

Annual Report 2021



CMQCC

Our Year in Review

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Our mission is to end preventable morbidity, mortality and racial disparities in California maternity care.

Letter from Leadership Team

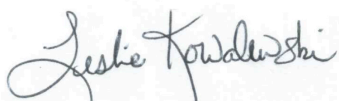
To our CMQCC Family:

As we reflect back on 2021, we want to acknowledge and celebrate the many accomplishments of our hospitals, partners and communities. You have demonstrated incredible resiliency, and we are grateful for your continued commitment to perinatal quality improvement amidst another year of unexpected pandemic challenges.

Together with our circle of partners, stakeholders and community organizations we have begun to envision, shape and launch initiatives that will further the mission of CMQCC – to end preventable morbidity, mortality and racial disparities in maternity care. Based on data from our Maternal Data Center and the most recent maternal mortality review, we are increasingly concerned about alarming inequity gaps in maternal outcomes. CMQCC is committed to addressing these gaps, and began the year by working with a birth equity advisor to deepen our understanding of structural racism and health inequities. We have added an equity lens to all of our ongoing projects and are deeply committed to advancing equity in quality improvement as we move into 2022.

We have also made the strategic decision to expand our focus in the next chapter of our work - outpatient care in order to focus on the entire continuum of care of the obstetric patient. In alignment with our new strategic plan, we revised the *Improving Health Care Response to Hypertensive Disorders of Pregnancy* Toolkit in November, and launched an “evidence-to-application” virtual summit to inform the development of a statewide low-dose aspirin initiative to reduce preeclampsia in partnership with the March of Dimes. An anemia during pregnancy project is currently underway in collaboration with a Community Leadership Group led by the Black Wellness and Prosperity Center in Fresno. The project will focus on ensuring that women are not presenting at labor and delivery with low hemoglobin levels, which can lead to hemorrhage. And, CMQCC has been meeting with partners across the state to reimagine postpartum care now that legislation has extended Medi-Cal coverage up to a year postpartum. We are excited to share updates on all of our current and future projects in this year’s Annual Report.

There are many opportunities on the horizon that will impact the health outcomes of birthing people not only in California but across the country. We know that we cannot do this work alone, and it will take all of us working together to drive and sustain real change that addresses inequities in maternal outcomes! Thank you for being a part of our CMQCC family and doing what you can to make a difference.



LESLIE KOWALEWSKI
Administrative Director,
CMQCC



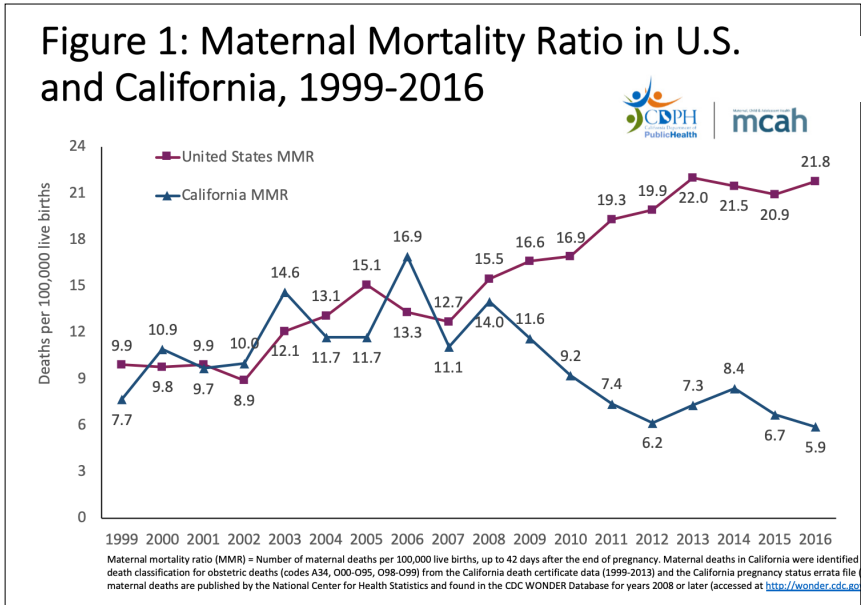
ELLIOTT MAIN
Medical Director,
CMQCC



JEFF GOULD
Principal Investigator,
CPQCC/ CMQCC

Background

For 15 years, the CMQCC team has collaborated with the California Department of Public Health (CDPH), expert volunteers, statewide partners, and member hospitals to end preventable morbidity, mortality, and racial disparities in California maternity care. Based on data published this year in the CDPH Pregnancy-Associated Mortality Review, California has seen maternal mortality decline by 65 percent between 2006 to 2016. In contrast, the national maternal mortality rate has continued to rise.



SOURCE: CA-PMSS Surveillance Report: Pregnancy-Related Deaths in California, 2008-2016. Sacramento: California Department of Public Health, Maternal, Child and Adolescent Health Division. 2021.

To drive improved maternal and pregnancy outcomes, CMQCC relies on four pillars to accomplish its mission: Data, Education, Quality Improvement, and Partnerships. Our work begins by using statewide hospital-level **data** to identify opportunities for improvement. We develop evidence-based **education** built on best practices and solutions, and assist in implementation through **quality improvement** programs. To improve outcomes at scale, we secure participation and active **partnership** with hospitals, organizations and key partners throughout the state.

This year’s Annual Report includes updates on our 2021 work organized by the four pillars and key plans for 2022.





DATA

Improving maternal health outcomes requires access to high-quality data. CMQCC member hospitals have access to the Maternal Data Center - an online tool that generates near-real-time data analytics. Hospitals representing approximately 98 percent of California's delivery volume use the Maternal Data Center to generate key metrics for hospital quality improvement. CMQCC partners with the California Department of Public Health and Public Health Institute to identify clinical and public health QI opportunities through review of pregnancy-related deaths. Data analyses are shared through reports and peer-reviewed journal articles, with 15 total articles published in 2021. CMQCC also develops quality measures, endorsed by the National Quality Forum, to drive national initiatives and promote quality care.



