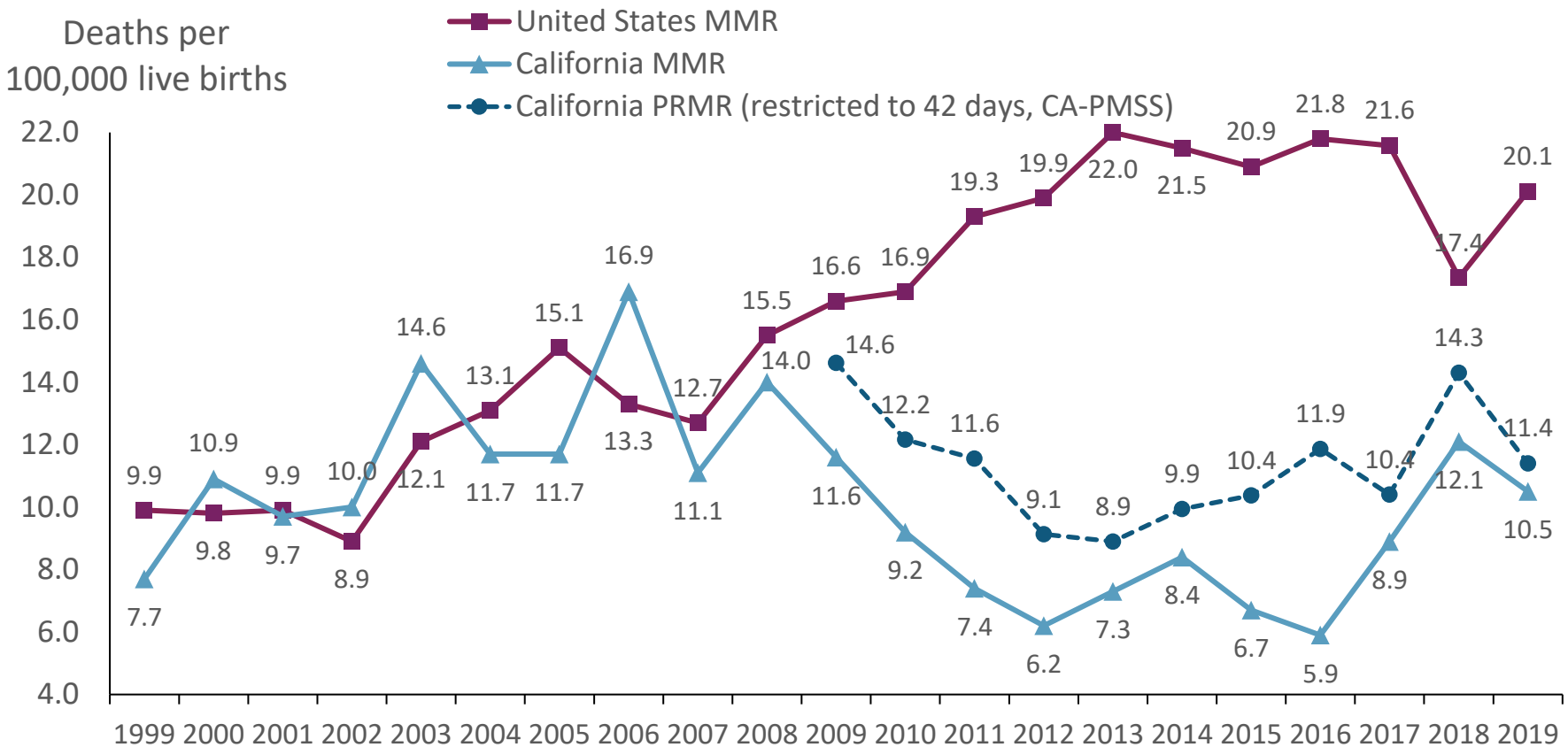
Contact Us

If you are having problems downloading our toolkit, please try using the latest versions of Chrome, Firefox or Safari, as problems may result from using another browser.

If you are still unable to download the toolkit or have further questions, please contact CMQCC.

cmqcc.org/resources-tools-kits/toolkits

Maternal Mortality Ratio in U.S. and California, 1999-2019



MMR is based on death certificate data alone.

Missing or inaccurate information about

- Pregnancy status
- When the death occurred
- Causes of death

Leads to missed maternal deaths that occurred up to 42 days after pregnancy ended.

CA-PMSS identified more deaths in the same time frame.

Maternal mortality ratio (MMR) = Number of maternal deaths per 100,000 live births, up to 42 days after the end of pregnancy. Maternal deaths in California were identified using ICD-10 cause of death classification for obstetric deaths (codes A34, O00-O95, O98-O99) from the California death certificate data (1999-2013) and the California pregnancy status errata file (2014-2019). Data on U.S. maternal deaths are published by the National Center for Health Statistics and found in the CDC WONDER Database for years 1999 or later (accessed at http://wonder.cdc.gov on April 14, 2022).

Accessed from MMR vs PRMR Measures 2009-2019 data slides
https://www.cdph.ca.gov/Programs/CFH/DMCAH/Pages/CA-PMSS.aspx

Continuum of care structure – unique to California!

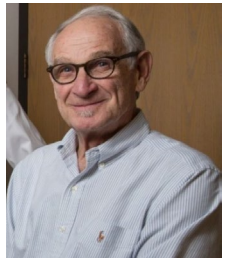
All NICU Admissions
Higher Acuity Admissions
Maternal Exposures
Neonatal Transport Data

RPPC Data

CMQCC Data

HRIF Data

CPQCC Team

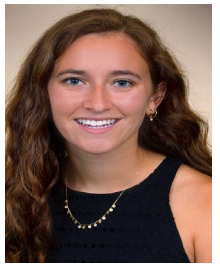
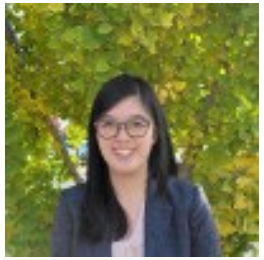










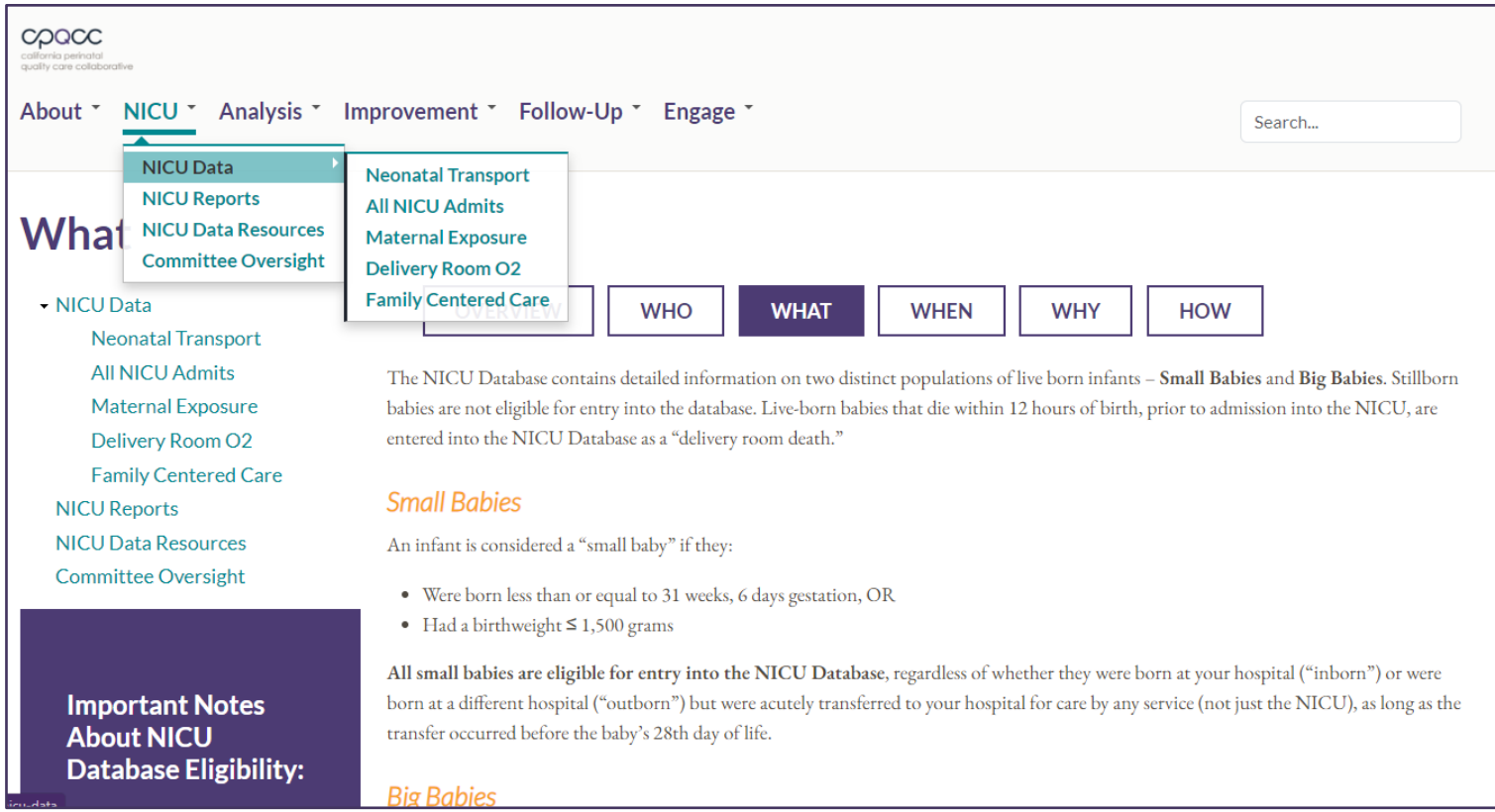
CPQCC's NICU Database Developments and Milestones

CPQCC eligibility criteria for higher acuity infants:

1998 VON/CPQCC Small Baby infants 401-1500g or 22-29 weeks GA

- **2012** CPQCC Small Baby infants expanded to 401-1500g or 22-31 weeks GA
- **2022** Updated both VON/CPQCC Small Baby infants to ≤ 1500g or ≤ 29/31 weeks GA

2000 CPQCC Big Baby infants > 1500 Grams



CPQCC's NICU Database Developments and Milestones

NICU Data Entry System:

2005 Online Data Entry System – Realtime Reporting

- 2006 Combined data entry for both **Small Baby and Big Baby** infants
- 2007 **CPeTS:** Linked data records for eligible infants acutely transported into NICUs
- 2010 **Electronic Data Submission (EDS):** Ability to upload multiple records via CSV files
- 2013 **HRIF Linkage:** Infants registered in the HRIF database linked to NICU records
- 2018 **All NICU Admits Database:** Allows the entry of **all** NICU admissions (including non-CPQCC)
- 2019: **MatEx Database:** Allows the entry of all NICU infants exposed to maternal substances (including non-CPQCC)

***** Optional Data Collection Items: **Delivery Room Oxygen** (DRO2), **Family Centered Care** (FCC), **Motivating & Optimizing Maternal Milk in Safety Net NICUs** (MOMMS)

CPQCC's NICU Database Developments and Milestones

NICU Reports Database:

2005 Online Data Report System – Realtime Outcomes

- 2017 **NICU Dashboard** (NICU & Region), Control Charts
  - 2021 Added visibility for network and CCS level
- 2019: **Baby Monitor** and **Health Equity Dashboard**
- 2020: **Focusboards:** Gastroschisis/Omphalocele and **Maternal Exposures** (MatEx), **Optional All NICU Admits**
  - 2022: **Family Centered Care** (FCC)
  - 2023: Chronic Lung Disease (CLD), Antibiotic Use (ABX)
- 2024: **System level Reporting**

Dashboard for Demo NICU as of Sep 10, 2024 at 04:24

2023 2024

Demo Center Operations

Live Births	Inborn Admission Percent	NICU Admissions	CPQCC Small Babies	CPQCC Big Babies	Acute Transports-Out	TRIPS @ Destination NICU Admit
1,734	8.5 %	151	14	23	16	16.0

TRIPS Change Eval to NICU Admit	Out-the-Door Time [AcTrsOut]	With at least 1 Major Surgery
1.33	1 Hour 19 Minutes	0

Small Babies

SWMM	Growth Velocity	Median PMA at Home Discharge	ANS Treatment	ROP Exam at Recommended Age	Chronic Lung Disease	NEC at this NICU
57.7 %	12.2	37 Weeks / 4 Days	100 %	100 %	22.6 %	0.0 %

Home on Human Milk Nutrition	Normothermic
87.5 %	82.9 %

Big Babies

Early Sepsis	Moderate/Severe HIE	Active Therap. Hypothermia Volume	High Acuity
0.58 ‰	1.18 ‰	0	100 %

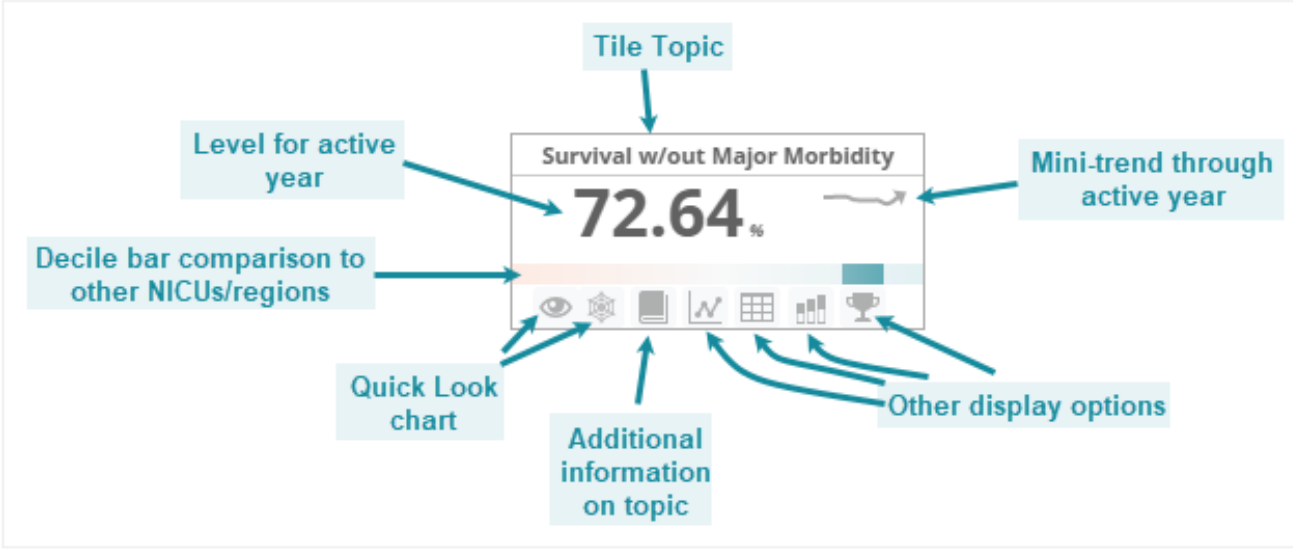
Infection Control

Late Infection at this NICU	CLABSI	ABX Use
13.8 %	0.00 ‰ Line Days	12.6 %

HRIF

HRIF Referral	Timely HRIF Referral	Core Visit 1 at Recommended Age
100 %	77.8 %	57.1 %

