



CMQCC: Quality Measurement and Improvement for California Maternity Services

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Doctor of Public Health Candidate

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California Maternal Quality Care Collaborative (CMQCC)

- Data-driven OB Quality Improvement
- Develop and Refine OB Quality Measures
- Develop a State-wide Effort for Collaborative OB Quality Improvement
 - Leverage existing professional groups, hospital systems, payors and state agencies
- Reduce Disparities in OB Outcomes
- Develop professional standards
- Develop prevention strategies
- Analyze and align quality with incentives
 - Negative, Positive, and Perverse

CMQCC: Founding Organizations

- **Maternal, Child and Adolescent Health Program, California Department of Public Health:**
Susann Steinberg, MD, Division Chief
Shabbir Ahmad, DVM, MS, PhD, Acting Division Chief
- **California Perinatal Quality Care Collaborative (CPQCC) (est. 1996):**
Jeffrey Gould, MD, MPH,
Elliott Main, MD,
Barbara Murphy, MS, RN,

CMQCC Key Partner Organizations

State Agencies:

- OSHPD Healthcare Information Division
- Office of Vital Records (OVR)
- Regional Perinatal Programs of California (RPPC)

Public Groups

- California Hospital Accountability and Reporting Taskforce (CHART)
- March of Dimes (MOD)

Professional groups

- American College of Obstetrics and Gynecology (ACOG)
- Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN)
- American College of Nurse Midwives (ACNM)

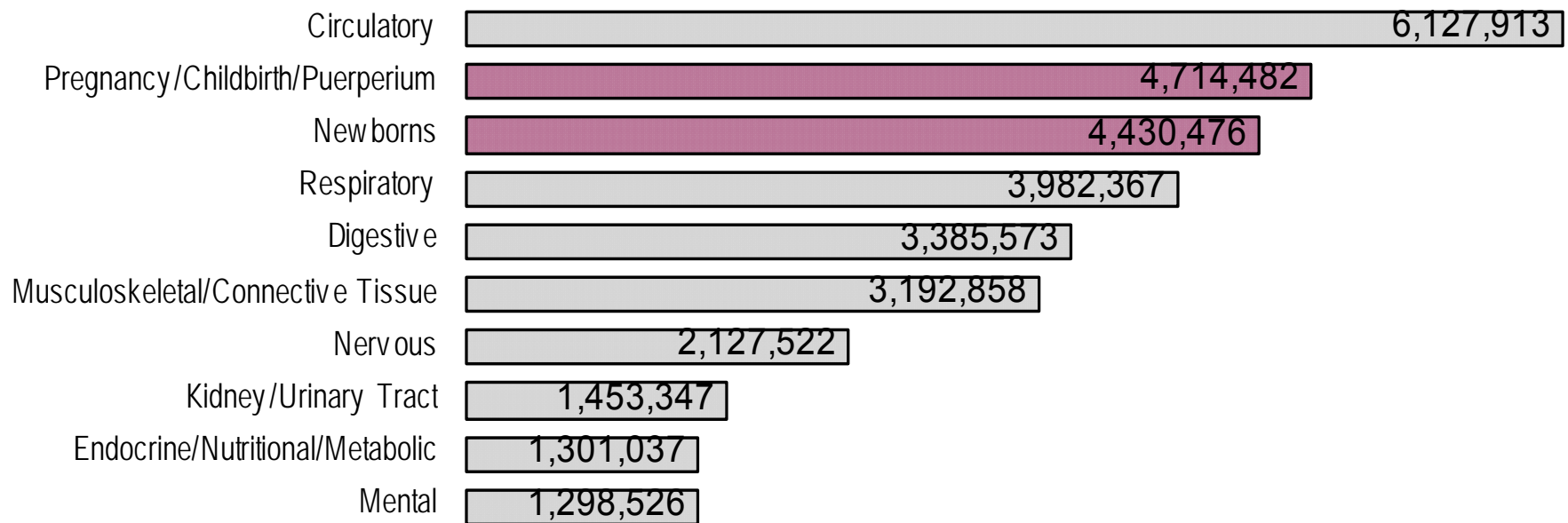
Key Medical and Nursing Leaders

- University and Hospital Systems
- Kaisers, Sutter, Sharp, CHW, Scripps, Public hospitals

Additional Partners are needed!!