EDUCATION

CMQCC is committed to helping clinicians stay current on the latest in high-quality maternity care. Obstetric quality improvement toolkits provide evidence-based guidance on addressing preventable causes of maternal mortality. CMQCC regularly shares best practices on data and clinical recommendations through community webinars – including a series of webinars focused on supporting perinatal units throughout the COVID-19 pandemic. Member hospitals have exclusive access to the online discussion platform SHARE and the labor support education platform HUDLS, which was re-launched with four additional lessons and five Contact Hours in 2021!



QUALITY IMPROVEMENT

Using data and evidence-based education as foundational tools, CMQCC helps hospital teams implement clinical best practices with quality improvement programs. Statewide outreach collaboratives and the QI Academy mentorship program facilitate shared learning between CMQCC member hospitals. Expert clinical coaches and data managers provide personalized guidance for member hospitals, and state-sponsored outreach programs help further promote utilization of our QI resources.



PARTNERSHIPS

Improving maternity outcomes at scale in such a diverse state is a testament to the power of partnership. Each year, nearly 450,000 babies are born in California – comparable to the birth volume of a large European country. CMQCC recognizes and celebrates the collaborative spirit among California stakeholders who share and work together to end preventable morbidity, mortality, and racial disparities. CMQCC is honored to have worked with so many organizations on our 2021 projects detailed on the following pages.



CMQCC Pillar: Data

CMQCC's work to improve maternal outcomes relies on gathering data on maternal deaths through statewide pregnancy-associated mortality reviews, analyzing data on individual hospital performance in the Maternal Data Center, and sharing outcome data through key quality measures and publications in peer-reviewed journals.

Maternal Mortality Reviews

In partnership with the California Department of Public Health (CDPH) and Public Health Institute (PHI), CMQCC facilitates the California Pregnancy-Associated Mortality Review (CA-PAMR), a comprehensive examination of pregnancy-related deaths. In 2021, CMQCC partnered with CDPH to convene three simultaneous maternal mortality committees focused on obstetric hemorrhage, maternal deaths occurring in four Southern CA counties, and all maternal deaths through 2020. All reviews utilize an equity lens to identify whether racism or discrimination contributed to the deaths. In addition, we collaborated with CDPH and PHI on the release of the CDPH 2008-2016 California Pregnancy-Related Deaths Report. Statewide maternal mortality reviews are instrumental in identifying hospital and public health quality improvement priorities to change clinical practice and health policies.

Working on the CA- PAMR committee is tremendously gratifying as it grounds me in the WHY and the true purpose of my work. It allows our patients to be our teachers. California birthing people deserve to have their stories told with attention not only to their medical conditions, but to the context of their lives and deaths including their demographics and social determinants of health. Only by attentively listening to them speak from the grave and understanding the opportunities for improvement can we eliminate preventable death and shrink health disparities in the peripartum period"

- AMANDA WILLIAMS, MD, MPH, DIRECTOR OF MATERNITY SERVICES, DEPARTMENT OF OB-GYN, KAISER PERMANENTE, OAKLAND MEDICAL CENTER

Maternal Data Center

Improving maternal health outcomes relies on high-quality and timely data. CMQCC's Maternal Data Center (MDC) is an online tool that provides rapid-cycle performance metrics stratified by race and ethnicity on maternity care. Currently there are more than 212 hospitals actively participating in the MDC, representing approximately 98 percent of births in California.

By utilizing the MDC, hospitals can...

- access their own rapid-cycle data analytics and benchmark peer-to-peer performance
- conduct drill-down analyses to identify quality improvement opportunities
- fulfill performance reporting requirements
- download customized data reports, including data stratified by race and ethnicity to support birth equity initiatives

Maternal Data Center (continued)

The following features were added to the MDC in 2021:

- An easy-to-use Severe Maternal Morbidity (SMM) Case Review Form that facilitates case review to identify and summarize QI opportunities
- A feature that allows hospitals to search for cases based on ICD-10 diagnosis or procedure codes. This new tool allows hospital staff to identify how often certain diagnosis or procedure codes are being applied at their facility—particularly for less common conditions and procedures that are not captured by performance metrics in the MDC (e.g., Uterine Rupture).
- Tools that enable hospitals to track their progress towards each of The Joint Commission maternal safety standards requirements, while also providing links to associated CMQCC implementation resources.
- For hospitals that participate in Medi-Cal’s Quality Incentive Pool (QIP) Program, the MDC rolled out reports to facilitate Medi-Cal Managed Care plan-specific reporting for the two inpatient perinatal measures required by Department of Health Care Services (DHCS).



Inaugural Quality and Engagement Awards

CMQCC’s inaugural Quality and Engagement Awards launched in 2021 to acknowledge member hospitals that go above and beyond to foster the highest quality of care for California’s mothers, birthing people, and newborns. In total, **63 hospitals** were recognized for either early implementation of the MDC Expanded Breastfeeding measures and/or high levels of engagement with the Maternal Data Center last year! This year we are offering three additional awards for our member hospitals; see a full list of the 2022 award recipients on page 16!

In my opinion CMQCC’s legacy will be the Maternal Data Center. The MDC gives small or large facilities the opportunity to use their own data, benchmarked against the state or other like facilities, to affect change. As we have all learned, if you can not measure it, you can not change it.”

- LAURENCE SHIELDS, MD MATERNAL-FETAL MEDICINE, DIGNITY HEALTH

Outcomes Data

CMQCC has developed four quality measures endorsed by the National Quality Forum, and authored more than 85 publications in peer-reviewed journals – including 15 total publications in 2021. CMQCC was one of the first state perinatal quality improvement collaboratives and our outcomes data have provided evidence to drive initiatives throughout the United States.

In April 2021, we published a key study demonstrating how CMQCC and our partners have sustained a significant reduction in cesarean rates for low-risk, first-time mothers in the Journal of the American Medical Association (JAMA). The low-risk, first-birth (or Nulliparous Term Singleton Vertex) cesarean rate for the entire state of California fell from 26.0% in 2014 to 22.8% in 2019. The national cesarean rate remained significantly higher in 2019, at 25.6%. While some other states have had lower rates, California is the first state in the country to collectively work to achieve a large and sustained reduction in cesarean section rates without any evidence of harm for either mother or infant.