The different metrics are each shown in separate tiles:

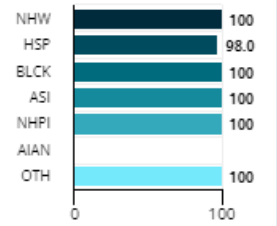


Each tile has **4 parts**:

1. A **title** describes the tile topic. If compared to other NICUs the current NICU's performance is in the least desirable decile, the title appears on a **orange** background. If compared to other NICUs the current NICU's performance is in the most desirable decile, the title appears on a **teal** background. In addition, for risk-adjusted outcomes (survival without major morbidity, Chronic Lung Disease, NEC at this NICU and Nosocomial Infection at this NICU), orange highlighting is used if the NICU's performance is statistically significantly below the average CPQCC NICUs performance while teal highlighting indicates statistically significantly above average performance.
   Note that this highlighting does not apply to some topics. For instance, the total number of births at the NICU's location is shown in neutral colors.
2. A **number** describing a quantitative result for the topic. The tile number is highlighted in the same way as the box title.
   Next to the number, a mini-trend is shown. If over time, the incidence of the process or outcome has been in the direction of improvement, the mini-trend appears in teal; if the time trend is mostly a decline, the mini-trend appears in orange, otherwise in neutral gray color.
3. A **decile bar** with a NICU's / region's position among all CPQCC NICUs / perinatal regions highlighted.
4. The bottom section of the tile provides additional **options** for the topic.

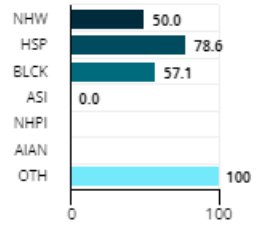
Health Equity Dashboard as of Oct 2, 2024 at 04:35 Toggle Dash Demo Center 2020 - 2024

Antenatal Steroids



Show Details

Timely Surfactant Use



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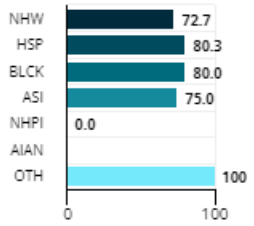
Normothermic



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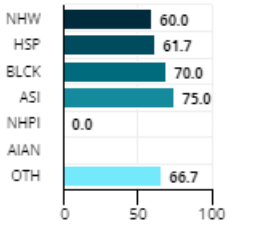
Minimal Intub Vent



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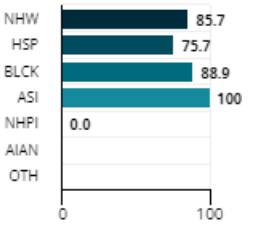
NIV when 1-Min AP>6



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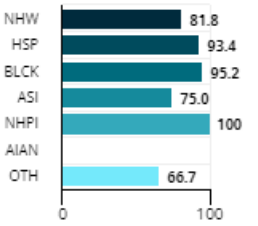
Cranial US by DOL28



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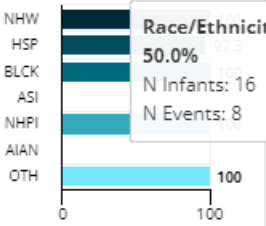
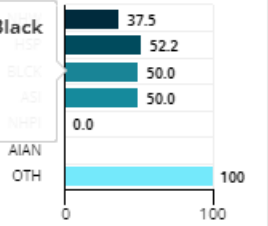
Eye Exam



Race/Ethnicity: Black
50.0%
N Infants: 16
N Events: 8

Show Details

Human Milk Nutrition



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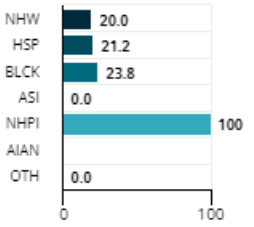
Timely HRIF Referral



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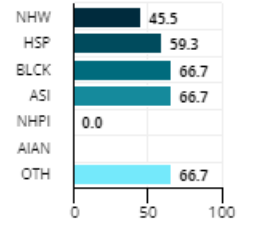
SWMM



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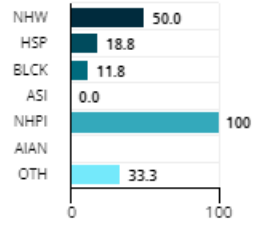
CLD



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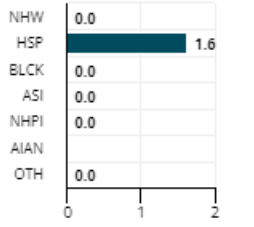
Pneumothorax



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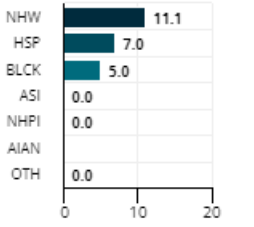
Severe Peri-IVH



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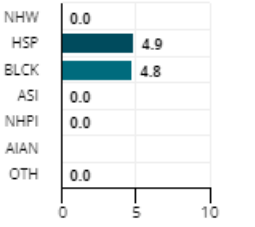
NEC



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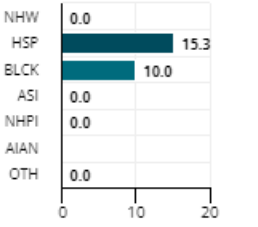
Late Infection



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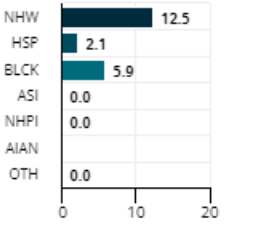
Severe ROP/ROP Surgery



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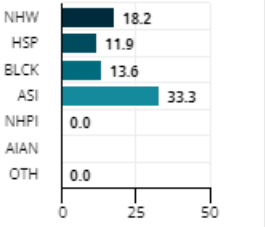
Infant Death



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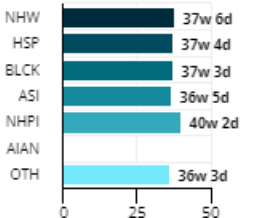
Median PMA at Discharge



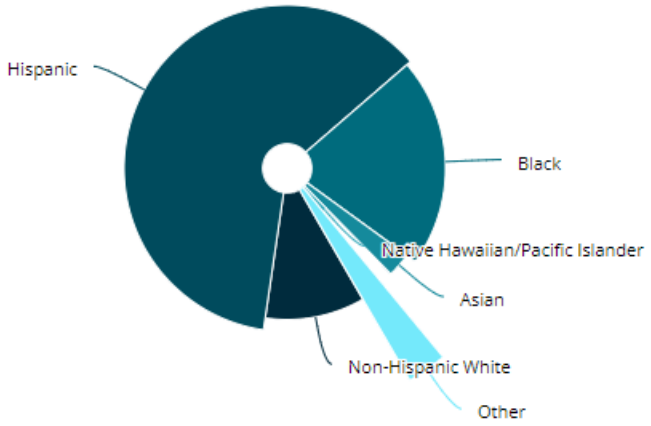
Health Equity Dashboard as of Oct 2, 2024 at 04:35 Toggle Dash Demo Center 2020 - 2024

Hide Details

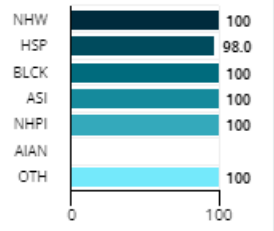
To exit full screen, press and hold Esc

Race/Ethnicity Distribution for all VON Small Babies

Radii proportional to % with Human Milk Nutrition ↑

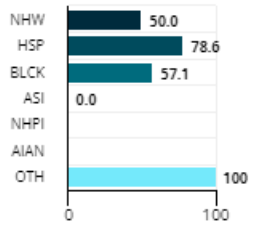


Antenatal Steroids



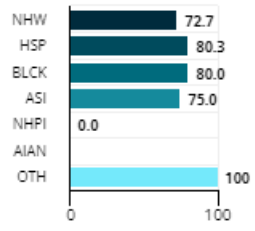
Show Details

Timely Surfactant Use



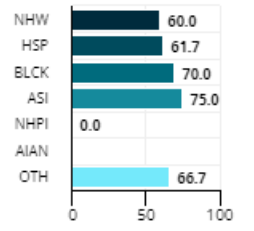
Show Details

Normothermic



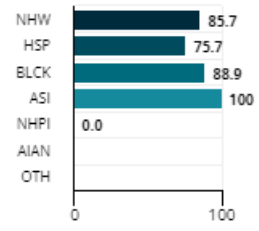
Show Details

Minimal Intub Vent



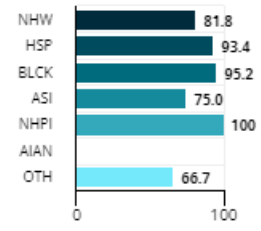
Show Details

NIV when 1-Min AP>6



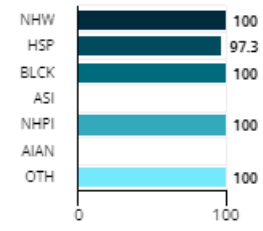
Show Details

Cranial US by DOL28



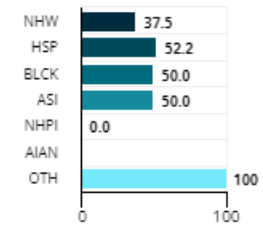
Show Details

Eye Exam



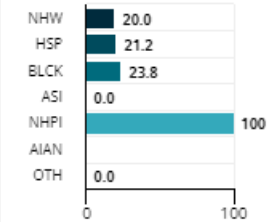
Show Details

Human Milk Nutrition



Show Details

Timely HRIF Referral



Health Equity Dashboard as of Oct 2, 2024 at 04:35

Toggle Dash

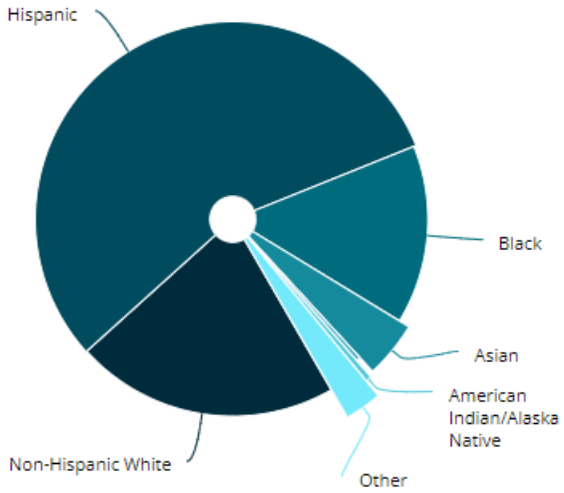
Demo Region

2020 - 2024

Hide Details

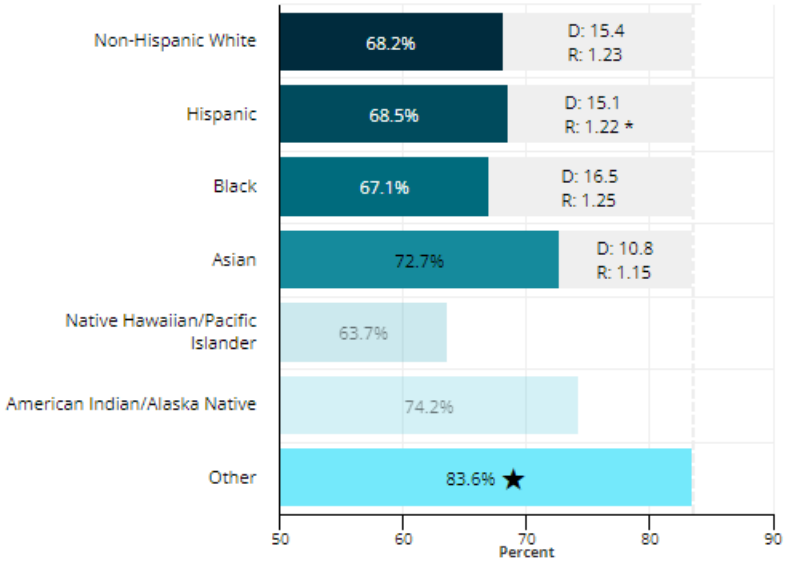
Race/Ethnicity Distribution for all VON Small Babies

