

2021



ANNUAL REPORT





We are committed to improving 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.

2021

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Dear Friends,

Another pandemic year; more of the uncertainty, stress, and illness of 2020 – but also more accomplishments by the CPQCC family: our faculty, staff, members, volunteers, and partners.

CPQCC has spent this year honing our strategic plan and making sure we're focusing on the most important areas for our patients, families, and members. 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 healthcare team. Our vision is to consider both the infant's NICU stay and broader health improvement by expanding our work with families and along the continuum from pregnancy through early childhood.

We are doing this by focusing on **three key pillars: "Vital Voices," "Pregnancy to Pre-K," and "Equitable Foundations."** You will learn more about these pillars and our accomplishments and ongoing commitments in these areas throughout this report. Some of the achievements we're most proud of from the past year include:

- Improvement Palooza 2021 which focused on anti-racism in the NICU; we were delighted at the broad involvement of families and healthcare partners in this event, and the record number (and geographic spread) of attendees. Special kudos to the organizers for continuing the learning throughout the year through follow-up sessions!
- The work of the Growth Advancement in the NICU (GAIN) Collaborative, which has actively addressed the needs raised by two of our member workgroups, Ten Point Nine (which represents NICUs with an average daily census of 10.9 or less) and Children's Hospitals, and the Optimizing Antibiotic Stewardship in California NICUs (OASCN) Collaborative, our biggest QI initiative to date with 31 NICUs
- HRIF introduced a new graphical clinic

dashboard that makes it easier for members to see what's happening with their patients, convened a working group to strengthen telehealth guidelines, and launched a COVID Family Survey to understand the impact of the COVID-19 pandemic on families with infants in the NICU

- We tracked more patients than ever in the Maternal Exposures and All NICU Admissions optional databases, examined disparities on the NICU Health Equity Dashboard, helped hospitals share data on common patients, and developed 11 new "how-to" videos for our NICU data and reporting sites

We don't know what 2022 will bring. But whatever happens, we will be glad that we are meeting it in community with our members, our partners - including our host institution, the Stanford School of Medicine, and our founding partner, the California Association of Neonatologists - our volunteers, and everyone working toward better and more equitable care for the babies and families of California and beyond. Thank you for everything you do.

JEFFREY B. GOULD
Chief Executive Officer

HENRY C. LEE
Chief Medical Officer

JOCHEN PROFIT
Chief Quality Officer

SUSAN HINTZ
HRIF Medical Director

REBECCA ROBINSON
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Associate Director of Quality





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01/2018



FEATURE:
**INTRODUCING OUR NEW
STRATEGIC PLAN**

Building on the release of a revised mission statement in 2020, CPQCC spent much of 2021 developing and honing a new strategic plan to guide our work over the next several years. Below, readers will find an overview of the core tenets of that plan. The rest of the report is structured around the plan's key pillars and describes new and ongoing work in each strategic area.



Care in the NICU remains a highly effective intervention, with the potential to ameliorate social disadvantage.”

– Dhurjati, Profit, 2021

We are committed to improving the quality and equity of perinatal care, centering the voices of lived experience and collaborating with families and with interdisciplinary members of the healthcare team. Our vision is to center the mother's health prior to birth, the infant's NICU stay, and their care after discharge by extending our reach to the family and across the continuum of care from pregnancy to early childhood. We will do this by focusing our work around three essential pillars:

- **Vital Voices:** Elevating the voices of families and all members of the healthcare team
- **Pregnancy to Pre-K:** Improving quality along the continuum of care
- **Equitable Foundations:** Ensuring that equity is the bedrock of perinatal care for patients, families, and the healthcare team

Pillar One: VITAL VOICES

CPQCC's work will be informed by the voices of a diverse group of family members who will participate in imagining, planning, and implementing our work. We recognize the critical role that families play as members of the healthcare team and the most important advocates in ensuring a child's current and future health and well-being. In addition, CPQCC is committed to creating partnerships with frontline, interprofessional healthcare team members across and within NICUs and HRIF Clinics, and to working with them to support the provision of family-centered care and their own health and wellness.



These challenges to parental presence in the NICU—of costly accommodations, convoluted social infrastructure, and inadequate family support services—are a result of the compounding social determinants of health and its reinforcement of structural oppression and systemic racism.”

– Pang, Lee, 2021

Pillar Two: PREGNANCY TO PRE-K

We recognize that to improve outcomes for California's most vulnerable infants, we must improve the health of families from pregnancy through Pre-K. Our goal is to establish and strengthen relationships with other organizations working across this continuum of care, including community organizations, the California Maternal Quality Care Collaborative (CMQCC), the California Association of Neonatologists (CAN), and the March of Dimes, as well as to expand and deepen our support to High Risk Infant Follow-Up Clinics across the state.