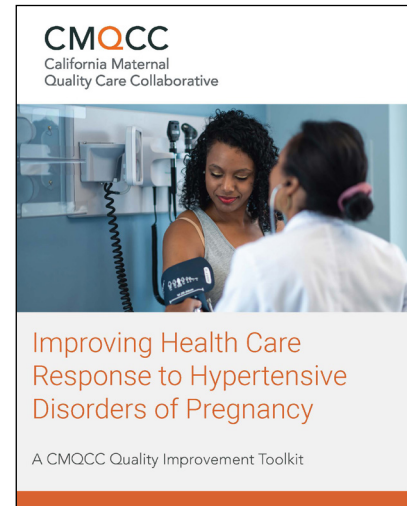
CMQCC Pillar: Education

We are committed to helping the healthcare community stay up-to-date on the latest clinical guidance through evidence-based quality improvement toolkits, webinars, and member-exclusive education platforms.

Toolkits

CMQCC's maternal quality improvement toolkits provide evidence-based guidance on addressing the primary causes of maternal morbidity and mortality, and include specific and actionable tools for clinicians such as sample policies and implementation techniques. We released the *Improving Health Care Response to Hypertensive Disorders of Pregnancy* Toolkit in November.

This toolkit is an update to the California Department of Public Health and CMQCC's existing Preeclampsia toolkit and contains expanded content to cover all hypertensive disorders of pregnancy. It was developed to support obstetric providers, clinical staff, hospitals and healthcare organizations with timely recognition and response to maternal hypertension and preeclampsia. Hypertensive disorders of pregnancy are one of the leading causes of pregnancy-related mortality and premature birth.



In addition to the expanded scope, other key changes from the first version of the toolkit include:

- Updated terminology and diagnostic criteria for HDP
- Management guidelines that are in alignment with recent changes in the American College of Obstetricians and Gynecologists treatment recommendations
- Guidance on low-dose aspirin (LDA) for prevention of preeclampsia
- Long-term follow-up guidance after an HDP diagnosis
- Best practices recommendations including accurate blood pressure measurement and nursing assessment protocols

The updated toolkit has been downloaded more than 1,900 times since its release in November. CMQCC's eight quality improvement toolkits are available for free on CMQCC's website.

New Obstetric Hemorrhage Toolkit Revisions

In March 2022, we released *Improving Health Care Response to Obstetric Hemorrhage*, the third update to our Hemorrhage toolkit. Visit our website to sign up for the upcoming introductory webinar, where our task force co-chairs will introduce and review key elements of the toolkit. More information about the *Improving Health Care Response to Obstetric Hemorrhage* Toolkit is available in "Upcoming Projects" on page 12.

COVID-19 Education and Shared Learning

Since the early days of the pandemic, CMQCC and our sister organization CPQCC partnered to bring hospitals and the broader healthcare community guidance on preparing and responding to COVID-19. We have continued our support with the following resources to help hospitals and healthcare workers respond to the pandemic as it evolves:

- Convening a hospital clinical leadership workgroup for peer-to-peer support
- Education sessions to help providers counsel patients who are vaccine hesitant
- Translation of patient education on vaccination handouts
- Data analysis of COVID's effect on maternal outcomes
- COVID-19 resources website – caperinatalprograms.org – to share organizational recommendations, sample hospitals resources and patient education resources

CMQCC Member Benefit Education

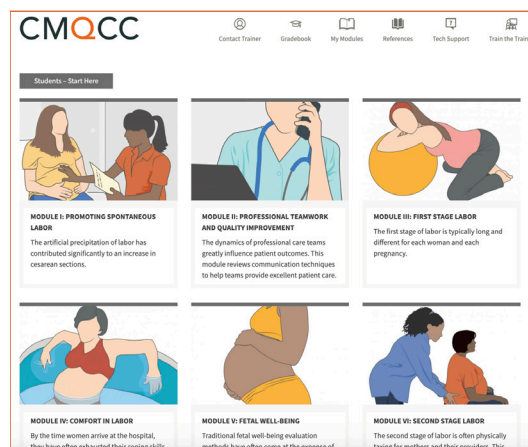
SHARE: CMQCC member hospital staff are actively sharing about quality improvement in maternity care on SHARE – an easily searchable online and email-based list serv. All staff at CMQCC member hospitals are invited to share hospital policies and best practices and solicit advice from their colleagues throughout the state. More than 500 members have SHARE accounts.

HUDLS – Hands-On Understanding and Demonstration of Labor Support – an education program for Labor and Delivery staff featuring 25 lessons on current evidence-based skills for labor support. HUDLS lessons have two parts: a series of didactic online training modules designed to take 15 minutes or less, and trainer-led bedside lessons to reinforce learnings. Hospital trainers have access to a lesson plan, teaching script, and instructional video demonstrating how to present the lesson concepts.

Thanks to generous funding from the Yellow Chair Foundation, the following new features are available for all CMQCC member hospitals as part of the 2021 upgrade:

- 5.0 Contact Hours with an easy-access PDF transcript that is accepted by the California Board of Registered Nurses
- Gradebook for hospital trainers to view staff progress and scores
- Four new lessons: Workforce Considerations for Racial Inequities, Midwifery Integration and Team-Based Care, Benefits of Doulas and Optimizing Patient Care, Data Review of NTSV Cesarean Deliveries for Quality Improvement
- Improved overall user experience and navigation throughout the course

SHARE and HUDLS are both available for CMQCC member hospital staff through a CMQCC Account.





CMQCC Pillar: Quality Improvement

Using data and education as foundational tools, CMQCC helps hospital teams implement evidence-based care with our quality improvement (QI) programs.