Radii proportional to % with Human Milk Nutrition ↑

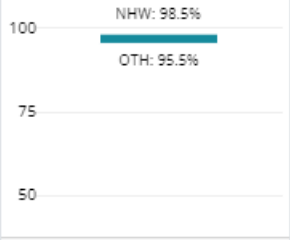


Human Milk Nutrition by Race/Ethnicity

Reset zoom

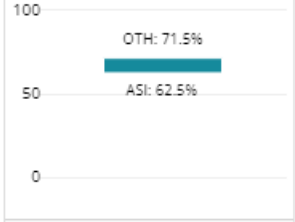


Antenatal Steroids



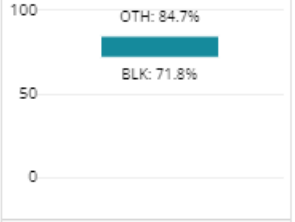
↑ Show Details

Timely Surfactant Use



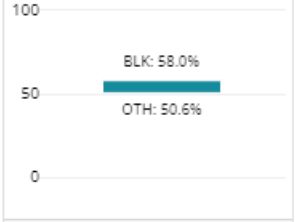
↑ Show Details

Normothermic



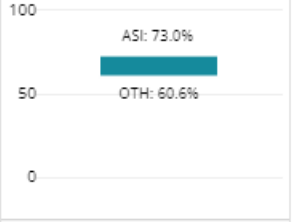
↑ Show Details

Minimal Intub Vent



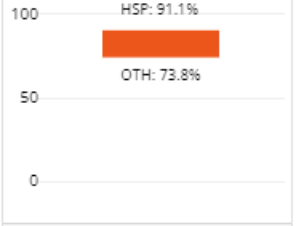
↑ Show Details

NIV when 1-Min AP>6



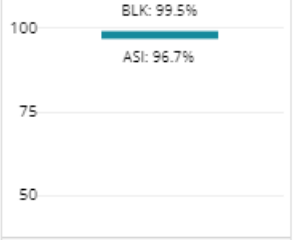
↑ Show Details

Cranial US by DOL28



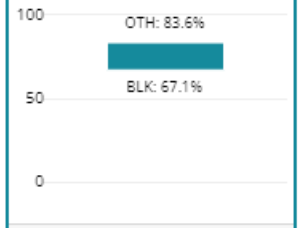
↑ Show Details

Eye Exam



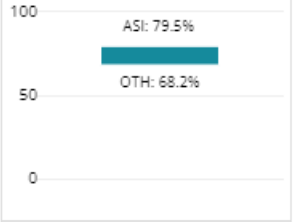
↑ Show Details

Human Milk Nutrition



↑ Show Details

Timely HRIF Referral



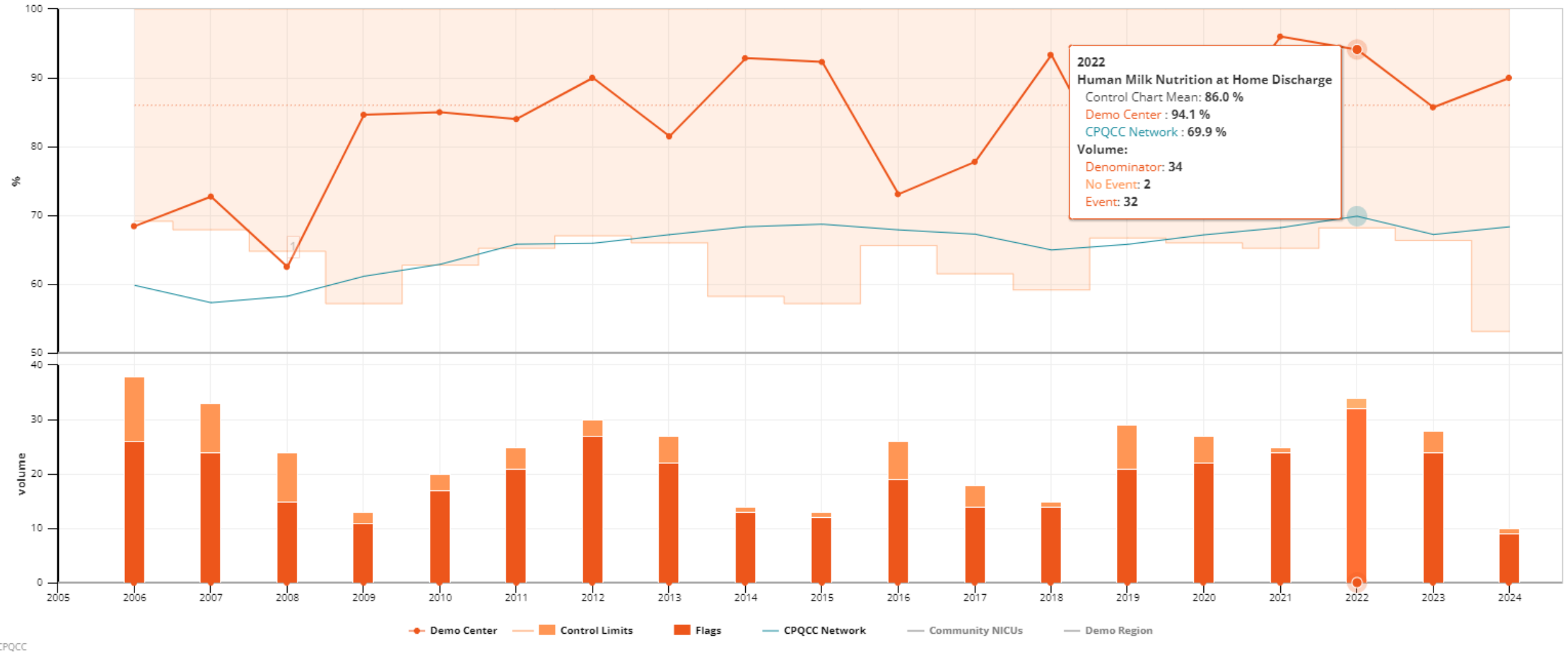
Hide Volume | Show CUSUM

Human Milk Nutrition at Home Discharge

VON Small Babies Home from Center, Discharged in 2006-2024

This chart is final for years 2023 and earlier. The chart is preliminary for 2024 as the data collection is on-going.

Demo NICU



CPQCC

Notes:

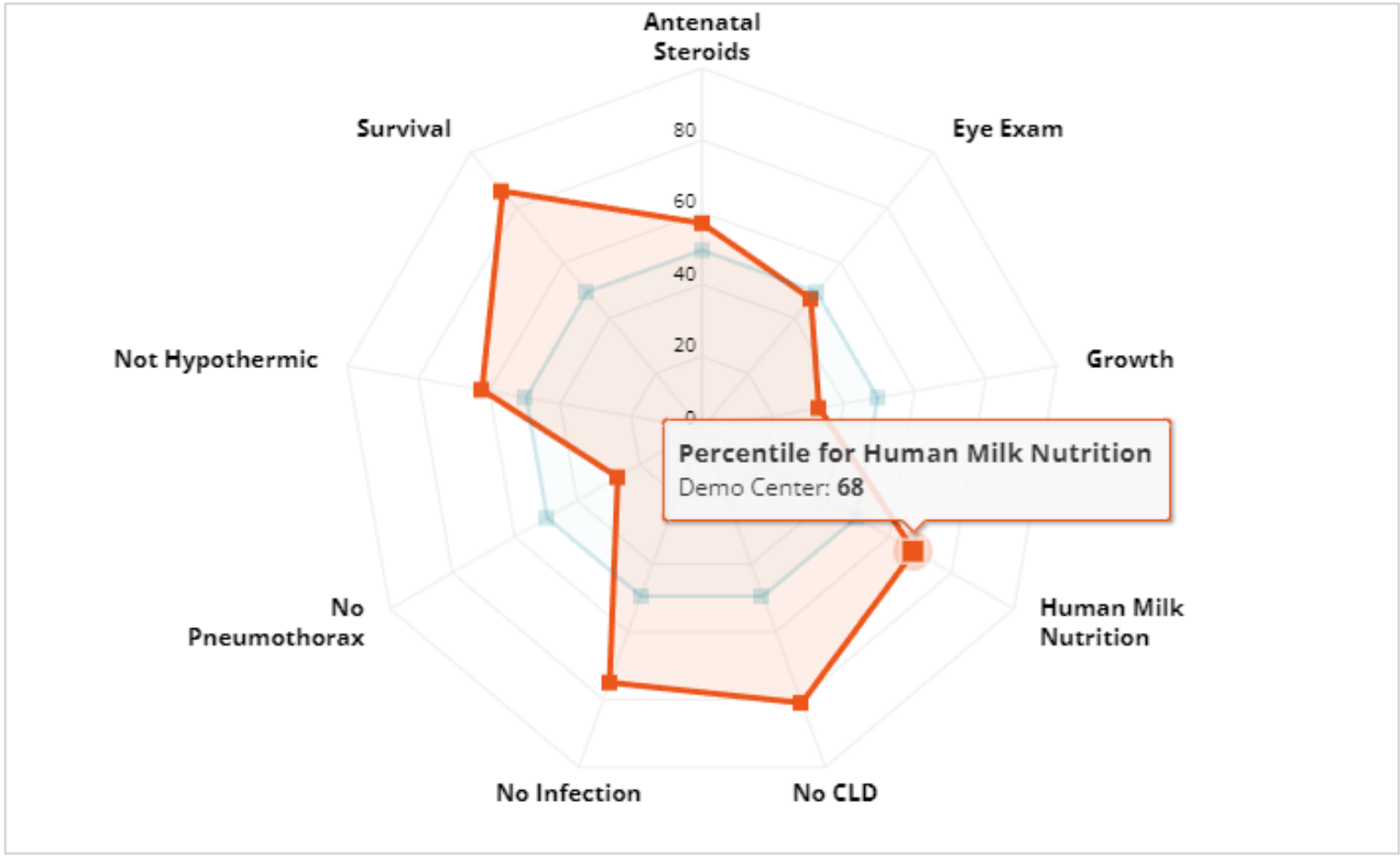
Control limits and central line are based on the most recent five years of data.

The VON small baby definition was revised in 2006 and 2022. Prior 2006: Infants with a birth weight of 401 to 1,500 grams. 2006 to 2021: Infants with a birth weight of 401 to 1,500 grams or 22 to 29 completed weeks gestation. 2022 or later: Infants with a birth weight less than or equal to 1,500 grams or less than or equal to 29 completed weeks gestation.

NICU BABY MONITOR

Components of the Baby MONITOR in All Infants ≤1,500 grams or ≤29 Weeks Completed Gestation, Discharged 06-01-2021 to 05-31-2024

Demo Center: Composite Score: 85



FOCUSBOARD: ALL NICU ADMITS

483
*NICU Admits of Infants born in 2024 **

Top 3 Problems during NICU Stay

The All NICU Admits DB for Demo Center used for this focusboard includes birth dates through 09/22/2024.
* 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

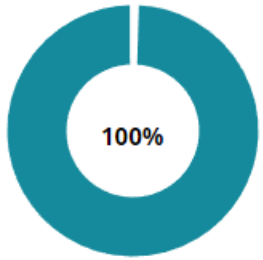
Explore summary of admit reasons or of problems during the NICU stay for NICU admits by acuity and year of birth ... Go

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

Home
Priming Oral Colostrum
Skin-to-Skin
Social Worker Visit

Priming with Oral Colostrum at this NICU



Percent with Oral Colostrum

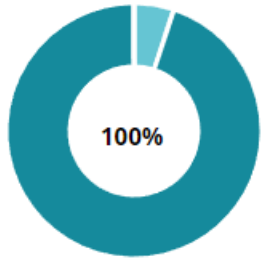
Median Hours to Oral Colostrum

The practice of priming with oral colostrum confers benefits to VLBW infants and signals NICU culture and commitment to use of mother's milk for nutrition.

The percent and median shown are based on all inborn infants who were hospitalized at your hospital for at least 48 hours, who did not have anomalies affecting the ability to prime with oral colostrum, and who were not exposed to maternal substance use during fetal life.

Explore this topic ... Go

Skin-to-Skin at this NICU



Percent with Skin-To-Skin

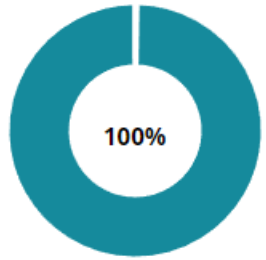
Median Days to Skin-To-Skin

Skin-to-skin care is protective against a variety of adverse neonatal outcomes. SKS requires holding of the infant by a family member. Positive touch is not counted. Infants that are transferred are included.

The percent and median shown are based on all inborn infants, who were hospitalized at your hospital for at least 5 days, and who did not have anomalies affecting the ability to provide skin-to-skin admitted to your NICU, and who never experienced high frequency ventilation.

Explore this topic ... Go

Social Worker Visit at this NICU



Percent with Social Worker Visit

Median Days to First Social Worker Visit

Timely social worker assessment is critical to identifying psychosocial and material needs of NICU families and to connect families to appropriate supportive services. Timely social worker contact, within 2 days of NICU admission, is also mandated by CCS regulations in California. The goal of this measure is to examine whether the needs of families are being assessed in a timely manner and to identify opportunities for improvement.

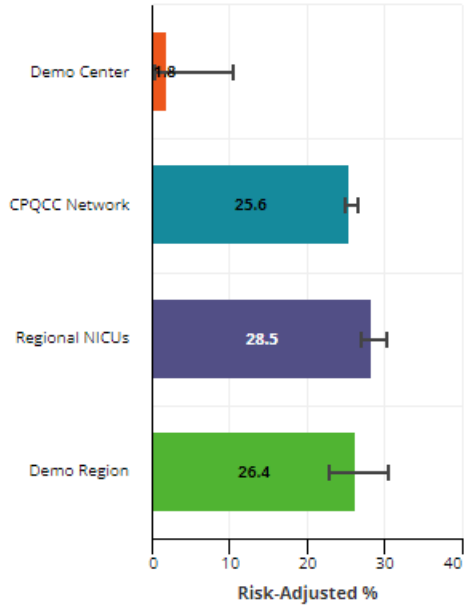
The percent and median shown are based on all inborn and outborn infants who were hospitalized for at least 3 days.

Explore this topic ... Go

javascript:document.fcc_getdata.fcctpc.value='fcctcol_demog';updfccCookies('fcctcol_demog',null,null,null,null,null,null,null,null,'fcctcol',null,null);updateTopic();

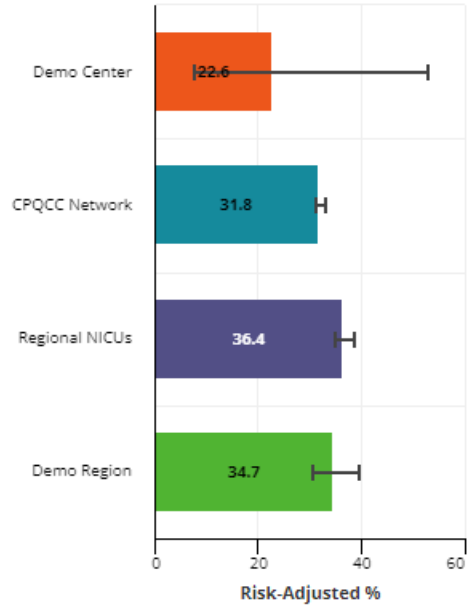
CLD Outcomes for Inborn or Outborn VON Small Babies Admitted by DOL 3, 2021 to 2023

Oxygen Use on the Date of Week 36 or at Discharge



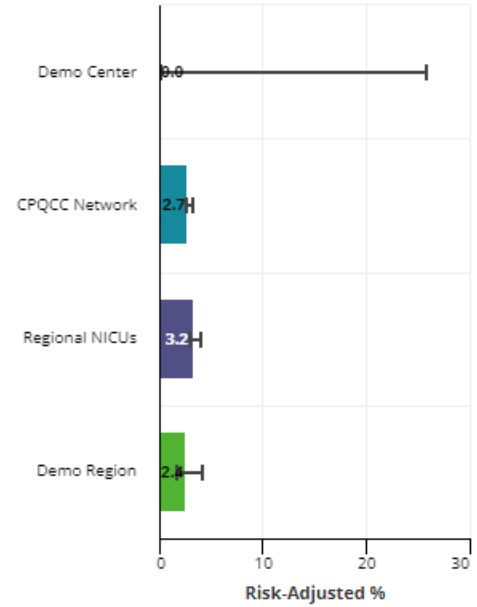
For birth years 2021 to 2023, Demo Center is among the top 25% performers for this metric.