“There has been escalating recognition of the importance of understanding later outcomes for high-risk infants, and “follow up” has been emphasized and acknowledged as a critical component of post-discharge support.”

– Lee, Hintz, 2021

Pillar Three: EQUITABLE FOUNDATIONS

CPQCC is deeply committed to improving the quality and equity of care for patients, families, and the healthcare team, particularly in clinical settings but also with attention to families' needs outside the NICU and HRIF Clinic. We will share and promote knowledge, tools, and interventions for advancing equity within California and across the world.



...access to services varies substantially across racial and ethnic groups, exacerbating inequities in overall wellbeing between children of color and their white peers. These racial and ethnic disparities are the result of policy choices and long-standing racism and eliminating the disparities should be the goal shared by every state.”

– Prenatal-to-3 Policy Roadmap, 2020

NICU INFANTS & FAMILIES

VITAL VOICES

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

PREGNANCY TO PRE-K

Improving quality along the continuum of care.

EQUITABLE FOUNDATIONS

Ensuring equity as the bedrock of perinatal care for patients, families, and the healthcare team.

QUALITY IMPROVEMENT



PILLAR ONE
VITAL VOICES

CPQCC's **VITAL VOICES** pillar focuses on elevating families and all members of the healthcare team as critical players in creating high quality, equitable care for high risk infants both during the NICU stay and beyond.

Navigating the Challenges of the Pandemic By Extending Telehealth Options for HRIF Families and Care Teams

The ongoing COVID-19 pandemic has upended healthcare delivery across the world, impacting every aspect of care. High Risk Infant Follow-Up has been no exception. Over the past two years, HRIF Clinics have endured repeated closures and interruptions in in-person services as they balance public health safety measures with the needs of the patients and families they serve. In response to the growing need for alternative options for care expressed by clinic teams and patient families, CPQCC and California Children's Services (CCS) have committed to supporting clinics in expanding access to telehealth appointments.

In 2020, CPQCC's interdisciplinary HRIF Telehealth Guidance Workgroup released a document to advise clinics on how to prioritize between in-person and telehealth visits, optimize virtual visits when they occur, and use developmental assessment tools that are appropriate for a telehealth setting.

In 2021, CPQCC and CCS continued the push towards increased access to telehealth by updating the HRIF Reporting System to capture data on the use of three new developmental screening tools that were authorized for use in HRIF telehealth settings. The expansion in developmental, functional, and motor tools that are telehealth and phone validated makes it easier for clinics to offer virtual visits to families and ensure that follow-up services are not interrupted for the patients who need them the most. CPQCC will continue to respond to the needs of our most vital voices, clinical care teams and the patients and families that they serve, helping them to weather the challenges of the pandemic and beyond.





PILLAR TWO
PREGNANCY TO PRE-K

Our **PREGNANCY TO PRE-K** pillar prioritizes projects that improve quality and equity along the continuum of care between pregnancy and age three, recognizing that the health of an infant is directly related to the health and wellbeing of mothers and families.

Unmasking Hidden Disparities Among an Understudied Population

When we talk about racial and ethnic disparities in maternal and infant health outcomes, we often focus on the deep inequities faced by Black and Hispanic populations. Yet collectively, the Asian-American and Pacific Islander (AAPI) population is the fastest growing racial/ethnic subgroup in the United States, representing 25% of all foreign-born people in the United States and 15% of California's total population. AAPI populations include people from more than 30 different countries with varying social and economic backgrounds and immigration patterns. However, despite this heterogeneity, AAPI data is frequently lumped together. Furthermore, care for Asian-Americans and Pacific Islanders is often not targeted despite significant differences in constitution and health status among subgroups.

“**Decisions about Asian health are being made using non-Asian data.**”

In 2022, CPQCC and our sister organization, CMQCC, are embarking on a new project funded by an R01 grant from the National Institutes of Health (NIH) to study care processes and outcomes for AAPI mothers and infants during birth hospitalization. The project is intended to further understanding of if and how disparities manifest within this diverse group. The project has three aims: (1) to test for disparities in care processes and outcomes among AAPI mothers and infants and identify associations with multilevel risk, (2) to assess the impact of hospital performance factors on care processes and outcomes of AAPI maternal and infant populations, and (3) to understand the birth and birth hospitalization experiences of AAPI populations alongside drivers of disparities in care processes and outcomes.