Promoting Equity

Over the past three years, CMQCC has been hosting an equity pilot collaborative with 5 hospitals to learn about the best ways to advance equity as a part of quality improvement initiatives. Participant hospitals have deployed a patient-reported experience metric (PREM), implemented implicit bias and birth equity trainings, and tested how to change unit attitudes and culture to support birth equity. Based on the insights and best practices identified in the pilot collaborative, CMQCC established a 22-member Birth Equity Task Force to lead the formal development and identification of action tools to address racism and promote equity. We anticipate releasing resources to interested California membership hospitals later this year.

QI Academy

The 4th cohort of QI Academy hospitals completed the mentorship program in 2021, bringing the total number of graduated hospitals to 37. QI Academy is an educational initiative where hospitals receive individual CMQCC mentorship on applying evidence-based QI techniques to a maternity care project. QI Academy facilitates the development of OB quality improvement leaders, and can be a great team-building activity to strengthen a hospital's QI skills.

In partnership with Blue Shield, CMQCC will continue to offer a new QI Academy cohort every 6 months in an all-virtual format to member hospitals. Continuing education contact hours and Maintenance of Certification (MOC) credit is available for participation in the program. Our 5th and 6th cohorts for QI Academy are currently underway, and we are actively recruiting for a 7th cohort to begin in July. We invite CMQCC member hospitals interested in participating to contact us for additional information.

Outreach Programs

Contracted by the California Department of Public Health, CMQCC manages the North Coast-East Bay and Mid-Coastal Regions for the Regional Perinatal Programs of California (RPPC). The RPPC program provides quality improvement resources, networking and consultation to hospitals throughout the state. Through RPPC, CMQCC leadership has been able to connect hospital staff statewide with our education and quality improvement resources. The current scope of work includes areas such as promoting perinatal equity, breastfeeding resources to meet the 2025 deadline identified in the CA Health and Safety Code, and supporting improvements in maternal transport policies.

Stanford's perinatal outreach program, the Mid-Coastal California Outreach Program (MCCPOP), has been providing comprehensive obstetrical and neonatal education and consultations for over 40 years. Contracted hospitals from San Mateo County to San Luis Obispo County have access to outreach education, morbidity & mortality review, peer reviews, data interpretation, and patient consultation. In light of the pandemic, MCCPOP has transitioned all continuing education courses and its annual conference to virtual formats for anyone to attend. More than 1,300 clinicians participated in MCCPOP's many educational offerings in 2021.



CMQCC Pillar: Partnerships

Building relationships with partners has been essential to establishing CMQCC's reputation as a state and national leader in maternal quality improvement. In a state that delivers 1 in 8 babies nationally, it takes all stakeholders working together to achieve sustainable results.

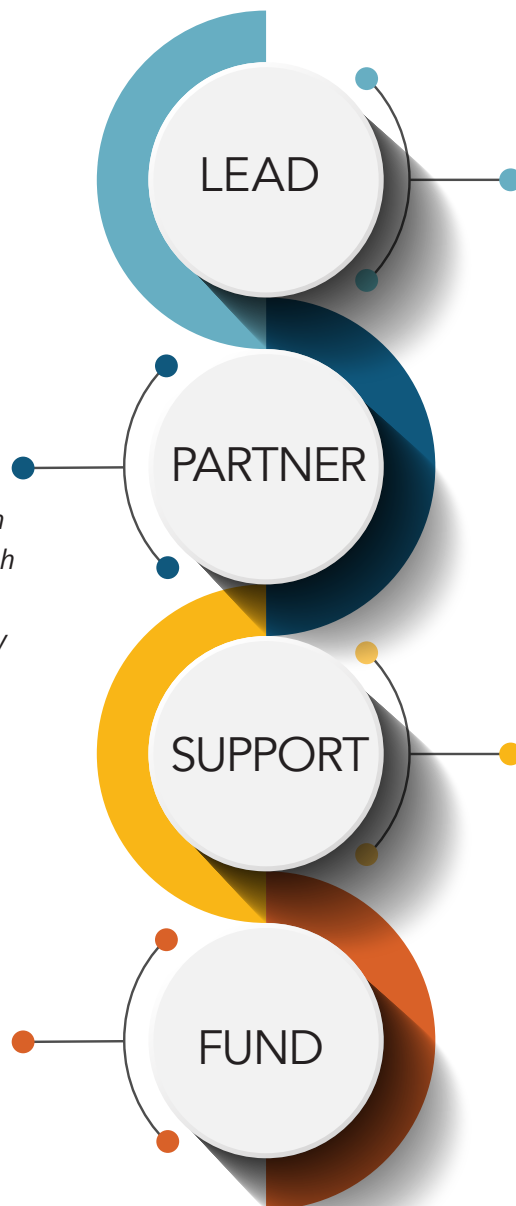
In 2021, we celebrated 15 years working with hospitals, expert volunteers, statewide partners, public health agencies and funders toward our mission – ending preventable morbidity, mortality and racial disparities in California maternity care. As we examine the next phase of work for CMQCC, we have memorialized a “Lead-Partner-Support-Fund” partnership structure to help us strategically support additional areas of hospital quality improvement.

CMQCC will contract with providers, hospitals, state organizations, and others, contributing staff time and resources to accomplish a shared vision.

Example: CMQCC partners with the California Department of Public Health and Public Health Institute to facilitate and publish comprehensive statewide Pregnancy-Associated Mortality Reviews (PAMR).

CMQCC will secure funds for partner organizations to implement programs and initiatives that meet shared organizational priorities.

Example: CMQCC has funded the Black Wellness and Prosperity Center to lead community-centered research around anemia in pregnancy.



CMQCC will be leading and driving change, recruiting hospitals and partners to work on defined priorities.

Example: CMQCC leads and develops quality improvement strategies, measures and convenes California hospital collaboratives for member hospitals to improve maternal patient safety which leads to improved perinatal outcomes.

CMQCC will provide resources, technical assistance, and guidance to outside organizations who are leading quality initiatives.

Example: CMQCC provides directors for the state's Regional Perinatal Programs of California (RPPC) with clinical resources and data to support their hospital outreach education efforts.