Any Type of Respiratory Support on the Date of Week 36 or at Discharge



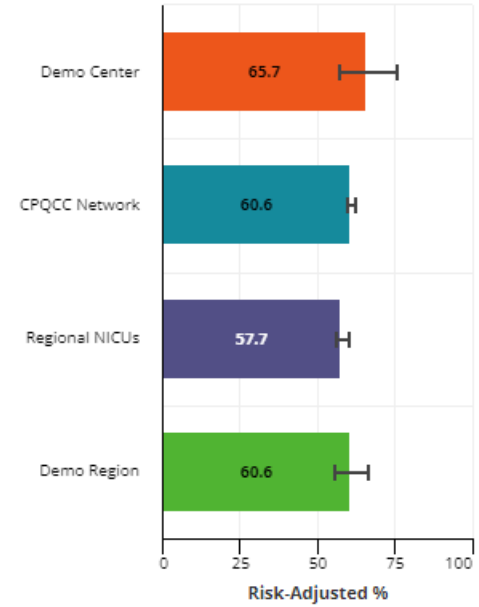
For birth years 2021 to 2023, Demo Center is in the second best performance quartile for this metric.

Intubated Respiratory Support on the Date of Week 36 or at Discharge



For birth years 2021 to 2023, Demo Center is among the top 25% performers for this metric.

Survival without Major Morbidity (SWMM)



For birth years 2021 to 2023, Demo Center is in the second best performance quartile for this metric.

Start Interactive Insights ... Go

Note:
The VON small baby definition was revised in 2006 and 2022. Prior 2006: Infants with a birth weight of 401 to 1,500 grams. 2006 to 2021: Infants with a birth weight of 401 to 1,500 grams or 22 to 29 completed weeks gestation. 2022 or later: Infants with a birth weight less than or equal to 1,500 grams or less than or equal to 29 completed weeks gestation.

Introduction to the NICU Reports Website

The NICU Reports website cpqccreport.org was constructed to serve as a report tool for Neonatal Intensive Care Units (NICUs) participating in the California Perinatal Quality Care Collaborative (CPQCC). What started as paper reports for the VON small baby population in 1998, transitioned to static on-line reports in 2002 that - due to the abundance of material offered through the CPQCC data collection - were replaced by dynamic near-real time reports in 2007.

The California Perinatal Transport System (CPeTS) on-line data collection was launched in the year 2006 resulting in additional reports on acute transport-in and acute transport-out activity for CPQCC member NICUs.

Starting from 2007, cpqccreport.org was further expanded to not only include NICU level reports, but also Perinatal Region level reports as well as reports at the sub-NICU level. For sub-NICU reporting, the report is restricted to outborn infants transported to the NICU from a specific referral location.

Starting with 2012, cpqccreport.org was expanded to include information on High Risk Infant Follow-Up (HRIF) registration of CPQCC infants thereby supporting member NICU's ability to ensure that HRIF eligible infants get enrolled and receive needed care beyond the NICU experience. Note that linked HRIF registration and CPQCC data is supported for 2009 and later.

Starting from December 2016, the cpqccreport.org update schedule was changed from bi-hourly to daily updates. The daily update not only generates standard NICU data bases, but also generates the perinatal region and network infant level files (see section on data bases and denominators) daily, a big change from the prior monthly updates.

The year 2016 brought additional changes to cpqccreport.org that were facilitated by better connection speeds and new and exciting real-time analytic tools. From the start, the analytic backbone of cpqccreport.org was SAS® (Statistical Analysis System). This tool has been enhanced by:

- the incorporation of Highcharts, a JavaScript-based charting tool that allows exciting dynamic enhancements of traditional statistical charts that are particularly suited to explore center-level and region-level processes and outcomes;
- the use of DataTables, a JavaScript library that provides the ability to generate responsive tables.

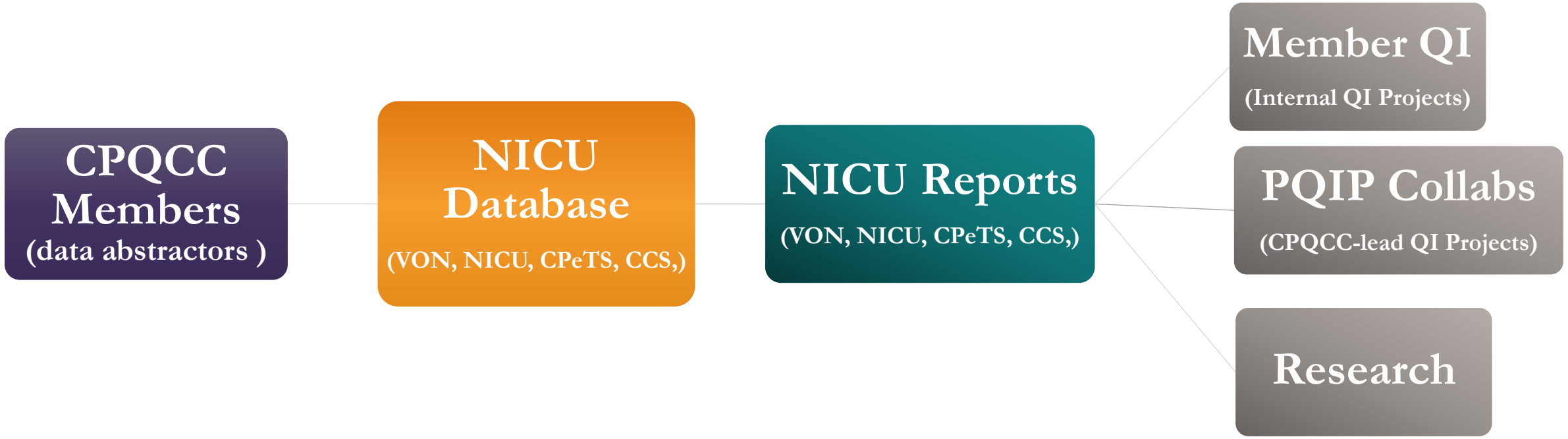
In 2018, cpqccreport.org was renamed **NICU Reports** website and re-designed in response to the increasing need of websites to be device responsive.

In the summer of 2020, the NICU Reports control chart feature was built out to allow NICUs tracking quality improvement efforts using the NICU data sets.

We believe that the depth of information available and each NICU's or Perinatal Region's ability to build their own custom reports makes the NICU Reports website a valuable tool for CPQCC member NICUs.

The remaining areas of the NICU Reports "Home" page explain the user interface (UI) as well as the many different report and chart options available to CPQCC members at the NICU and Perinatal Region level.

NICU Data Flow Chart



CPQCC Member NICUs

168 total NICUs in California

134 CPQCC Member NICUs

CCS Level

- 15 Intermediate NICUs
- 86 Community NICUs
- 23 Regional NICUs
- 12 Non-CCS

Perinatal Regions

- 16 North Coast – East Bay
- 11 Northeastern
- 11 San Joaquin – Central Valley – Sierra Nevada
- 12 Mid-Coastal
- 14 Southern Inland Counties
- 28 Central- North LA – Coastal Valley
- 9 Orange County
- 13 South Coastal and East LA
- 18 San Diego and Imperial
- 8 Kaiser North
- 16 Kaiser South

CPQCC NICU Data Center

What kind of *tools and resources* are offered at the NICU Data Center?

- **Help Desk**: A portal that allows users to request assistance, ask questions or express concerns
- **Data Reviews:** Submit a help ticket to schedule individual or group specific training over Zoom
- **Annual Data Training Webinars:** A series where we share an overview of the latest updates, projects and tools
- **NICU Data Sharing:** Allows NICUs to share data on transported infants that were seen in their NICU
- **Custom Query:** A powerful tool that allows users to pull a subsets of infants based on different measures.
- **Data Finalization Checklist:** A powerful tool that allows users to track and complete deliverables for specific deadlines.

CPQCC NICU Data Center

NICU Data Center Committees, workgroups and more!

- **Data Committee Advisory Group (DCAG)**
  - A team of data user experts that help us to optimize the NICU data system
- **Data Mentorship Program**
  - A team of experts that mentor their peer users to help them to optimize their internal workflow
- **Data Finalization Deadlines and Resources**
  - Online timeline: January – June
  - NICU Data Resources page: Data Finalization Guidelines, etc.
- **Data Management Awards**
  - 5 different types of award certificates that recognize and acknowledge the success of NICUs that submit certain deliverables by a designated deadline

Continuum of care structure – unique to California!

All NICU Admissions
Higher Acuity Admissions
Maternal Exposures
Neonatal Transport Data

RPPC Data

CMQCC Data

HRIF Data

California Perinatal Transport System (CPeTS)

California Perinatal Transport System

The California Perinatal Transport Systems CPeTS was established in 1976 pursuant to the enactment of California Assemby Bill 4439. This act appropriated funds for the development of a dispatch service to address the need for facilitating transport of critically ill infants and mothers with high risk conditions to regional Neonatal Intensive Care Units (NICUs) and Perinatal High Risk Units (PHRUs).

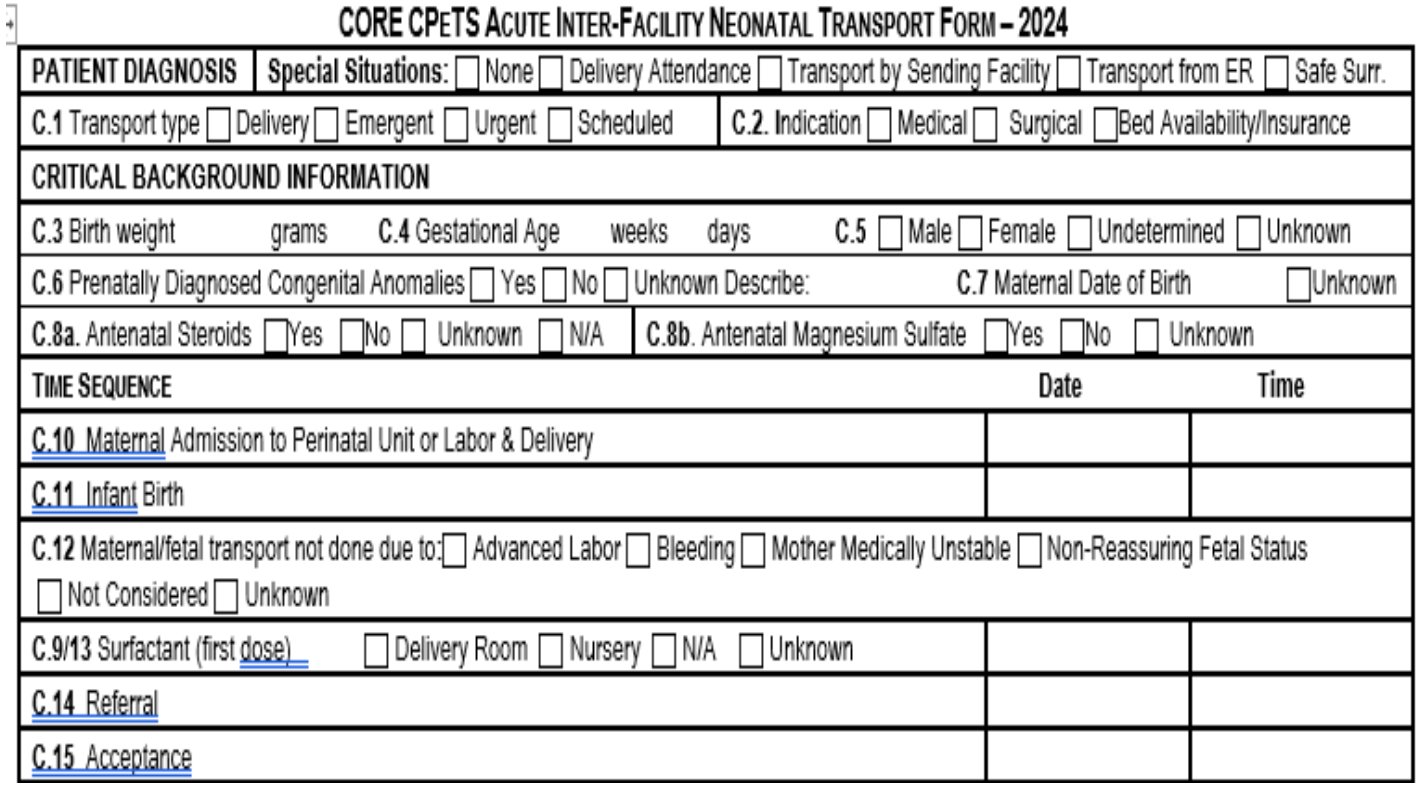
CPeTS provides the collection and analysis of perinatal and neonatal transport data for regional planning, outreach program development, and outcome analysis.This information is reported to participating hospitals, and the Division of Maternal, Child, and Adolescent Health of the California Department of Public Health. We support an integrated network of regional perinatal programs in California. Opportunities for regional perinatal programs to share and solve their common problems are provided through meetings of an Advisory Committee.