A defining aspect of this project is an effort to engage community partners in the research to gain better understanding of how different AAPI birthing populations experience care. As a first step, the project team is planning a hybrid conference on May 16, 2022, to bring together community groups and experts in maternal and neonatal care to discuss key areas to focus on and how to best integrate the community into the research process from the start.

Says Jochen Profit, MD, MPH, CPQCC's Chief Quality Officer and Co-Principal Investigator on the project, “we are attempting to describe what the landscape [for this population] actually looks like. [Care decisions are being made] that may not make a lot of sense because this group, which is highly diverse, is being lumped together.” Although initially focused on developing a deeper understanding of care process and birth outcomes for AAPI populations, the long-term goal, says Profit, is to develop practical solutions that will make a tangible difference for AAPI communities across the state.

Asians make up 60% of the world's population and 6% of the population of the US, yet only 0.17% of NIH Funding is directed towards dedicated research on Asian health.

Helping Predict the Unknown: A Periviability Calculator

The uncertainty surrounding expected outcomes at periviable gestations (22-25 weeks) is one of the biggest challenges for families facing the traumatic circumstance of preterm birth and for the physicians that counsel them. There are several critical gaps in our knowledge that limit more precise counseling of families facing periviable birth. While we have refined predictive ability by adding factors beyond gestational age alone, we are not presently leveraging the full spectrum of maternal, fetal, and hospital data available to optimize risk prediction in a contemporary population. The models that we utilize today often use older data from a select group of hospitals. Moreover, these models are not individualized to the hospital of care. In addition, we do not know if using these models impacts the counseling provided by clinicians or leads to differences in practice, outcomes, or cost.

CPQCC was recently awarded an NIH R01 grant to develop and test a new prediction model that can be used to forecast survival outcomes for these extremely preterm infants. The project, led by CPQCC's Chief Medical Officer, Henry C. Lee, has three main aims: (1) to develop contemporary predictive models for periviable birth outcomes and to compare those models to existing prediction tools; (2) to evaluate variation in clinical decision making for periviable infants; and (3) to test whether the prediction provided by a refined outcome estimator influences clinical practice.

As a population-based network that includes both community and academic hospitals, and with the infrastructure for statewide data collection and widespread implementation of new practices, CPQCC is uniquely positioned to develop a contemporary predictive model for periviable birth and to close the critical knowledge gaps.

The CPQCC team spent 2021 developing the prediction algorithm, which will be rolled out to CPQCC NICUs to test in waves over the coming year. The team will then study how using the tool in practice influences and improves clinical decisions and outcomes.



What Happens to My NICU Graduates After Discharge? | Explore the Rich Data Available Through the HRIF Reporting System with the New HRIF Sample App

The image displays two overlapping screenshots of the HRIF Reporting System. The background screenshot shows a 'HRIF Standard Visit Summary Report (Core Visit #1)' for Westeros Medical Center - SCZZZC. It includes filters for 'Infant's Birth Year' (All) and 'Infant's Medical Eligibility' (All). A table titled 'HRIF Eligibility Profile for Seen Cases (Criteria from RR Form Medical)' is visible, with columns for 'Num', '%', and 'Num'. The table lists various medical criteria and their corresponding counts and percentages.

Criteria	Num	%	Num				
Gestational Age at Birth < 32 weeks	1442	55.8%	6421				
<= 1500 grams	1257	48.6%	5701				
Oxygen > 28 Days and CLD	243	9.4%	1320	12.7%	13%	9%	16%
INO > Hours/Meds for PPHN	233	9%	382	3.7%	1%	1%	3%

The foreground screenshot shows a 'NICU Summary Report' with a 'Select Report' dropdown menu. A red YouTube play button is overlaid on the report, with a text overlay that says 'Click "View Report"'. The report includes fields for 'NICU Hospital', 'Infant's Birth Year', 'Infant's Birth Weight at Discharge', 'Infant's Qualifying Medical Condition', and 'Report Section Name'.

For the families of NICU infants, discharge often comes with a host of questions. How likely is it that my baby will require hospitalization again? What sort of follow-up care will they require? What medications might they need? What challenges might they face? Thanks to the unique integration of CPQCC's NICU and High Risk Infant Follow-Up data sets, NICU care teams can provide more concrete feedback on the trajectory of patients that are discharged from their unit from the point that they leave the NICU through age three.

CPQCC's HRIF Reporting System allows NICUs to generate detailed reports on how their NICU graduates are doing regardless of where in the state they are receiving HRIF services. To better inform NICU care teams on the information available to them, CPQCC has recently released the "Sample App," a tool that allows NICU teams to explore the rich data available through the HRIF Reporting System using dummy data.

The Sample App does not require an individual user login account and can be used to explore the potential of the system for strengthening information sharing across the continuum of care.