Upcoming Projects

We are excited to share the following projects and key priorities for 2022 and beyond. Based on data from our Maternal Data Center and the most recent maternal mortality review, we are increasingly concerned about maternal mortality in the extended postpartum period. As such, we have made the strategic decision to expand our focus in the next chapter of our work into the outpatient arenas to focus on the entire continuum of care of the obstetric patient.

Just Released! Updated Obstetric Hemorrhage Toolkit

In March 2022, we released our updated quality improvement toolkit: *Improving Health Care Response to Obstetric Hemorrhage*. Formerly published in 2010 and 2015 together with the California Department of Public Health, this is the second update to the Hemorrhage toolkit to incorporate the latest evidence and best practices.

Throughout the revised toolkit, we have included resources to address inequities in quality of care and shared the voices of women and their lived experiences with hemorrhage. Management guidelines are in alignment with the 2021 Joint Commission Standards for Maternal Safety and National Partnership for Maternal Safety Hemorrhage Bundle.

Key changes in this version of the toolkit include:

- Expanded guidance on obstetric hemorrhage risk factor assessment and an updated Obstetric Hemorrhage Risk Screen Table that includes parameters for continued re-evaluation of risk
- Increased emphasis on the importance of assessment for concealed hemorrhage
- Updated medication protocols and recommendations on the use of tranexamic acid (TXA) as an adjunctive therapy
- Multiple new chapters, including Management of Iron Deficiency Anemia; Secondary Obstetric Hemorrhage and Readmission; and Implementing and Sustaining Maternal Quality, Safety and Performance Improvement for Obstetric Hemorrhage

The toolkit, introductory webinar recording and slideset are available for everyone on CMQCC's website.



Adverse Childhood Experiences (ACES)

Current literature indicates that a birthing person's exposure to chronic stress, including from Adverse Childhood Experiences (ACES), can impact their prenatal, obstetric and postnatal clinical outcomes. To better understand the strategies clinicians can implement to mitigate chronic stress during pregnancy and postpartum, including trauma-informed care, CMQCC has convened a Perinatal ACES Task Force to review the existing literature on ACES and toxic stress with funding from the Office of the California Surgeon General. The Task Force will work on publishing recommendations in a journal article.

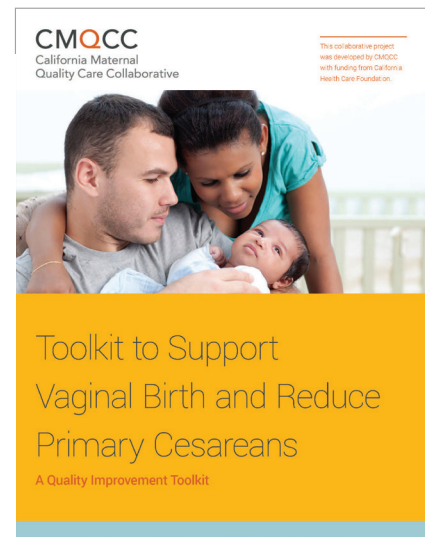
Supporting Vaginal Birth Toolkit Update

The *Toolkit to Support Vaginal Birth and Reduce Primary Cesareans* was released in 2016 to help maternity clinicians improve labor management and lower their low-risk, first-time birth cesarean rate. Thanks to generous funding from the Yellow Chair Foundation, we will be expanding the Toolkit and its complementary Implementation Guide with additional chapters.

The new content will focus on:

- Midwifery team-based care models
- Low-intervention practices, including the integration of doulas into the patient care team
- Standardized timely transfer tools for out-of-hospital births

We expect to release the revised toolkit in Winter 2022.



Patient-Centered Approach to Anemia in Pregnancy

Iron deficiency anemia in pregnancy is a significant risk factor for several life-threatening outcomes, including postpartum hemorrhage and preterm birth. Through CMQCC funding, the Black Wellness and Prosperity Center in Fresno has convened the Anemia Community Leadership Group (ACLG) comprised of community members and clinical stakeholders to develop a consensus approach to effective and equitable care of prenatal anemia and culturally responsive treatments. A key part of this initiative will involve qualitative research through one-on-one listening sessions with women who experienced anemia during pregnancy. A long-term goal of this work is to secure funding to develop and publish a toolkit sharing effective and culturally responsive treatment protocols and educational materials. This project is being funded by Stanford Center for Clinical and Translational Research and Education Spectrum Grant.

Low-Dose Aspirin Initiative

Building on CMQCC's *Improving Health Care Response to Hypertensive Disorders of Pregnancy* Toolkit and the March of Dimes' Low-Dose Aspirin Toolkit, the future initiative aims to reduce preeclampsia and subsequent preterm births using a hospital-community approach. CMQCC in partnership with the March of Dimes is in the initial phase of bringing together a team that includes patients and community partners to identify strategies, barriers, and data measures, with the goal of launching a pilot to increase low dose aspirin utilization among high-risk patients this Summer. This collaborative project is funded by the March of Dimes.

Upcoming Projects (continued)

Maternal Sepsis Care Practices Study

A major finding of the Maternal Sepsis Task Force was existing screening tools to identify sepsis in adults do not perform well when applied to pregnant patients. Accordingly, in 2020 the Task Force developed and recommend a new two-step screening and confirmation approach for the diagnosis of sepsis in CMQCC's *Improving Diagnosis and Treatment of Maternal Sepsis* Toolkit. In our next phase of studying sepsis care practices, we are working with Duke University on a maternal sepsis study entitled, "Large-scale Implementation of Community Co-led Maternal Sepsis Care Practices to Reduce Morbidity and Mortality from Maternal Infection" funded by the National Institutes of Health.