The California Perinatal Transport System can assist health care professionals in the REFERRAL of high-risk pregnant women and newborn infants. An updated bed availability status is obtained daily from regional CCS-California Children Services approved neonatal intensive care units. There are many NICUs participating in this daily survey that includes an array of county, for-profit, non-profit, university affiliated, and HMO-owned facilities. This information is being made available via this website.

perinatal.org

California Perinatal Transport System (CPeTS)

- Data collection began in 2007
- Over 108,000 records in system averaging 5,630/year over last 5 years



CORE CPeTS Acute Inter-Facility Neonatal Transport Form – 2024

PATIENT DIAGNOSIS	**Special Situations:** ☐ None ☐ Delivery Attendance ☐ Transport by Sending Facility ☐ Transport from ER ☐ Safe Surr.		
C.1 Transport type ☐ Delivery ☐ Emergent ☐ Urgent ☐ Scheduled	**C.2.** Indication ☐ Medical ☐ Surgical ☐ Bed Availability/Insurance		
CRITICAL BACKGROUND INFORMATION			
C.3 Birth weight grams	**C.4** Gestational Age weeks days	**C.5** ☐ Male ☐ Female ☐ Undetermined ☐ Unknown	
C.6 Prenatally Diagnosed Congenital Anomalies ☐ Yes ☐ No ☐ Unknown Describe:		**C.7** Maternal Date of Birth ☐ Unknown	
C.8a. Antenatal Steroids ☐ Yes ☐ No ☐ Unknown ☐ N/A	**C.8b.** Antenatal Magnesium Sulfate ☐ Yes ☐ No ☐ Unknown		
TIME SEQUENCE		**Date**	**Time**
C.10 Maternal Admission to Perinatal Unit or Labor & Delivery			
C.11 Infant Birth			
C.12 Maternal/fetal transport not done due to: ☐ Advanced Labor ☐ Bleeding ☐ Mother Medically Unstable ☐ Non-Reassuring Fetal Status ☐ Not Considered ☐ Unknown			
C.9/13 Surfactant (first dose) ☐ Delivery Room ☐ Nursery ☐ N/A ☐ Unknown			
C.14 Referral			
C.15 Acceptance			

California Perinatal Transport System (CPeTS)

- **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

Continuum of care structure – unique to California!

All NICU Admissions
Higher Acuity Admissions
Maternal Exposures
Neonatal Transport Data

RPPC Data

CMQCC Data

HRIF Data

RPPC Program Overview

RPPC
REGIONAL PERINATAL PROGRAMS OF CALIFORNIA

History

- Established in 1979
- Evolved from the need for a comprehensive, cooperative network of public and private health care provider within geographic areas to assure the well-being of pregnant women & their babies
- Promote access to appropriate levels of high-quality care
- Provide Quality Improvement (QI) resources, consultation and technical assistance to hospitals and providers

Goals

- Promote pregnant women and their babies having access to the level of care they need
- Reduce adverse maternal and neonatal outcomes
- Eliminate disparities in infant and maternal morbidity and mortality

Regional Perinatal Programs of California

The **Regional Perinatal Programs of California (RPPC)** and the **California Perinatal Quality Care Collaborative (CPQCC)** work together to enhance maternal and neonatal health across the state. This collaboration focuses on creating integrated regional perinatal systems to deliver high-quality, risk-appropriate care to pregnant women and newborns.

Key Objectives of the Collaboration:

1. **Integrated Care Systems:** Develop coordinated networks that combine clinical medicine, population health, and social support to ensure comprehensive care for mothers and infants.

2. **Quality Improvement Initiatives:** Implement data-driven quality improvement projects that address disparities in maternal and neonatal health, using shared resources and expertise from both the public and private sectors.

3. **Stakeholder Engagement:** Foster active collaboration among healthcare providers, community organizations, and public health entities through regular workshops and forums to disseminate best practices and innovative solutions.

4. **Holistic Support:** Focus on creating a supportive environment for at-risk mothers and their infants, leveraging local resources and social services to enhance health outcomes. This collaborative effort aims to strengthen the perinatal care system in California, ultimately reducing maternal morbidity and mortality while promoting healthier outcomes for newborns.

Continuum of care structure – unique to California!

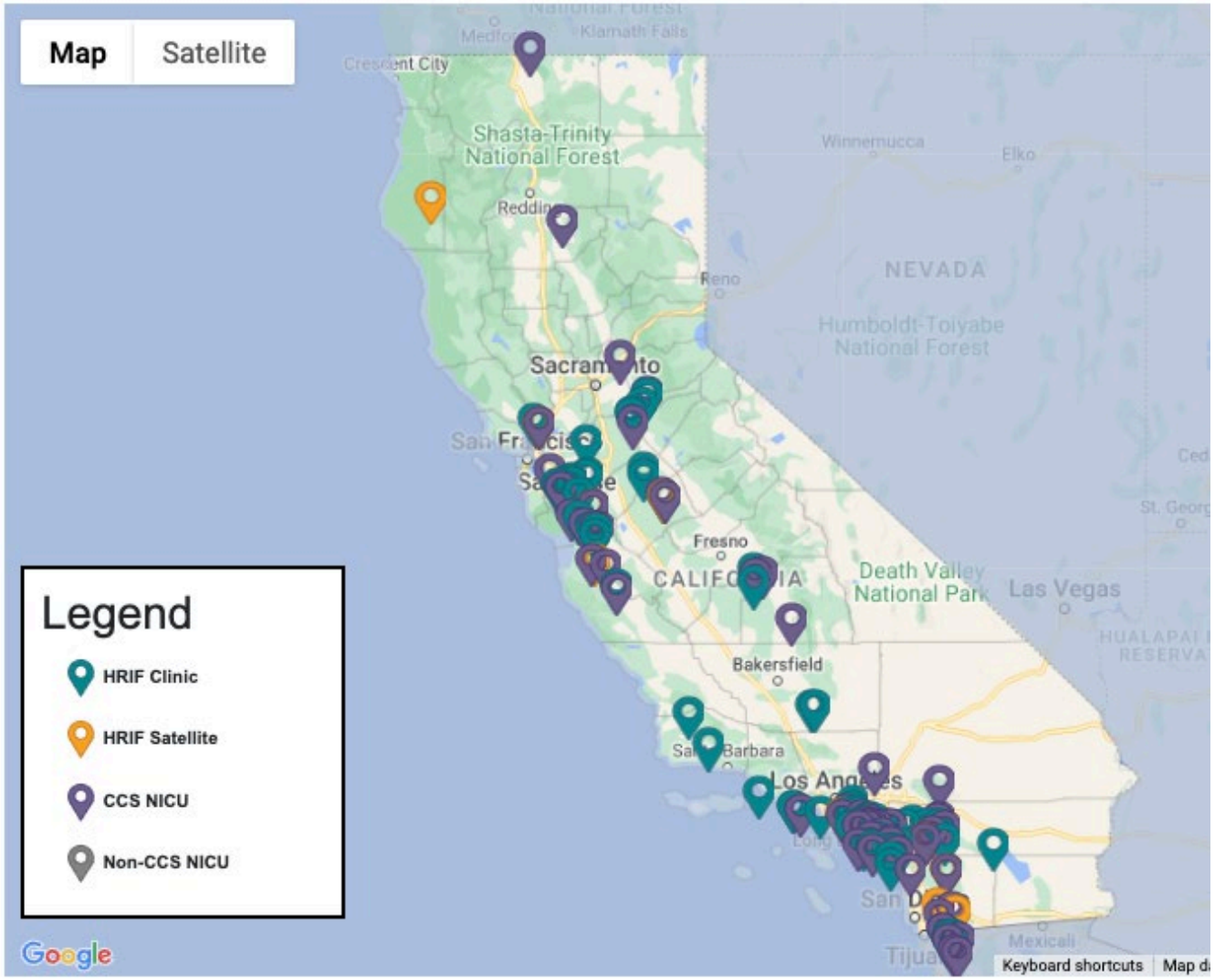
All NICU Admissions
Higher Acuity Admissions
Maternal Exposures
Neonatal Transport Data

RPPC Data

CMQCC Data

HRIF Data

CCS HRIF Program & NICU sites



124 CCS NICUs

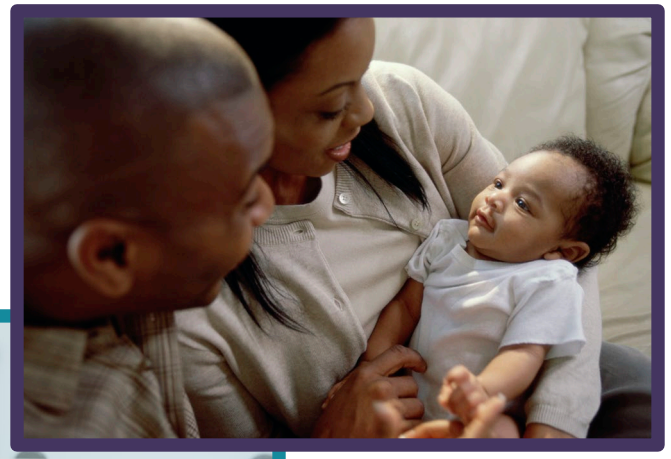
- 24 Regional
- 85 Community
- 15 Intermediate

66 HRIF Program Clinics

- 24 Regional
- 42 Community

12 HRIF Satellite Clinics

HRIF Visits: Number and Timing



Provides for **3 "Standard" or core visits**

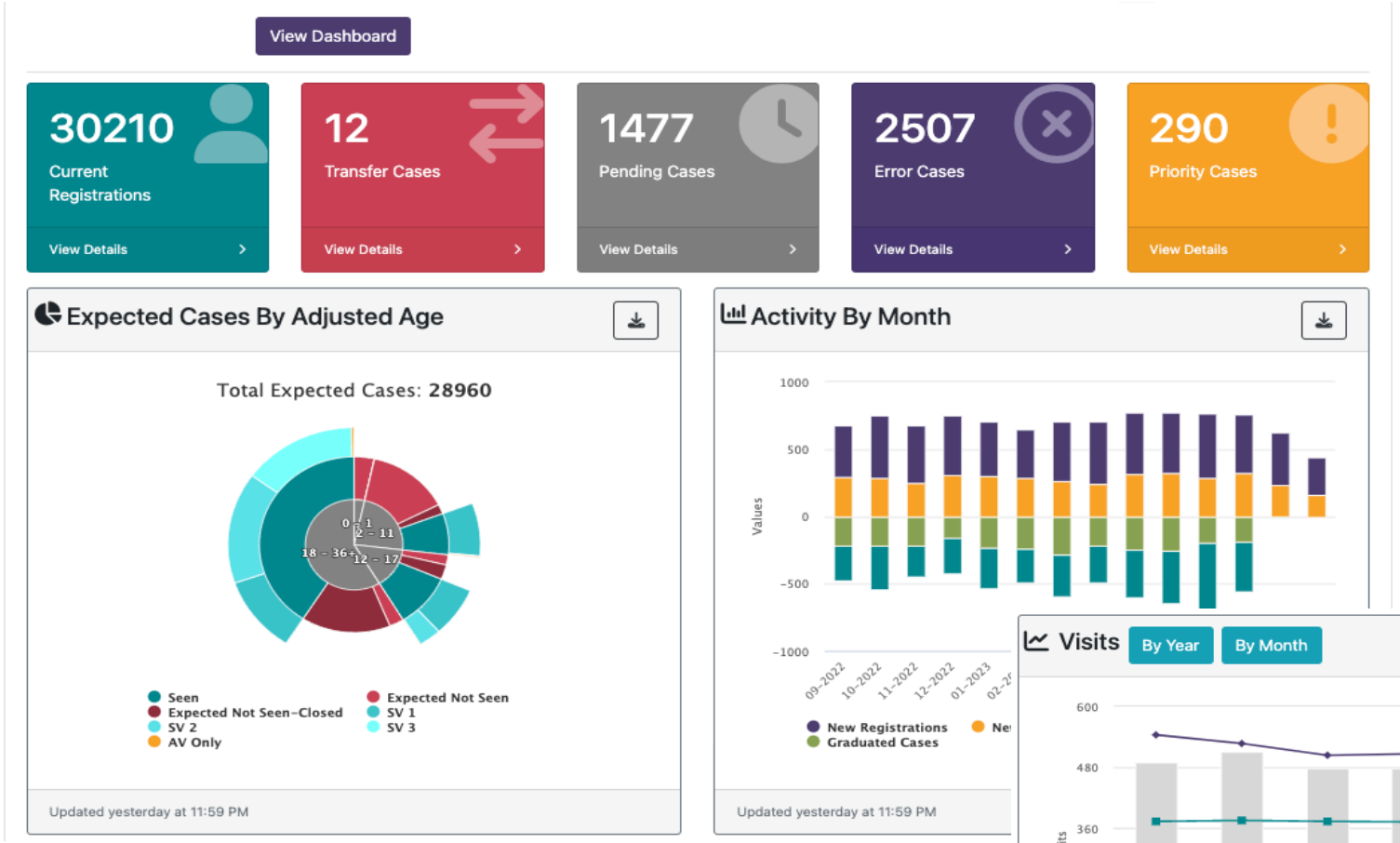
- **#1:** 4 - 8 months
- **#2:** 12 - 16 months
- **#3:** 18 - 36 months

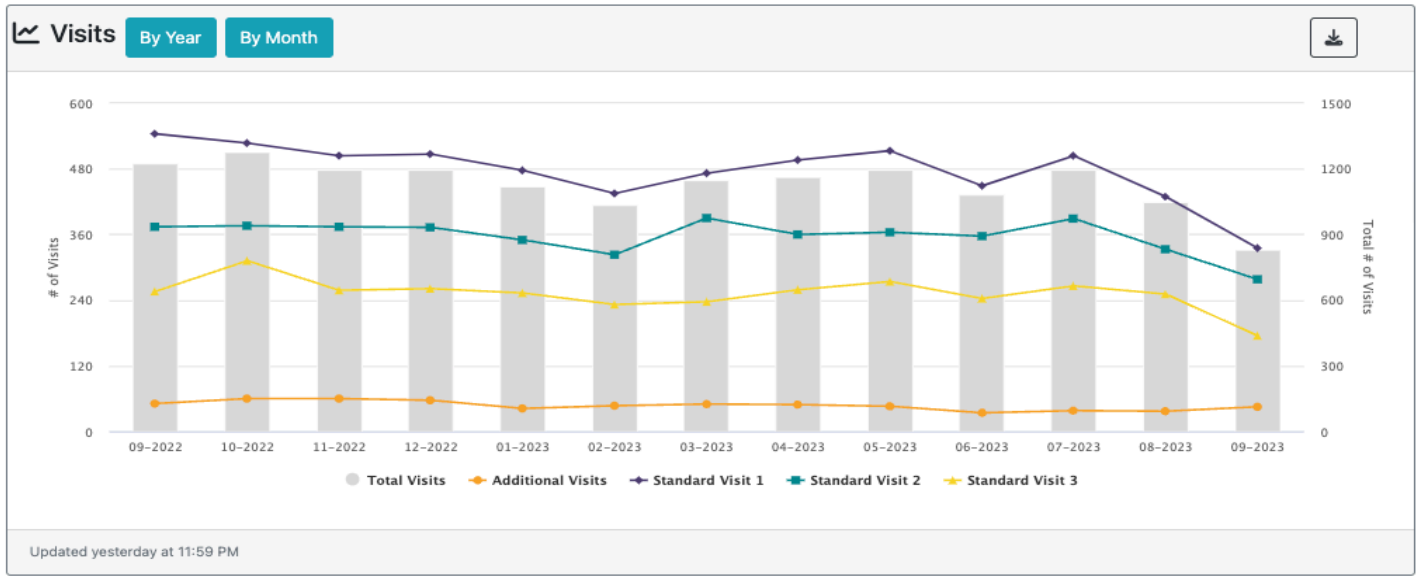
Additional visits covered by CCS as determined to be needed by HRIF team.