- **To view the HRIF Sample App, visit:** <https://sampleapp.ccshrif.org/>
- **For more information on how to use the HRIF Sample App, view this one-minute tutorial video:** <https://www.youtube.com/watch?v=siLYdNpCOiA>
- **To request a user login account for the HRIF Reporting System so that you can view real data on patients discharged from your NICU, visit:** <https://www.cpqcc.org/follow/hrif-data/how>



PILLAR THREE
EQUITABLE FOUNDATIONS

The third pillar of CPQCC's new strategic plan, **EQUITABLE FOUNDATIONS**, aims to cement equity as the bedrock of perinatal care for patients, families, and the healthcare team.

Reducing Language Barriers for Limited English Proficiency NICU Families

Time and again, data has shown us that fewer Black and Hispanic babies, and importantly, fewer families of Black and Hispanic babies, thrive in the NICU environment. The reasons why are manifold, but what has become clear is that social determinants of health, and not biological differences, are driving these disparities. It was with this knowledge that CPQCC embarked upon an effort to conduct virtual site visits with 40 member NICUs across the state. The aim of the site visits was to identify how race and wealth affect the care of vulnerable infants and their families. While CPQCC has tracked health equity indicators for years, site visits allowed the team to critically examine the more intangible factors behind what has worked for NICUs in improving equity for their patients and where challenges remain. Three common concerns arose from these site visits – language barriers that hinder communication in the NICU, factors that inhibit family visitation in the NICU, and lack of access to and awareness of paid family leave.

With the aim of closing some of these gaps, the CPQCC team set out in January 2021 to tackle the number one most repeated obstacle to equitable care for all families: language barriers. A multidisciplinary workgroup was formed to brainstorm actionable solutions, comprising of three neonatologists, an interpreter, and a family liaison. Armed with data showing that NICU families with limited English proficiency (LEP) receive half the amount of skin-to-skin time with their infants compared to other families ([Brignoni-Perez, Scala, et al, 2021](#)) despite spending comparable amounts of time in the NICU, and with the knowledge from the site interviews that most NICUs have interpreter services (ranging from phones and iPads to live interpreters) but are not using them to their full potential, it was clear to the group that further support, training, and education are needed to help NICUs engage optimally with LEP families.

The group has drafted an [evidence-based tip sheet](#) that aims to guide hospitals in fostering a trusting relationship between clinicians and LEP families to improve infant outcomes, minimize medical error and miscommunication, and better understand the cultural differences of LEP families that may potentially affect care. The workgroup is planning a webinar in the spring of 2022 which will highlight the tips and allow interested NICUs to ask questions about potentially better practices. For example, NICUs often wonder if they should assign a Spanish-speaking nurse to care for a Spanish-speaking family's infant, but this in fact perpetuates a cycle in which other providers feel that it is not their responsibility to interact with that family, further isolating them and preventing the free flow of information between providers and families. Instead, NICUs should ensure that an interpreter is used for every interaction with that family and that all providers make the effort, with the use of an interpreter, to build a rapport with the family so that they feel comfortable bringing up their questions and concerns.

The group's long-term goal is to potentially expand the tip sheet into a comprehensive toolkit to support NICUs in engaging LEP families and to possibly launch a full-fledged quality improvement effort that helps address the underlying issues. Another result of the workgroup's efforts: starting in 2022, CPQCC NICUs will be asked to enter data on the language of preference of an infant's primary care provider and to document whether they required interpreter services as part of their routine CPQCC data collection. The workgroup hopes that this data will allow for more exploration around language related disparities that may exist and will lead to more resources being developed to support LEP NICU families.

CPQCC
TIP SHEET

Overcoming Language Barriers in the NICU

Infants of limited English proficient (LEP) families in the NICU are at risk for poor outcomes and potential medical errors due to language and cultural barriers. Clinician interpretation techniques may fail to consider LEP family cultures and expectations, which have led to disproportionate readmission rates, less time performing skin-to-skin, decreased breastmilk use rates, and patient dissatisfaction. Data have shown that even where professional medical interpreting services are available, they remain underutilized due to apparent lack of time, lack of training, and the normalization of the underuse of interpreters.

The goal of this tip sheet is to enable hospitals to:

1. Foster a trusting environment between clinicians and LEP families in order to improve infant outcomes.
2. Minimize medical error and miscommunication.
3. Better understand cultural differences of LEP families that may potentially affect care.