Key objectives of the study will be to work with colleagues at Duke University and a community advisory group on the following objectives:

- Refine the sepsis screening algorithm in pregnancy
- Identify clinician barriers to utilizing the screening algorithm
- Identify patient barriers to receiving care at the appropriate time

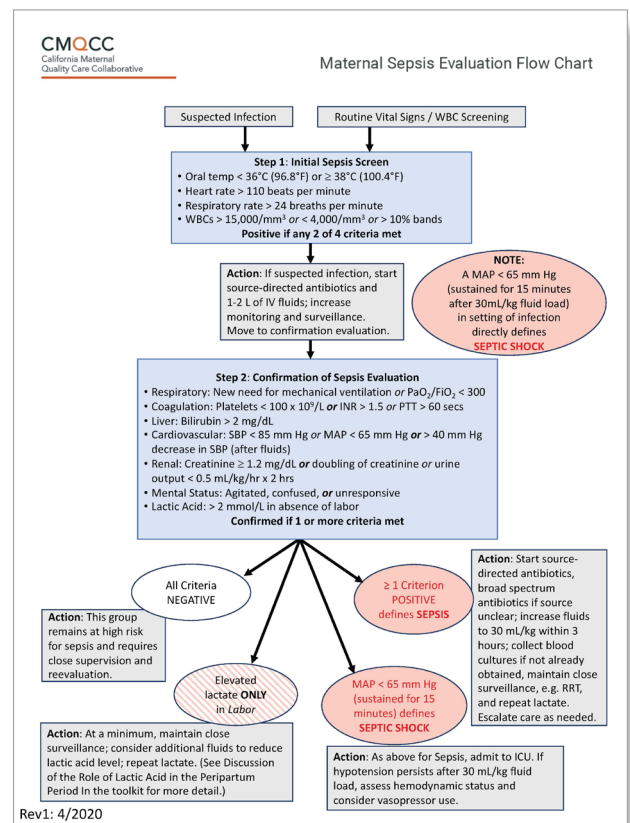
The project should culminate with a large-scale quality improvement (QI) collaborative in multiple hospitals nationally.

Asian American, Native Hawaiian and Pacific Islander Research

In 2022, CMQCC and our sister organization, CPQCC, are embarking on a new project to study care processes and outcomes for Asian American, Native Hawaiian and Pacific Islander (AANHPI) birthing people and infants during birth hospitalization. The project is intended to further our understanding of how disparities manifest within this diverse group, and is funded by the National Institutes of Health and Stanford CARE: Center for Asian Health Research and Education. The multi-year project aims to:

- Evaluate disparities in care processes and outcomes among AANHPI mothers and infants and identify associations with multilevel risk factors
- Assess the impact of hospital factors on care processes and outcomes
- Increase understanding of the birth and delivery hospitalization experiences of AANHPI

A defining aspect of this project is an effort to engage community partners in the research to gain a better understanding of how AANHPI birthing populations experience care. As a first step, the project team is planning a hybrid conference on May 16, 2022, to discuss key areas to focus on how to best integrate the community into the research process.



2021 CMQCC Publications

Carmichael SL, Abrams B, El Ayadi A, Lee HC, Liu C, **Lyell DJ**, Lyndon A, **Main EK**, Mujahid M, Tian L, Snowden JM. "Ways Forward in Preventing Severe Maternal Morbidity and Maternal Health Inequities: Conceptual Frameworks, Definitions, and Data, from a Population Health Perspective." *Women's Health Issues*. December 2021.

Zhang A, Berrahou I, **Leonard SA**, **Main EK**, Obedin-Maliver J. "Birth registration policies in the United States and their relevance to sexual and/or gender minority families: Identifying existing strengths and areas of improvement." *Soc Sci Med*. December 2021.

Leonard SA, **Main EK**, Lyell DJ, Carmichael SL, Kennedy CJ, Johnson C, Mujahid MS. "Obstetric comorbidity scores and disparities in severe maternal morbidity across marginalized groups." *Am J Obstet Gynecol MFM*. November 2021.

Society for Maternal-Fetal Medicine (SMFM), Combs CA, Allbert JR, Hameed AB, **Main EK**, Taylor I, Allen C; SMFM Patient Safety and Quality Committee. "Society for Maternal-Fetal Medicine Special Statement: A quality metric for evaluating timely treatment of severe hypertension." *Am J Obstet Gynecol*. October 2021.

Snowden JM, Lyndon A, Kan P, El Ayadi A, **Main EK**, Carmichael SL. "Severe Maternal Morbidity: A Comparison of Definitions and Data Sources." *Am J Epidemiol*. September 2021.

Dhurjati R, **Main EK**, **Profit J**. "Institutional Racism: A Key Contributor to Perinatal Health Inequity." *Pediatrics*. September 2021.

White VanGompel E, **Main EK**. "Safe care on maternity units: a multidimensional balancing act." *BMJ Qual Saf*. June 2021.

Butwick AJ, Liu C, Guo N, Bentley J, **Main EK**, Mayo JA, Shaw GM, Stephansson O. "Association of Gestational Age with Postpartum Hemorrhage." *Anesthesiology*. June 2021.

White VanGompel E, Perez S, Datta A, Carlock F, **Cape V**, **Main EK**. "Culture That Facilitates Change: A Mixed Methods Study of Hospitals Engaged in Reducing Cesarean Deliveries." *The Annals of Family Medicine*. May 2021.

Karakash SD, **Main EK**, **Chang SC**, Shaw GM, Stevenson DK, **Gould JB**. "Measuring Variation in Interpregnancy Interval: Identifying Hotspots for Improvement Initiatives." *Am J Perinatol*. May 2021.

Rosenstein MG, **Chang SC**, **Sakowski C**, **Markow C**, Teleki S, Lang L, Logan J, **Cape V**, **Main EK**. "Hospital Quality Improvement Interventions, Statewide Policy Initiatives, and Rates of Cesarean Delivery for Nulliparous, Term, Singleton, Vertex Births in California." *JAMA*. April 2021.

Haidari E, **Main EK**, Cui X, **Cape V**, Tawfik DS, Adair KC, Sexton BJ, **Profit J**. "Maternal and neonatal health care worker well-being and patient safety climate amid the COVID-19 pandemic." *J Perinatol*. March 2021.

Main EK, **Chang SC**, **Carpenter AM**, Wise PH, Stevenson DK, Shaw GM, **Gould JB**. "Singleton preterm birth rates for racial and ethnic groups during the coronavirus disease 2019 pandemic in California." *Am J Obstet Gynecol*. February 2021.