HRIF Visits: Beyond neurodevelopment

- Neurosensory, neurologic, developmental assessments, autism screening, ***but much more*** –
  - **Hospitalizations, surgeries, medications, equipment**
  - **Medical services and Special services**
    - Data on "Receiving", "Referred", but also "Referred and NOT receiving" *and why.*
  - **Early Start, Medical Therapy Program** -
  - **Parent concerns** – Living/ care arrangements, caregiver concerns, language in household, family social economic stressors

HRIF Program Clinic Dashboard





HRIF Health Equity Dashboard

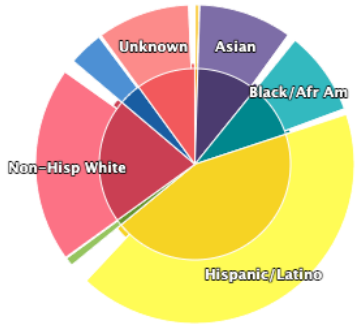
Universal Filter

Factors: Race/Ethnicity | Birth Years: 2017 - 2021 | BW or GA: All | SV 1 | SV 2 | SV 3

Pie Chart

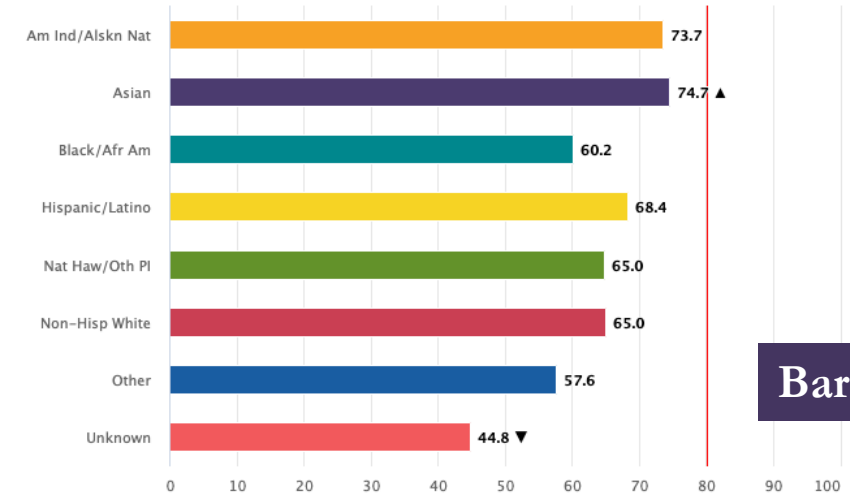
Race/Ethnicity Distribution

Total Registered: 44232
Total Expected: 41649



Am Ind/Alskn Nat | Asian | Black/Afr Am | Hispanic/Latino
Nat Haw/Oth PI | Non-Hisp White | Other | Unknown

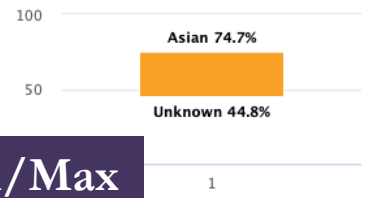
Follow up Rate by Race/Ethnicity



Bar Chart

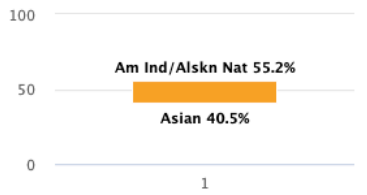
Outcome Min/Max

Follow up Rate



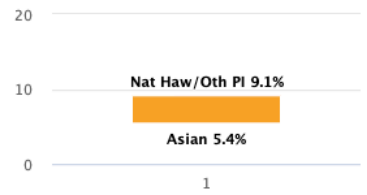
Select

Early Intervention



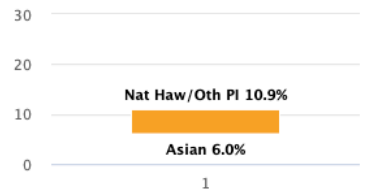
Select

MS Ref Status (Not Rcvd)



Select

SS Ref Status (Not Rcvd)



Select

NICU Teams Gain HRIF Access!

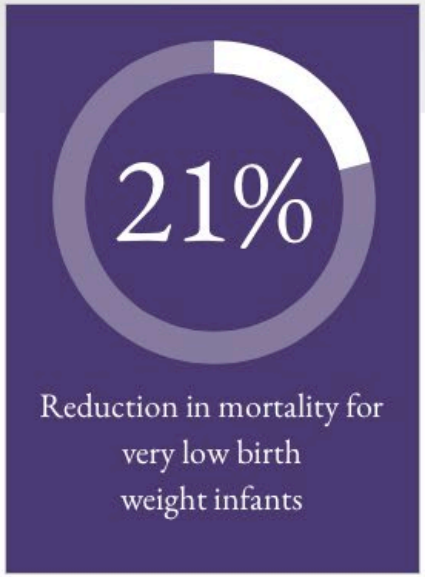
NICU leaders and teams should request HRIF database access to refer patients and view NICU Summary reports!

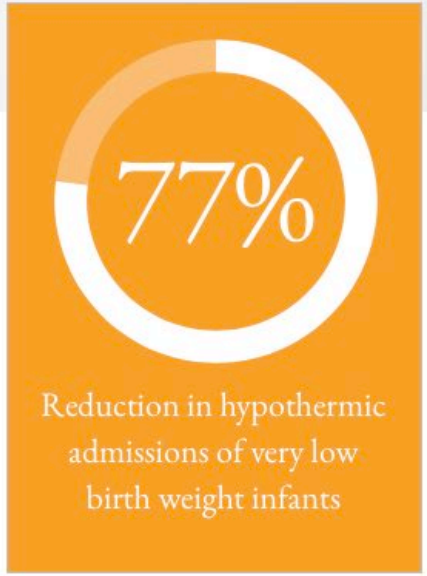
Submit a help ticket at **www.cpqcchelp.org**

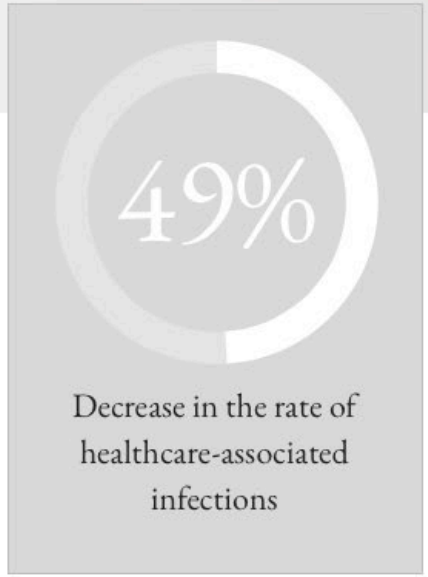
COMING SOON: CCS NICU REFERRAL DASHBOARD

Has this made a difference?

Improving the Quality and Equity of Care for California's Most Vulnerable Infants & Their Families







NICU Level Improvement Impact 2008-2017

Member hospitals reduced mortality rates for VLBW infants by

15%

An additional

9%

of babies were discharged without major morbidities like severe ROP, NEC, CLD, and severe IVH