Potentially Better Practices (PBPs) for overcoming language barriers in the NICU:

1 Do not assume language proficiency based on the patient's name or characteristics. ^[1]

- More than 25% of families coming to HRIF clinics have a language other than English as their primary language spoken at home. We anticipate that there is an even higher percentage of LEP families in the general NICU population.
- Be aware that there are degrees of language proficiency and that the listed language proficiency may not be entirely accurate.
- Relying on unqualified interpreters, whether members of the patient's family or other hospital staff, can lead to miscommunication. Unqualified interpreters include: family, friends, and NICU staff who are not qualified bilingual staff. Section 1557 of the Patient Protection and Affordable Care Act emphasizes the importance of using a qualified medical interpreter versus an ad-hoc one and expressly prohibits the use of unqualified interpreters barring extreme circumstances. Unqualified interpreters include: family, friends, NICU staff who are not certified healthcare interpreters, etc. Studies have shown that using qualified in-person or remote (phone/video) services results in better communication than unqualified, ad hoc interpreters. ^{[1][2][7][8]}
- When using an interpreter, continue to address the patient's family directly and not the interpreter ("Can you tell me more?" is more appropriate than "Can you tell the patient's family to tell me more?").
- Body language and positioning of interpreters and other clinicians can affect patient perceptions of healthcare and comfort.
 - It may be helpful for the interpreter to stand beside/behind the patient/family member to be able to receive and interpret information from the entire medical team.
- For video interpreters, ensure that the interpreter can see the patient/family member and vice versa. It is also recommended to brief the interpreter before beginning the conversation with the patient/family member (e.g. "I'm Nurse X and we're in the NICU. I'm about to discuss discharge planning and readiness with the patient's mother").
- Avoid using online translation tools (Google translate, etc) as this is not a suitable substitute since accuracy may vary widely, and could potentially introduce risk and patient safety issues.

This tip sheet was authored by CPQCC's Language Barriers Workgroup, John Han-ting Yao, Research Assistant; Henry C. Lee, MD, Chief Medical Officer, and Caroline Toney-Noland, MSc, Program Manager, with consultation from CPQCC's Perinatal Quality Improvement Panel (PQIP) Education Committee. Many of the suggested practices in this document were gathered through interviews with CPQCC NICUs.

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CPQCC
TIP SHEET

Overcoming Language Barriers in the NICU

3 Remember to constantly check for family comprehension. ^{[9][4]}

- Assessing and addressing the patient/family health literacy and learning preferences will help providers improve and minimize barriers to effective communication. ^[9]
- Nodding, smiling, or making eye-contact may not equate to patient comprehension.
- Using techniques such as the "teach-back" method can be a helpful approach to confirm understanding. ^[9]
 - For example: "Just to make sure I've done a good job explaining the procedure/process, can you tell me what you understand in your own words?"
- Using a variety of different communication strategies when encountering LEP patients and families may be beneficial to improved communication.
 - Non-verbal communication strategies such as using mannikins, printed translated materials, parent buddy programs or peer support specialists (especially if they are language concordant), may aid comprehension in addition to using qualified interpreters.

5 Bias is prevalent in every team.

- It is important to work collectively to combat implicit bias to protect families, patients, and staff and to ensure respectful care. ^[3]
- Avoid jargon, acronyms, and speak in standard English. Speaking louder does not enhance clarity or comprehension.

[1] Quality, Rockville, MD. <https://www.aahq.org/health-literacy/professional-training/teppguide/index.html>
 [2] Lee, 2005. https://www.healthdesign.org/sites/default/files/CultIndomment_language_access_issues.pdf
 [3] *J Clin Nurs*. 2020 Jul;29(13-14):2221-2230. doi: 10.1111/jocn.15212. Equib 2020 Feb 26; PMID: 32545074 <https://doi.org/10.1111/jocn.15212>
 [4] *Health Aff (Millwood)*. 2018;37(12):2018-2020. doi: 10.1093/heap/ckz016. <https://pubmed.ncbi.nlm.nih.gov/31811111/>
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 [6] *Health Aff (Millwood)*. 2020. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7101167/>
 [7] *Family, Cady PDCC, MD, MPH, CNP The Teach Back Method, Home Healthcare Now*, June 2015 - Volume 33 - Issue 6 - p 344-345 doi: 10.1097/NNH.0000000000000244
 [8] <https://www.ftis.gov/role-rights-for-individuals/section-1557/index.html>

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Ensuring Equity in High Risk Infant Follow-Up Care

Equity is the foundation of high-quality healthcare and a key focus of all of CPQCC's work within the NICU, HRIF Clinic, and beyond. The HRIF team published two key papers in 2021 that outline significant areas for potential improvements in equity in HRIF care.