Mujahid MS, Kan P, **Leonard SA**, Hailu EM, Wall-Wieler E, Abrams B, **Main EK**, **Profit J**, Carmichael SL. "Birth hospital and racial and ethnic differences in severe maternal morbidity in the state of California." *Am J Obstet Gynecol*. February 2021.

Morton CH, Hall MF, Shaefer SJM, Karsnitz D, Pratt SD, Klassen M, Semenuk K, Chazotte C. "National Partnership for Maternal Safety: Consensus Bundle on Support After a Severe Maternal Event." *J Obstet Gynecol Neonatal Nurs*. January 2021.

CMQCC Quality and Engagement Awards

We are excited to announce the award recipients for the 2022 CMQCC Quality and Engagement Awards! We present the following awards to member hospitals who go above and beyond to improve the quality of care for California's mothers and birthing people.



Quality & Sustainability Award: NTSV Cesarean Birth Rate (PC-02)

Awarded to hospitals that achieved a target Cesarean Birth rate among their Nulliparous, Term, Singleton, Vertex (NTSV) birthing population for three years in a row. For Calendar Years 2019 and 2020, the target rate was 23.9%; for Calendar Year 2021, the target NTSV rate was 23.6%.

- Adventist Health Bakersfield
- Adventist Health Clear Lake
- Adventist Health Ukiah Valley
- Alta Bates Summit Medical Center
- Arrowhead Regional Medical Center
- Bakersfield Memorial Hospital
- Banner Lassen Medical Center
- Barton Memorial Hospital
- California Pacific Medical Center-Van Ness Campus
- Community Memorial Hospital
- Contra Costa Regional Medical Center
- Corona Regional Medical Center
- Desert Valley Hospital
- Doctors Medical Center of Modesto
- Eden Medical Center
- El Camino Health - Los Gatos
- Emanuel Medical Center
- Henry Mayo Newhall Hospital
- HHS Saint Louise Regional Hospital
- HHS Santa Clara Valley Medical Center
- Highland Hospital
- Kaiser Permanente Baldwin Park Medical Center
- Kaiser Permanente Downey Medical Center
- Kaiser Permanente Panorama City Medical Center
- Kaiser Permanente Redwood City Medical Center
- Kaiser Permanente Riverside Medical Center
- Kaiser Permanente Roseville Medical Center
- Kaiser Permanente San Diego Medical Center
- Kaiser Permanente Santa Clara Medical Center
- Kaiser Permanente South Sacramento Medical Center
- Kaiser Permanente Vacaville Medical Center
- Kaiser Permanente West Los Angeles Medical Center
- Loma Linda University Children's Hospital
- Lucile Packard Children's Hospital at Stanford
- Mad River Community Hospital
- Madera Community Hospital
- MarinHealth Medical Center
- Martin Luther King, Jr. Community Hospital
- Memorial Medical Center, Modesto
- MemorialCare Miller Children's & Women's Hospital Long Beach
- Mercy Medical Center - Redding
- Mills - Peninsula Medical Center
- Mission Hospital
- Natividad Medical Center
- Northern Inyo Hospital
- Palomar Medical Center Escondido
- PIH Health Hospital-Whittier
- Pomona Valley Hospital Medical Center
- Rancho Springs Medical Center
- Redlands Community Hospital
- Riverside University Health System-Medical Center
- San Joaquin General Hospital
- Santa Barbara Cottage Hospital
- Scripps Memorial Hospital Encinitas
- Scripps Mercy Hospital Chula Vista
- Scripps Mercy Hospital San Diego
- St. Bernardine Medical Center
- St. Jude Medical Center
- St. Mary Medical Center Apple Valley
- St. Mary Medical Center Long Beach
- Sutter Coast Hospital
- Sutter Davis Hospital
- Sutter Delta Medical Center
- Sutter Lakeside Hospital
- Sutter Medical Center, Sacramento
- Tri-City Medical Center
- Twin Cities Community Hospital
- UC Irvine Health
- UC San Diego Health
- UCLA Medical Center, Santa Monica
- Ventura County Medical Center
- Ventura County Medical Center - Santa Paula Hospital
- Watsonville Community Hospital
- Woodland Healthcare
- Zuckerberg San Francisco General Hospital and Trauma Center



Quality & Sustainability Award: Timely Treatment for Severe Hypertension Rate

Awarded to hospitals that met and maintained a Timely Treatment for Severe Hypertension (HTN) rate of 80% and above for Calendar Years 2019 through 2021. This rate is a CMQCC sustainability recommendation.

- Corona Regional Medical Center
- John Muir Medical Center-Walnut Creek Campus
- Kaiser Permanente Modesto Medical Center
- Natividad Medical Center
- Saint Agnes Medical Center
- San Gabriel Valley Medical Center
- Sierra Vista Regional Medical Center
- St. Joseph Hospital, Orange
- Tri-City Medical Center

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Quality & Sustainability Award: QI Academy Collaborative Hospitals

QI Academy is CMQCC's year-long mentorship program in which participating hospital staff receive coaching on the application of evidence-based quality improvement (QI) techniques to a hospital-selected quality initiative. The award is given to QI Academy participants that met, and have maintained, their target rate for their selected quality initiative.

- Corona Regional Medical Center
- Enloe Medical Center - Esplanade Campus
- MemorialCare Miller Children's & Women's Hospital Long Beach
- Queen of the Valley Medical Center - Napa
- Redlands Community Hospital
- St. Mary Medical Center Apple Valley
- St. Joseph Hospital, Orange
- UC San Diego Health



MDC Superstar Award: Small Birth Volume Hospitals

Awarded to hospitals with <1000 births that exhibited high levels of engagement in the Maternal Data Center during the prior calendar year.