And the rate of Necrotizing enterocolitis (NEC) decreased by

45%

Lee, Liu, Profit, Hintz, Gould.
J Perinatol. 2020 Jul;146(1):e20193865

NICU Level Improvement Impact 2014-2023

Severe Intraventricular Hemorrhage decreased by

13%

8%

Reduction in Neonatal Mortality

Severe retinopathy of prematurity decreased by

6%

NICU Level Improvement Impact 2014-2023

Necrotizing Enterocolitis has not significantly increased or decreased

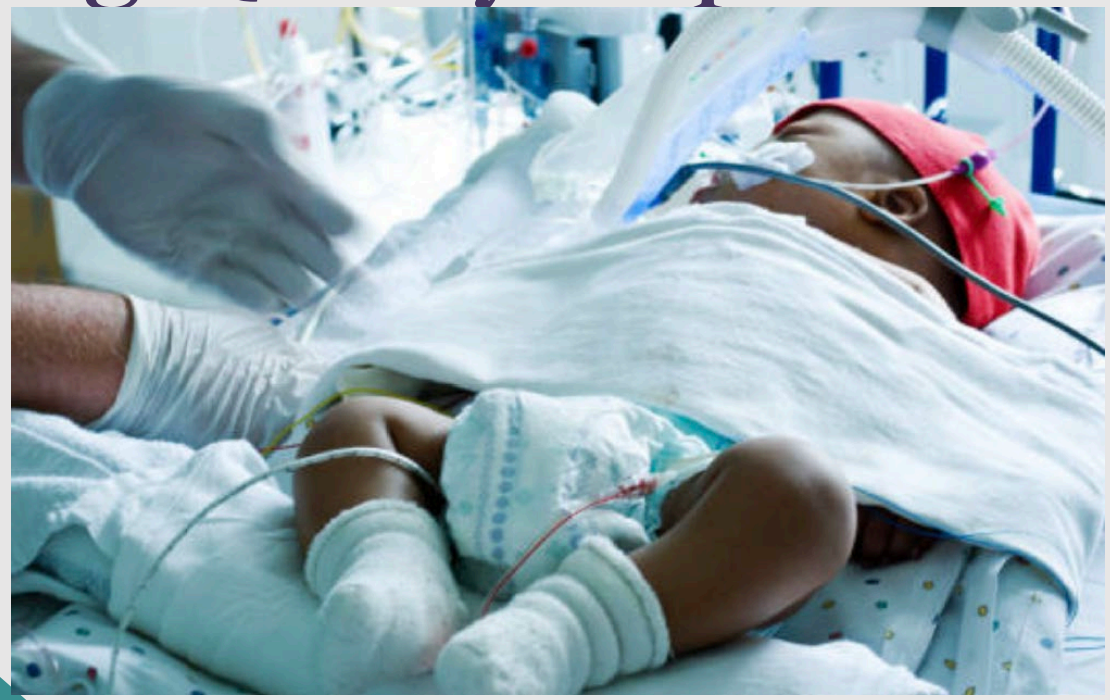
11%

Increase in Hospital Associated Infections

Chronic Lung Disease has not significantly increased or decreased

CPQCC

Spreading Quality Improvement in CA



Courtney C Breault, MSN, RN, CPHQ
Associate Director of Quality
CPQCC

Equity Focused Quality Improvement

CPQCC QI Framework

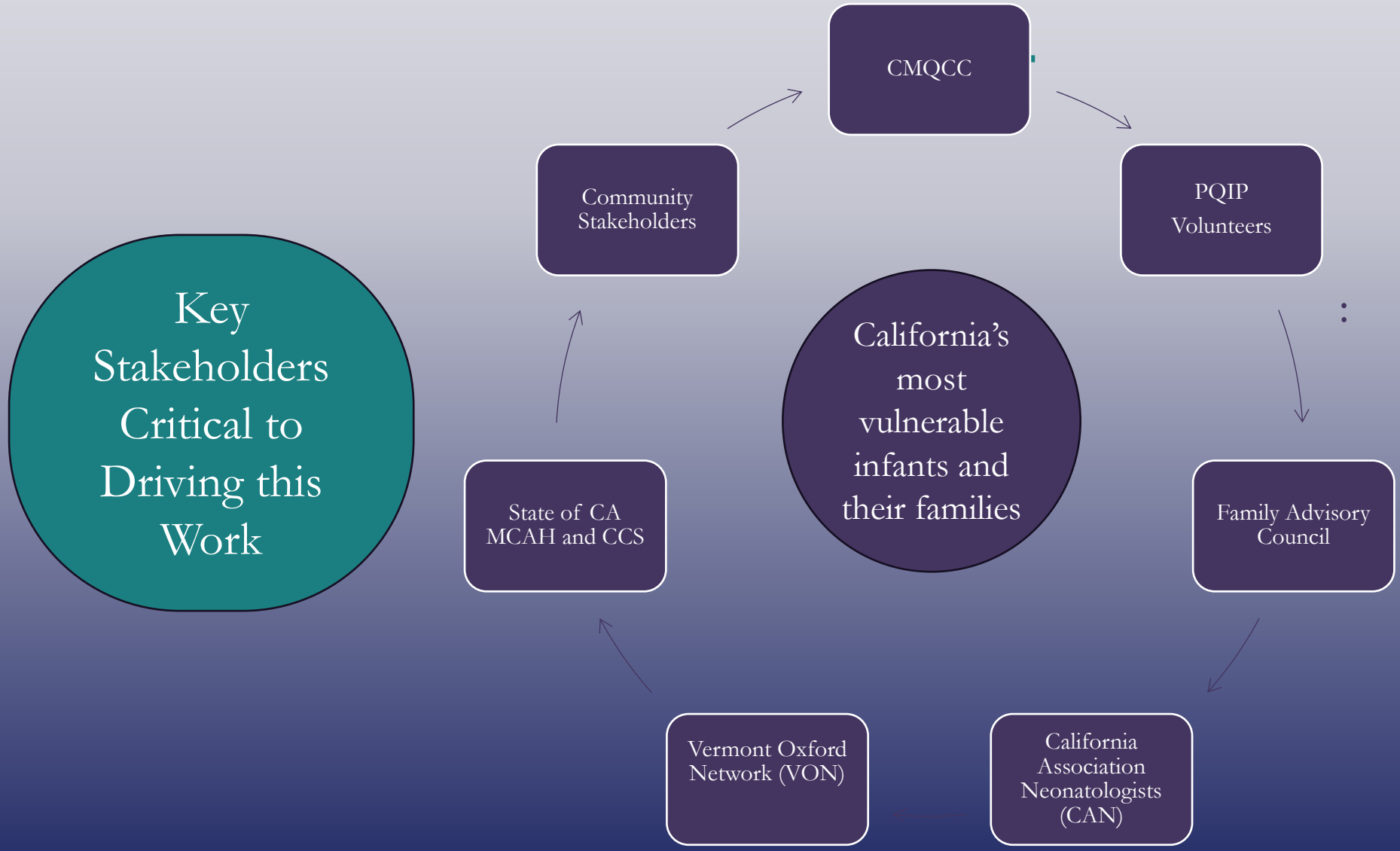
1 QUALITY IMPROVEMENT

3 DATA FEEDBACK

2 EDUCATION

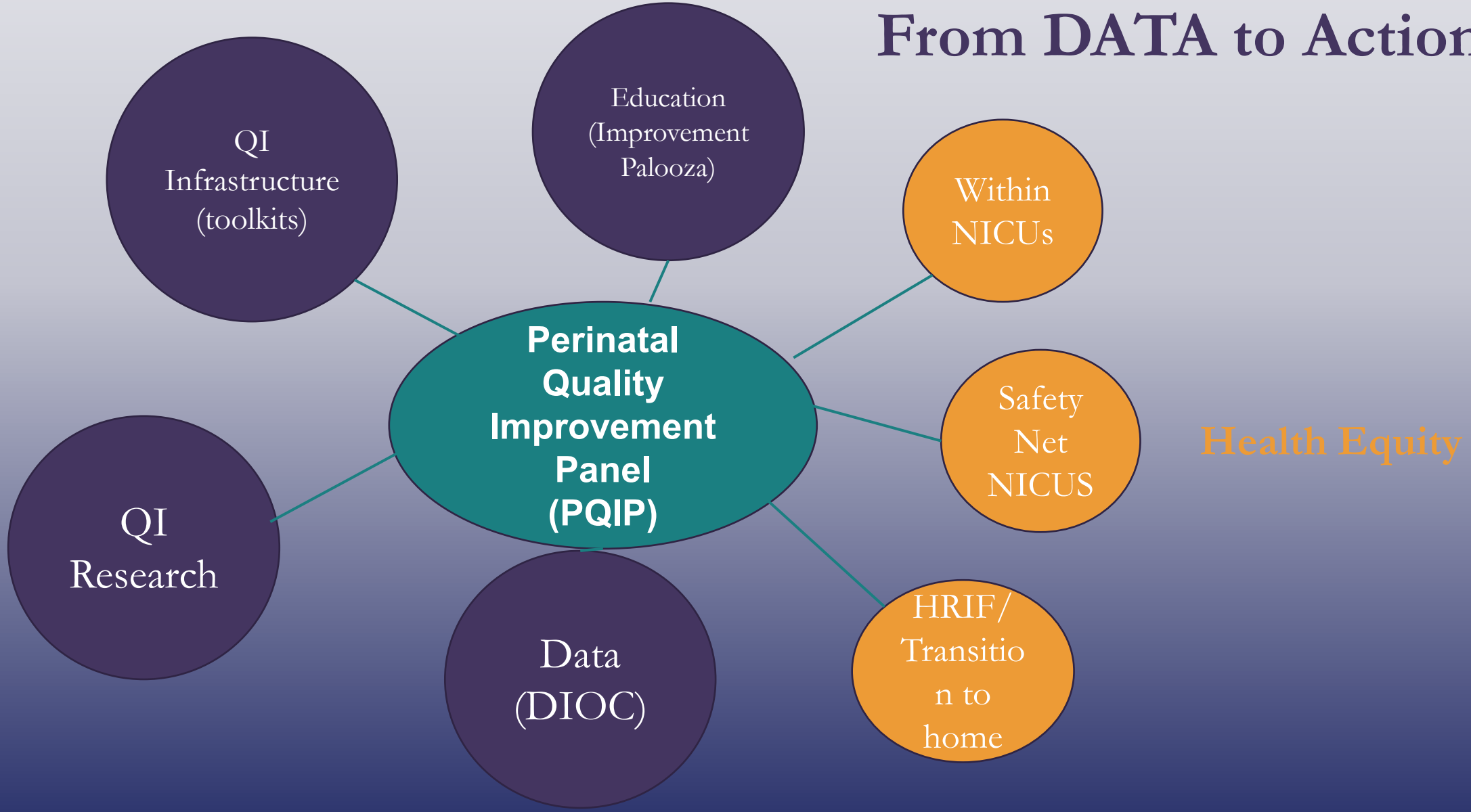
4 PARTNERSHIPS

CPQCC Partners



Volunteers contribute 100+ hours monthly

From DATA to Action

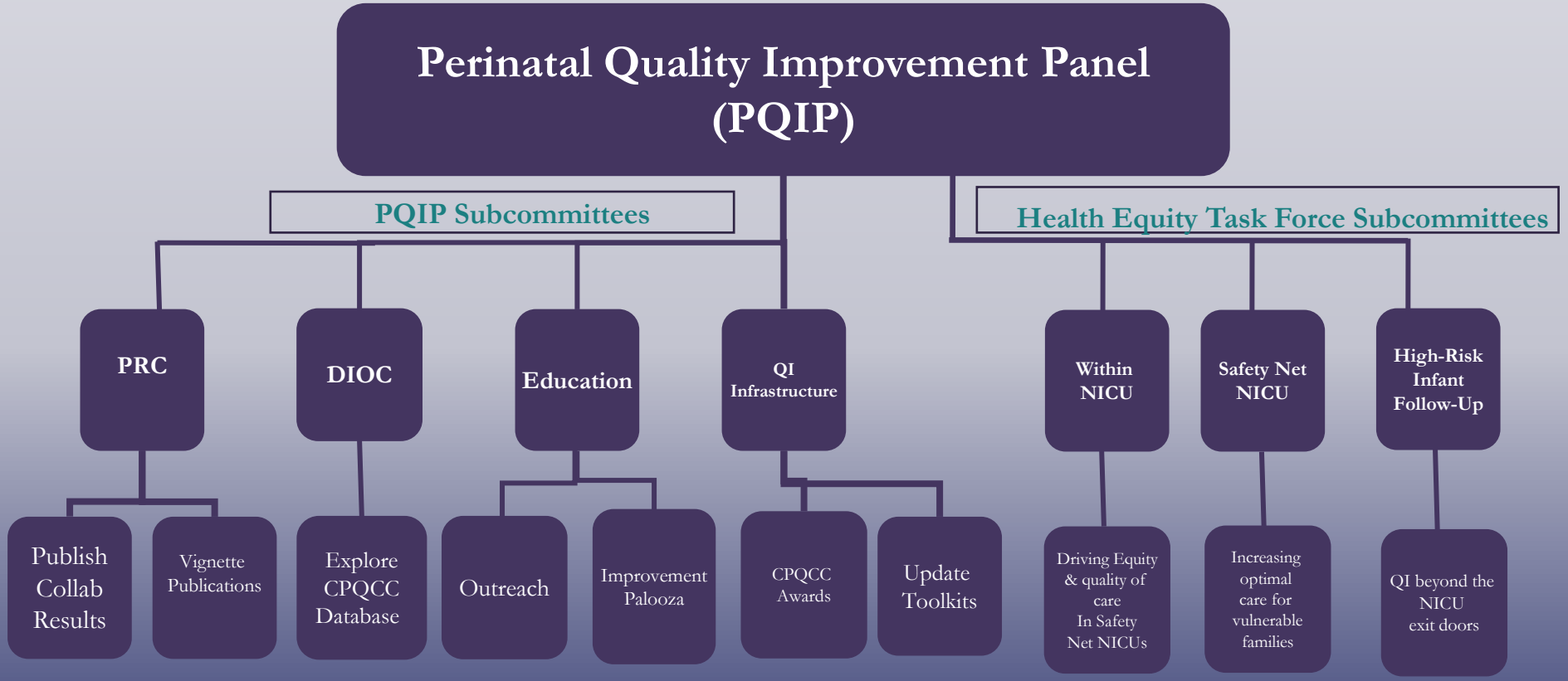


Health Equity

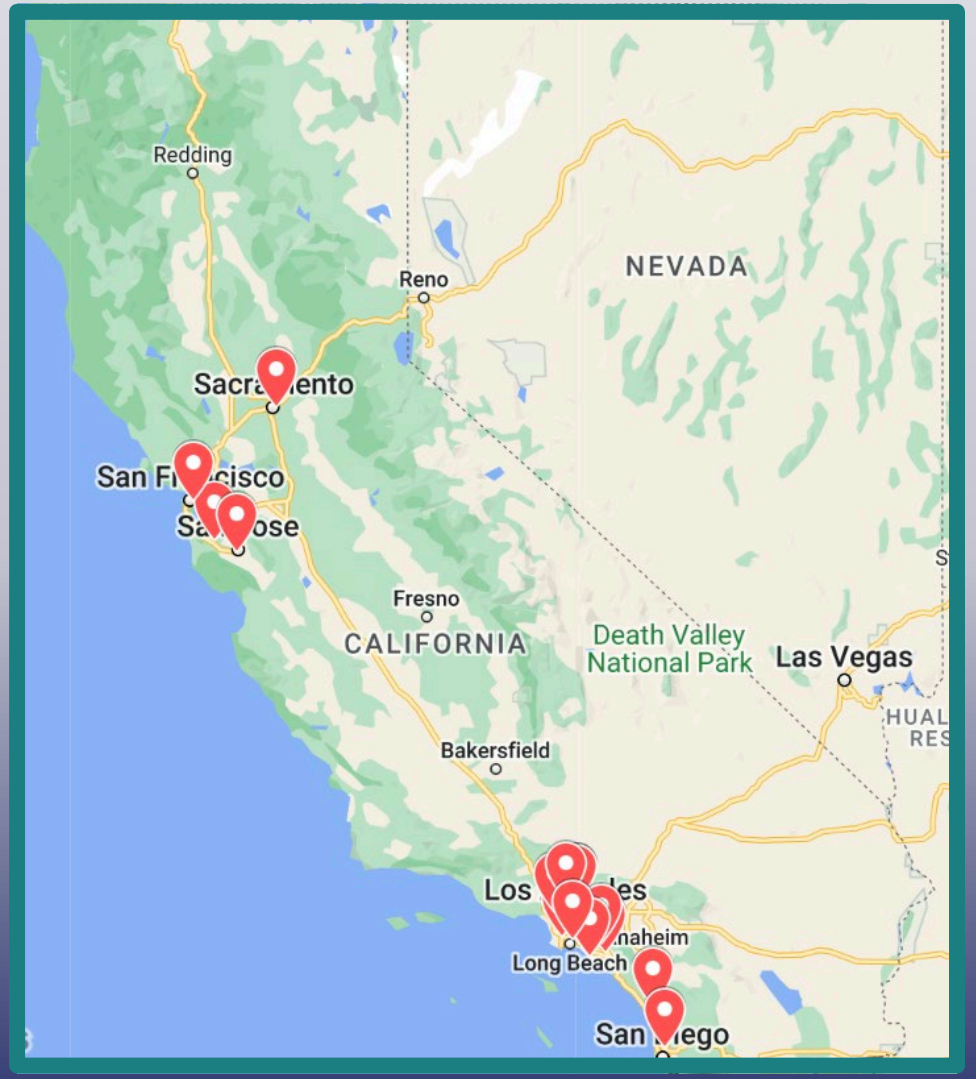
Perinatal Quality Improvement Panel (PQIP)

12 meetings per year
2 face-to-face meetings and monthly Zooms

PQIP Chair
Courtney Breault, MS,RN Associate Director of Quality



Perinatal Quality Improvement Panel (PQIP)



PQIP MEMBERS

1. Irfan Ahmad
2. Lisa Bain
3. David Braun
4. Malathi Balasundaram
5. Jennifer Canvasser
6. Katherine Coughlin
7. Tanya Hatfield
8. Priya Jegatheesan
9. Ashwini Lakshmanan
10. Henry Lee
11. Anjelica Montano
12. Michel Mikhael
13. Mindy Morris
14. Guadalupe Padilla-Robb
15. Jaclyn Pasko
16. Kurlen Payton
17. Pedro Paz
18. William Rhine
19. Elizabeth Rogers
20. Joseph Schulman
21. Kristen Schaffer
22. Rachelle Sey
23. Tom Shimotake
24. Aida Simonian
25. Tony Soliman

CPQCC/CMQCC Co-Chairs & Principal Investigators

Jochen Profit
Deirdre Lyell

CPQCC/CMQCC Senior Advisor

Jeffrey Gould

CPQCC STAFF & Faculty

Courtney Breault*
Fulani Davis
Erika Gray
Susan Hintz
Leslie Kowalewski
Rebecca Robinson
Joanne Tillman
Annalisa Watson

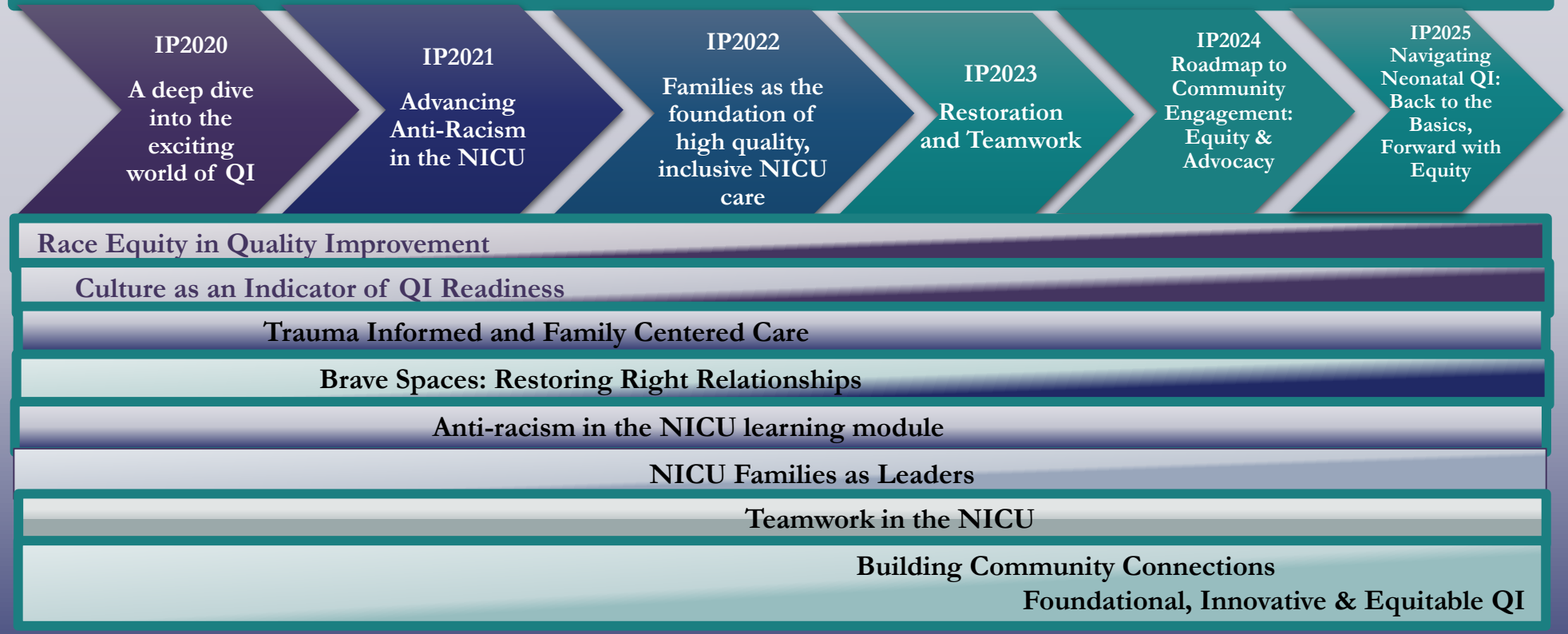
**PQIP Chair*

Equity Focused QI: How do we do this?