The first paper examines how rural residence and other associated factors impact attendance at the second high risk infant follow-up visit by 20 months corrected age for very low birth weight infants. Attendance rates even for the first HRIF visit are suboptimal, ranging from 61 to 76% ([Fuller, Lu, et.al.,2021](#)) and attendance at subsequent visits trend even lower. Given that concerns for high-risk infants after NICU discharge often take time to

present, attendance at all the three prescribed HRIF visits is critical to timely identification of motor and developmental problems and for referral to and initiation of the required services. Previous studies have found that sociodemographic characteristics, maternal race, poverty, substance use, and multiple gestation are associated with lower visit attendance rate. Using CPQCC's linked NICU and HRIF data sets, the authors sought to examine the impact of rural location in addition to other known factors on HRIF visit attendance past the first standard visit. The authors found that only 75% of VLBWs attended the second HRIF visit and that those who were less likely to attend were Black or resided in a rural location. Of the 68 HRIF Clinics in California, 51 are in an urban location and only 17

in a rural location. Having attended the first HRIF standard visit within the recommended time frame of 4-8 months corrected age was associated with a greater than two-fold increase in the odds of attending the second visit by 20 months corrected age. These findings point to a need for quality and process improvements beginning in the NICU and continuing beyond discharge to underscore the value of HRIF visits and to support patient families for whom location may be a significant barrier to accessing care.

The second paper specifically examines the factors associated with follow-up care of NICU infants who have had hypoxic-ischemic encephalopathy (HIE). Infants with HIE may have unique barriers to follow-up care which have not previously been studied. As with the previous paper, the authors sought to examine how sociodemographic, and program related factors impacted attendance rates but focused on attendance of at least one visit by 12 months of age specifically among infants with moderate or severe HIE. The study results showed that in this cohort, at least 73.9% of infants attended an HRIF visit by age one and that after that follow-up rates increased and variation in attendance among clinics declined over time ([Pai, Kan, et.al., 2020](#)). However, female infants with HIE and those born to Black, single, less than college-educated, or publicly insured caregivers as well as those referred to high-volume or regional programs, were less likely to have attended an HRIF visit in the first 12 months. Pacific Islander infants also had lower odds of having attended high risk infant follow-up care.

These two pivotal studies underscore the importance of examining where disparities in access to HRIF care exist so that action can be taken to dismantle the barriers that many patient families face in obtaining the necessary services for their high-risk infants. To that end, CPQCC is in the process of developing an HRIF Health Equity Dashboard, [similar to the one that currently exists for California's NICUs](#). The HRIF Health Equity Dashboard will allow users to view a breakdown by race/ethnicity of the patients seen at their clinic as a whole and by standard visit, which will allow clinic teams to track if certain groups are being seen less frequently. Additional filters will allow HRIF Clinics to drill down by birth cohort, birth weight, primary language, and insurance. The HRIF Health Equity Dashboard will focus primarily on three main outcomes: core visit follow-up rate, early intervention, and service referrals. Given that clinical outcomes can vary so widely depending on a child's health status upon NICU discharge, focusing on outcomes related to access to care provides a more accurate picture of the quality and equity of care that a clinic is providing relative to others. The dashboard is currently under development with feedback from CPQCC's HRIF Executive Committee and the "Transition to Home" subgroup of CPQCC's Health Equity Taskforce. The team is tentatively planning for a launch before the end of 2022.





AND MORE

ADDITIONAL HIGHLIGHTS

State of the Collaboratives



Optimizing Antibiotic Stewardship for California NICUs (OASCN)

The Optimizing Antibiotic Stewardship in California NICUs (OASCN) Collaborative kicked off in February 2021 with 31 NICUs across California, the largest CPQCC QI collaborative to date. The collaborative aim is to implement and evaluate an innovative, scalable antibiotic stewardship intervention that pairs prospective audit and feedback with the ECHO™ (Extension for Community Healthcare Outcomes) collaborative learning model. The OASCN collaborative is grounded in a faculty-facilitated, case-based learning model tailored to how clinicians are inclined to learn and build practice consensus. Sites have been extremely engaged, with an average of 60-100 participants or more attending online learning sessions every two weeks and participating in dynamic discussions. Collaborative data, tracked through a web-based quality improvement data platform available to all participating sites, indicates a healthy improvement in AUR by numerous sites. The OASCN Collaborative completed its 12-month implementation phase in February 2022 and moved into a 12-month sustainability phase.