- Adventist Health Lodi Memorial
- Adventist Health Simi Valley
- Adventist Health Ukiah Valley
- AHMC Anaheim Regional Medical Center
- Corona Regional Medical Center
- Desert Valley Hospital
- El Camino Health - Los Gatos
- Fairchild Medical Center
- Hazel Hawkins Memorial Hospital
- Hemet Global Medical Center
- LAC / Harbor - UCLA Medical Center
- LAC / Olive View - UCLA Medical Center
- Martin Luther King, Jr. Community Hospital
- Mercy Medical Center - Mt. Shasta
- Palomar Medical Center Poway
- Petaluma Valley Hospital
- Queen of the Valley Medical Center - Napa
- Ridgecrest Regional Hospital
- San Geronimo Memorial Hospital
- San Ramon Regional Medical Center
- Santa Rosa Memorial Hospital
- St. Elizabeth Community Hospital
- St. Joseph Hospital, Eureka
- Sutter Maternity & Surgery Center of Santa Cruz
- Tahoe Forest Hospital District
- USC Verdugo Hills Hospital
- Watsonville Community Hospital



MDC Superstar Award: Medium-Sized Birth Volume Hospitals

Awarded to hospitals with 1000-2499 births that exhibited high levels of engagement in the Maternal Data Center during the prior calendar year.

- Adventist Health and Rideout
- Adventist Health Bakersfield
- Adventist Health Glendale
- Arrowhead Regional Medical Center
- Eisenhower Medical Center
- Enloe Medical Center - Esplanade Campus
- Garfield Medical Center
- Kaiser Permanente Antioch Medical Center
- Kaiser Permanente Fresno Medical Center
- Kaiser Permanente Redwood City Medical Center
- Kaiser Permanente San Jose Medical Center
- Kaiser Permanente Santa Rosa Medical Center
- Kaiser Permanente Vacaville Medical Center
- Kaiser Permanente Vallejo Medical Center
- Kern Medical
- Memorial Medical Center, Modesto
- MemorialCare Saddleback Medical Center
- Natividad Medical Center
- NorthBay Medical Center
- Orange Coast Medical Center
- PIH Health Good Samaritan Hospital
- PIH Health Hospital - Whittier
- Providence Saint Joseph Medical Center
- Redlands Community Hospital
- Riverside University Health System - Medical Center
- Ronald Reagan UCLA Medical Center
- Salinas Valley Memorial Healthcare System
- San Gabriel Valley Medical Center
- Scripps Memorial Hospital Encinitas
- St. Jude Medical Center
- St. Mary Medical Center Apple Valley
- Stanford Health Care - ValleyCare - Pleasanton
- Sutter Davis Hospital
- Torrance Memorial Medical Center
- Tri-City Medical Center
- UC Irvine Health
- UCLA Medical Center, Santa Monica
- Washington Hospital Healthcare System
- Zuckerberg San Francisco General Hospital and Trauma Center

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MDC Superstar Award: Large Birth Volume Hospitals

Awarded to hospitals with >2500 births that exhibited high levels of engagement in the Maternal Data Center during the prior calendar year.

- Clovis Community Medical Center
- Community Memorial Hospital
- Community Regional Medical Center
- El Camino Health - Mountain View
- Hoag Memorial Hospital Presbyterian
- Huntington Hospital
- Kaiser Permanente San Diego Medical Center
- Kaiser Permanente San Leandro Medical Center
- Kaiser Permanente South Sacramento Medical Center
- Loma Linda University Children's Hospital
- MemorialCare Miller Children's & Women's Hospital Long Beach
- Rancho Springs Medical Center
- Saint Agnes Medical Center
- St. Francis Medical Center
- St. Joseph Hospital, Orange
- Sutter Medical Center, Sacramento
- UC San Diego Health



MDC Early Implementers Award

Awarded for the implementation of a new MDC measure or feature. In 2022, awarded to hospitals that documented completion of one of the maternal safety bundles within the Maternal Data Center's Patient Safety Watch section, and completed at least six months of associated data collection (chart review).

- AHMC Anaheim Regional Medical Center
- Community Memorial Hospital
- Doctors Medical Center of Modesto
- Eisenhower Medical Center
- Huntington Hospital
- Loma Linda University Children's Hospital
- Mercy Medical Center - Redding
- Orange County Global Medical Center
- PIH Health Hospital - Whittier
- Providence Cedars-Sinai Tarzana Medical Center
- Providence Saint Joseph Medical Center
- Riverside University Health System - Medical Center
- San Antonio Regional Hospital
- San Gabriel Valley Medical Center
- Scripps Memorial Hospital Encinitas
- Scripps Memorial Hospital La Jolla
- Scripps Mercy Hospital Chula Vista
- Scripps Mercy Hospital San Diego
- St. Joseph Hospital, Orange
- Washington Hospital Healthcare System

Executive Committee

CMQCC's Executive Committee provides guidance on strategy and priorities. We would like to extend gratitude to the following longtime Executive Committee members who stepped down in 2021: William (Bill) Gilbert, MD; Lawrence D. Lurvey, MD, JD; Manuel Porto, MD; John Wachtel, MD, FACOG; and Zachary Zwolak, MD. We would also like to welcome our new members: Palav Babaria, MD, MHS; Priya Batra, MD, MHS; Shantay R. Davies-Balch, MBA, CLE, Doula; Diane Lindsey, MBA; Gail Newel, MD, MPH; Lyn Yasumura, MD.

Ifeyinwa Asiodu, RN, PhD, IBCLC
AWHONN, UCSF School of Nursing

Palav Babaria, MD, MHS
Quality and Population Health Management, DHCS

Priya Batra, MD, MHS
Quality and Population Health Management, DHCS

Joy Burkhard, MBA
2020 Mom

Shantay R. Davies-Balch, MBA, CLE, Doula, Black Wellness and Prosperity Center, Fresno

Jeffrey B. Gould, MD, MPH
CPQCC, Stanford University

Robert Imhoff
Health Quality Institutes

Miranda Klassen
AFE Foundation

Lisa Korst, MD, PhD
Childbirth Research Associates, LLC

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Office of Statewide Health Planning and Development

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Usha Ranji, MS
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Holly Smith, MPH, MSN, CNM
American College of Nurse Midwives

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California Health Care Foundation

Lyn Yasumura, MD
Kaiser Permanente



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