- Improvement Palooza
- QI Toolkits
- QI Tips Sheets
- Webinars
- Health Equity Dashboard
- Family Advisory Council
- Quality Improvement Collaboratives
- Outreach QI Touchpoints

ADVANCING EQUITY IN THE NICU

History of CPQCC's Improvement Palooza



IP25 Navigating Neonatal QI: Back to the Basics, Forward with Equity!

Join us for CPQCC's 6th Annual Improvement Palooza
Wednesday, March 5th, 2025, in San Diego

In an exciting change, next year's event will be held midweek to align with the California Association of Neonatologists' 31st Annual Cool Topics in Neonatology Conference, ensuring a seamless transition for attendees to participate in both events. Mark your calendars and join us for an unforgettable QI learning and networking experience!

REGISTER

Come for the knowledge, stay for the sunset!

New Location:
Catamaran Resort Hotel and Spa
3999 Mission Blvd
San Diego, CA 92109

CPQCC QI Collaboratives

2024 and 2025

CPQCC Collaboratives

Over 16 Years of Improvement

Healthcare-Associated Infection (2008-2009): **11 sites**

Breastmilk Nutrition (2009-2011): **19 sites**

Delivery Room Management (2011-2012): **24 sites**

Optimizing Length of Stay (2013 - 2014): **24 sites**

Antibiotic Stewardship (2016-2017): **29 sites**

Grow, Babies, Grow! (2018-2020): **25 sites**

Simulating Success (2018-2020): **12 sites** +2 out of state teams

Optimizing Antibiotic Stewardship (OASCN) (2021 - 2023): 31 sites

Growth Advancement In the NICU (GAIN): Surgical (2021 – 2023): 6 sites

GAIN): Ten Point Nine Growth Advancement In the NICU ((2021 – 2023): 8 sites

NICUs Enabling Optimal Brain Health (NEOBrain) (2022 – 2024): **24 sites**

Motivating & Optimizing Maternal Milk in Safety Net NICUs (MOMMS) (2024) **26 sites**

2025 Collaborating for Access and Resources in Early Life (CARE)

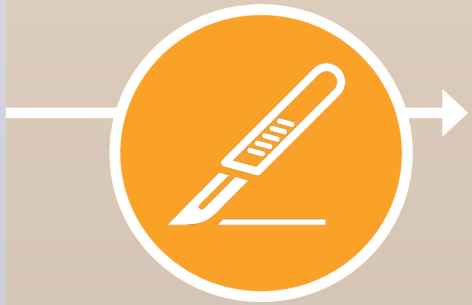
Over 75% of CPQCC member hospitals have participated in a CPQCC QI Collaborative over the past 15 years

Recent QI Collaboratives Summary

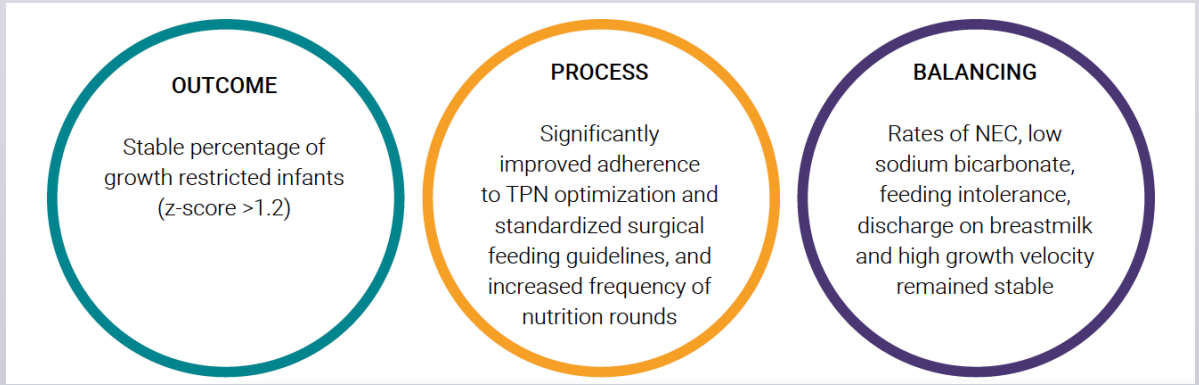
GAIN QI Collaboratives

Growth Advancement in the NICU (GAIN): *Surgical Patients*

COLLABORATIVE GOAL



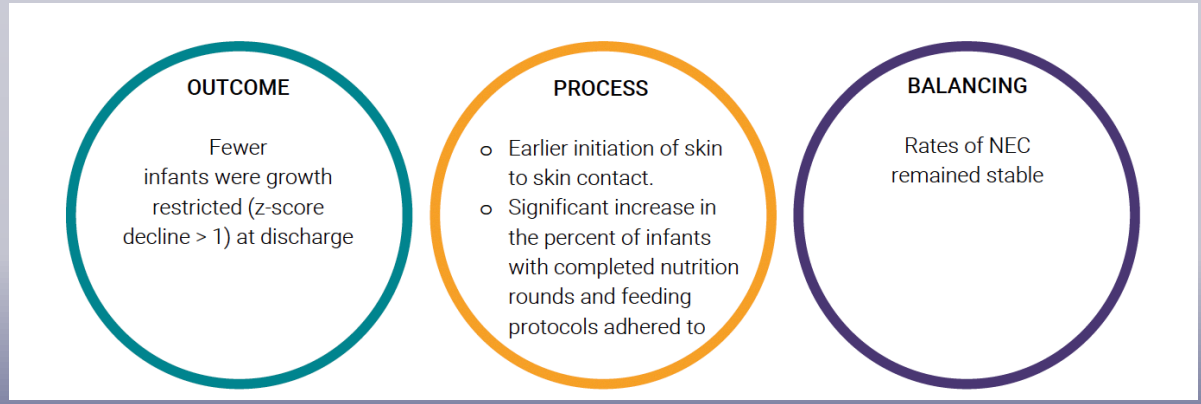
IMPROVE GROWTH AND NUTRITION
for infants who have had intestinal surgeries in participating NICUs.
July 2021 – 8 sites



Growth Advancement in the NICU (GAIN): *Ten Point Nine*

COLLABORATIVE GOAL

IMPROVE GROWTH AND NUTRITION
for infants > 1500 grams in participating NICUs with an average daily census of ≤ 10.9. ***July 2021 – 6 sites***



NEOBrain QI Collaborative

NICUs Enabaling Optimal Brain Health (NEOBrain)
COLLABORATIVE GOAL

PROMOTE NEUROPROTECTIVE CARE
for VLBWs in participating NICUs.

May 2022 – 26 sites

Outcome

100% parents report care competence at discharge

Process

- Significantly increased positive care team touch
- More infants receiving skin to skin within the first week of life
- Decreased time to 1st STS encounter

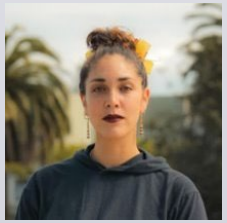
Balancing

Stable rates of IVH

- Elevating the Parent Voice and Experience
- Sustainability Successes
- Culture survey
- Vignettes

2024 CPQCC MOMMS Collaborative

MOMMS FACULTY PANEL

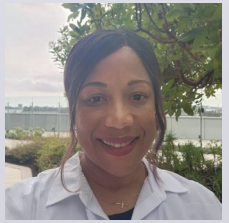


Ruta Lauleva Aiono

Ifeyinwa V. Asiodu

Courtney Breault

Fulani Davis



Patricia Dupree

Susan Hintz

Diana Hurtado

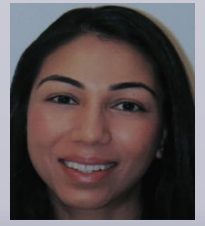
Priya Jegatheesan

Jessica Liu

Sanary Lou

Kimberly Novod

Meg Parker



Rupalee (Polly) Patel

Kurlen Payton

Jochen Profit

Janice Seto

Annalisa Watson

26

Safety Net NICUs

CPQCC MOMMS LEARNING SESSION #1 HIGHLIGHTS

1. Community of Learning in Action

- Teams shared ideas and opportunities
- Discussed using lactation educators to improve outcomes
- Compiled and described human milk feeding resources.

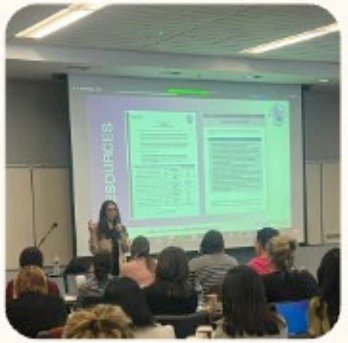
2. Identifying Challenges

- Discussed common challenges identifying SDOH and providing resources
- Many resources identified and shared
- Resources will be compiled to connect with their communities and families about human milk feeding.

3. Engaging Community Members

As providers, you have the power to:

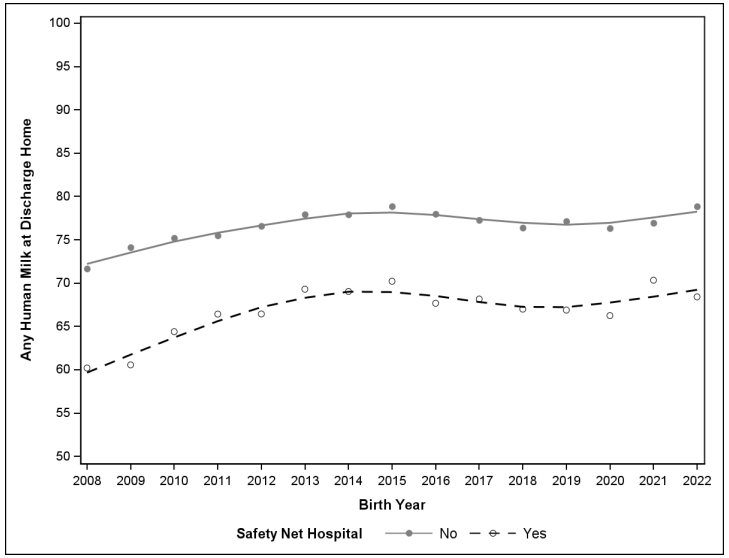
- Connect families with individual, community & cultural expertise
- Provide culturally respectful education
- Empower families by supporting their autonomy



Motivating & Optimizing Maternal Milk In Safety Net NICUs — MOMMS

MOMMS Learning Session #1 June 14, 2024

Santa Clara Valley Medical Center, San Jose



CPQCC Collaborating for Access and Resources in Early Life (CARE)

QI Collaborative 2025

Addressing unmet health related social needs is a CPQCC priority

Step 1: Identify Screening Tool
Step 2: Identify Process for partnership with community partners
Step 3. Integrate SDH Screening and Referral into NICU Work Flow

FACULTY PANEL

1. SMART AIM (Baseline % change needed)
2. Select metrics (outcome, process & balancing)
3. Site selection
   - Eligibility criteria-safety net or all NICUs?
   - Number of sites
4. Leveraging existing resources
   - CMQCC
   - HE Taskforce
   - Parker Team
   - Interactive tools (Padlet, REDcap, etc.).
   - CPQCC FAC as part of CAB
5. Resource Directory for referral
6. EMR integration or low fidelity screening/referral
7. Connection to HRIF

Leveraging our expertise in QI, we plan to disseminate our work widely to the 134 NICUs in California and other state and national perinatal collaboratives.

Proposed Framework
Local Implementation

Family voice/ multidisciplinary staff input → Screening tool selection and adaptation → Resource guide development

Integrate practice within NICU workflow → Increase quality of referrals → Improve connection with resources

CPQCC CARE Collaborative Timeline

CPQCC's QI Opportunities

Improvement Palooza 2025

March 5, 2025

CPQCC CARE Collaborative

Target: ALL CPQCC NICUs

Launch: Fall 2025

Connect with CPQCC

Get involved with PQIP, or an interest group!!

Our Mission: Neonatal Excellence

A Journey Toward Quality

100% Participation

- Each NICU across the state is a unique & different "station" on the road to better care
- QI is the vehicle that will take everyone there.

From Data to Impact

- Touchpoints that demonstrate clear connections between quality measures, NICU practices and positive outcomes

Ready, Set, Quality!!

Creative & innovative tools

"Mission Packs"

- Guides
- Checklists
- Motivational items (stickers, digital badges)

Join CPQCC!

Help shape the future of neonatal care through innovation and collaboration!

Get Involved!

Join a Subcommittee

Be curious about your data!

Share your data!

Q&A Session

Closing

Recording and Webinar Evaluation

!!ATTENTION!!

At the end of this webinar please click the evaluation link provided to submit your evaluation for this data trainings.

Note: 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://cpqcc.org/engage/annual-data-training-webinars-2024

Next Data Training Webinar!

October 16th – What's New with CPeTS Data

Register for What's New with CPeTS Data

THANK YOU!

california perinatal quality care collaborative