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



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

In July 2021, CPQCC launched two cohorts of a new collaborative focused on growth and nutrition outcomes in select patient populations – infants who have had intestinal surgery and infants with a birth weight between 1500-2500 grams being cared for in NICUs with a low average daily census. The Growth Advancement in the NICU (GAIN) Collaborative was born out of the request of two distinct member-led workgroups that see a large share of these patients, the Children's Hospital Workgroup and the Ten Point Nine Workgroup, which represents the many CPQCC member NICUs with an average daily census of ≤ 10.9 . While CPQCC quality improvement efforts typically focus on broadly applicable areas of care for very low birth weight (VLBW) infants, the GAIN Collaborative represents the first time that CPQCC has launched a collaborative explicitly designed around the unique needs of particular subsets of member NICUs. The GAIN Collaborative meets monthly over Zoom to discuss site progress, challenges, and successes and to hear from a faculty panel of neonatologists, dietitians, quality improvement specialists, a clinical nurse specialist, and a NICU parent. The collaborative will hold its third virtual learning session in June 2022, at the end of its active phase. Sites will then transition to a year-long sustainability phase with periodic learning sessions to allow for continued collaboration and dialogue.

The GAIN: Surgical Collaborative aims to reduce the percentage of eligible infants discharged home or transferred out with moderate malnutrition. Eligible infants include those who have had one or more intestinal surgeries including bowel resections, atresias, and laparotomies. Eight NICUs are participating.

The GAIN: Ten Point Nine Collaborative has a dual aim to reduce the percentage of eligible who are discharged home or transferred out with mild malnutrition, and to increase the percentage of eligible infants who leave the NICU on any human milk. Eligible infants include inborn infants with a birth weight between 1500-2500 grams who had a NICU stay of at least seven days. Outborn infants and those with major congenital anomalies are excluded. Seven NICUs with an average daily census of ≤ 10.9 are participating in the cohort.



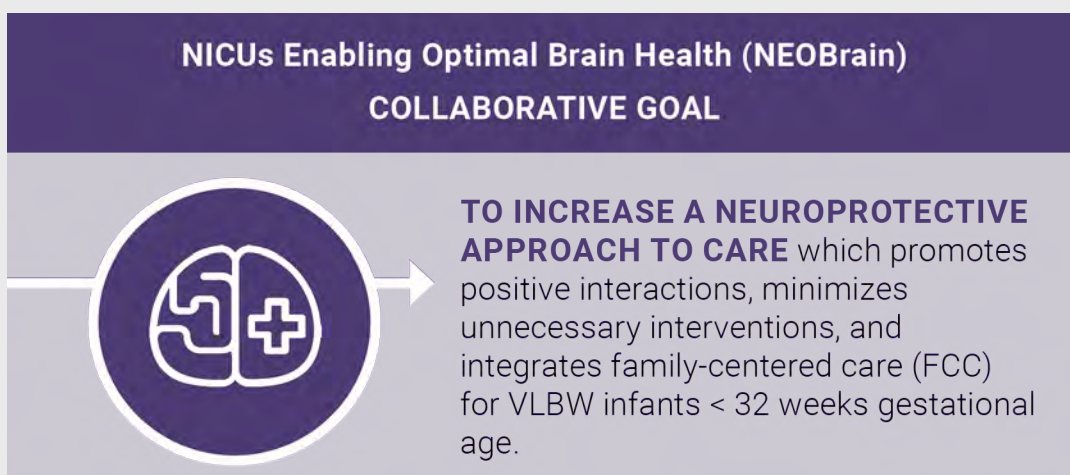
NEW IN 2022! NICUs Enabling Optimal Brain Health (NEOBrain)

Registration opened in January 2022 for CPQCC’s newest quality improvement collaborative – NICUs Enabling Optimal Brain Health (NEOBrain). The global aim of the NEOBrain Collaborative is to increase the use of a neuroprotective approach to care of very low birth weight (VLBW) infants < 32 weeks gestational age which promotes positive interactions, minimizes interventions, and integrates family-centered care (FCC). NEOBrain will focus its interventions around three main areas - prevention, protection, and promotion – using the FAIR framework. The FAIR framework attempts to break down structural barriers to equity using an approach that is family-centered, anti-racist, individualized, and rigorous.

The collaborative, which is slated to launch by early June 2022, is a unique opportunity for California NICUs to focus on high impact areas of neuroprotection including:

- Family-focused involvement in care from NICU admission
- Increasing positive environmental interactions and decreasing noxious environmental stimulation
- Decreasing unnecessary interventions, such as pokes, blood tests, x-rays, and other assessments that do not impact medical decision making
- Creating a unit culture focused on neuroprotection

In addition to the usual benefits of collaborative involvement which include access to evidence-based change packages and a community of learning where lessons, guidelines, and strategies are shared across sites, NEOBrain will offer enrolled sites access to “[Supporting and Enhancing NICU Sensory Experiences \(SENSE\)](#),” a comprehensive approach to ensuring multi-modal positive sensory exposures for high-risk infants in the NICU developed by the USC Chan Division of Occupational Science and Occupational Therapy’s NICU Therapy Lab.



QI Fundamentals | Learn the FUNdamentals of Quality Improvement with CPQCC

In 2021, CPQCC launched a pilot test of a new self-paced, online quality improvement education course – **Quality Improvement Fundamentals** - designed to walk learners through the foundations of healthcare improvement in NICUs. The course is composed of several modules of short video-based lessons, including instructional content and “deep dive” videos that feature CPQCC member NICUs explaining how they have used the concepts presented in the lesson as part of their unit’s quality improvement journey. Lessons are accompanied by practical tools for learners to use to put the concepts into practice.

Topics included in the course include:

- Understanding the Model for Improvement (from IHI)
- Creating a Culture of Improvement
- How to Form and Manage a QI Team
- Planning for Sustainability
- An Introduction to QI Tools
- Learning from Run Charts and Control Charts
- Supplementary Content on Building an Anti-Racist NICU and Using CPQCC Data and Reports for QI

In 2021, the QI Fundamentals course was pilot tested by clinical team members from the 46 NICUs participating in one of CPQCC’s ongoing quality improvement collaboratives (OASCN, GAIN: Surgical, and GAIN: Ten Point Nine). CPQCC is currently in the process of revising the course to include additional content on driver diagrams, PDSA cycles, sustainability, run charts and control charts, featuring quality improvement experts from our Perinatal Quality Improvement Panel (PQIP). The course is also being transitioned to new course software. The revised course will be open to all CPQCC members in mid-2022.

Module 2: Getting Your NICU QI Ready

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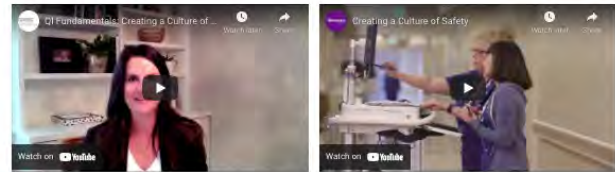
HOME MODULE 1 **MODULE 2** MODULE 3 ADDITIONAL CONTENT

This module will demonstrate how to get your NICU ready to embark on a QI project or participate in a CPQCC QI collaborative. There are three lessons. This module will take approximately 35 minutes to complete.

- Lesson 1: Creating a Culture of Improvement
- Lesson 2: How to Form and Manage a QI Team
- Lesson 3: Planning for Sustainability

Lesson 1: Creating a culture of improvement

Culture is the embodiment of what an organization values and the principles, behaviors, and attitudes that guide it in its day to day operations. A culture of quality is one in which quality improvement is embedded in the work of all employees, from senior leadership to frontline staff. A culture of quality can drive an organization’s policies, practices, and processes. Changing culture requires sustained commitment and does not occur overnight. Ideally, a NICU would assess their culture before beginning a quality improvement endeavor. The videos below describe the importance of culture and “just culture” as a model for promoting quality and teamwork within an organization, and the behaviors and attitudes that help to support it.



Deep Dive: Assessing NICU Culture

CPQCC member hospital, Alta Bates Medical Center, explains how they have assessed their NICU culture and used that knowledge to further their quality improvement goals.



Engage

Now that you’ve completed this lesson, we encourage you to review the culture surveys below and think about how you could employ them in your NICU to assess your unit’s culture. Even if you only use your annual hospital-wide culture or attitudes survey, it is important to reflect on how the climate in your NICU will contribute to (or possibly inhibit) your quality improvement efforts. Be sure to address aspects of team culture before beginning your project.

Learn More

- SCORE: Assessment of your work setting Safety, Communication, Operational Reliability, and Engagement (Duke Center for Healthcare Safety and Quality)
- The Safety Attitudes Questionnaire: psychometric properties, benchmarking data, and emerging research (BMC Health Services Research)
- Changing Safety Culture (Journal of Perinatology)

Practical Tools

- Three Good Things Worksheet (CPQCC)
- SCORE Survey (Safe & Reliable Healthcare). If you’re interested in accessing the SCORE Survey for your unit click here to request more information.
- Safety Attitudes Questionnaire - SAQ (BMC Health Services Research)

Join us for some QI FUN!
PRE-ENROLL BELOW.

<https://forms.gle/45Axjzr4GYcgC3EJA>

CPQCC published [37 new articles](#) in peer-reviewed journals in 2021, together with collaborators from across the state and country. We are extremely grateful to CPQCC members for contributing data for quality improvement that makes possible this research which advances our understanding of neonatal care.

2021 CPQCC Publications

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