CMQCC: **Transforming Maternity Care**

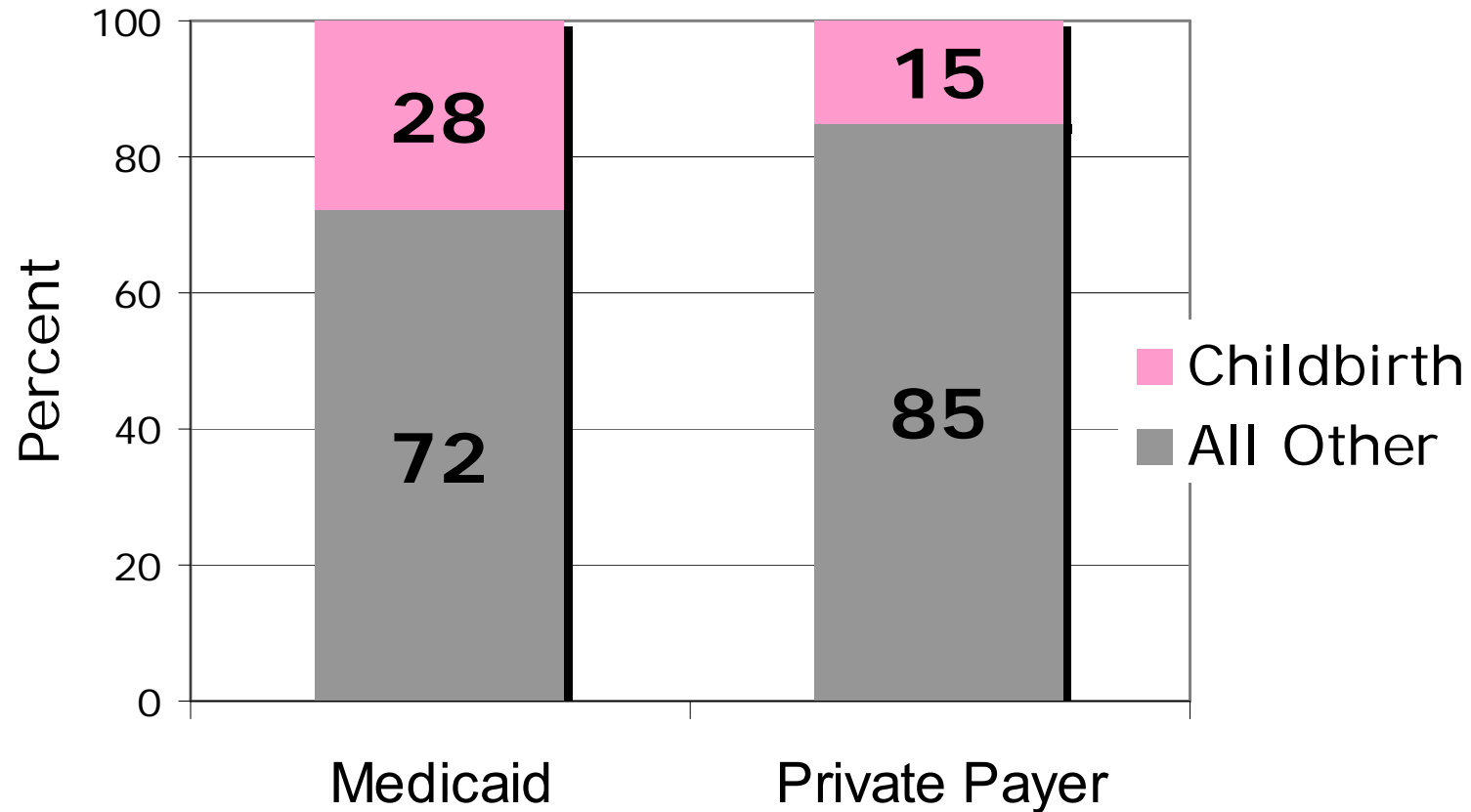
Maternity Services within Healthcare



Source: U.S. Agency for Healthcare Research & Quality, 2008

Leading major diagnostic categories by number of hospital discharges, United States, 2005

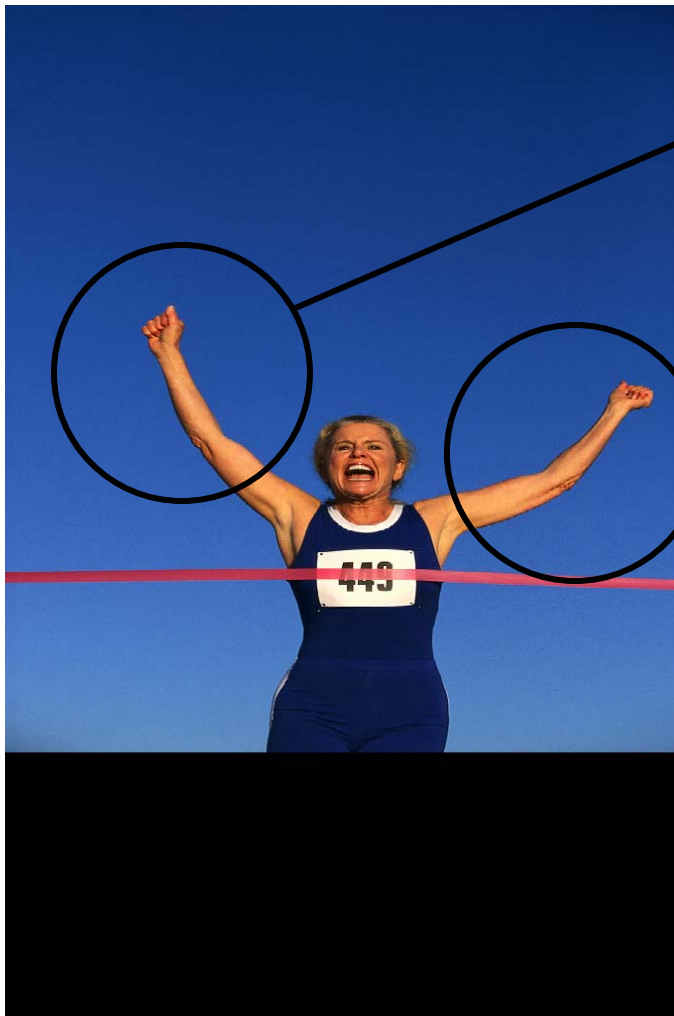
Maternity Services within Healthcare



Total hospital charges by payer, US: 2005

Source: Andrews et al. 2007

Two Arm Approach...



Right Arm: Data-- QI Measures, Research, And Analysis

“If you can’t measure it, you can’t improve it.”

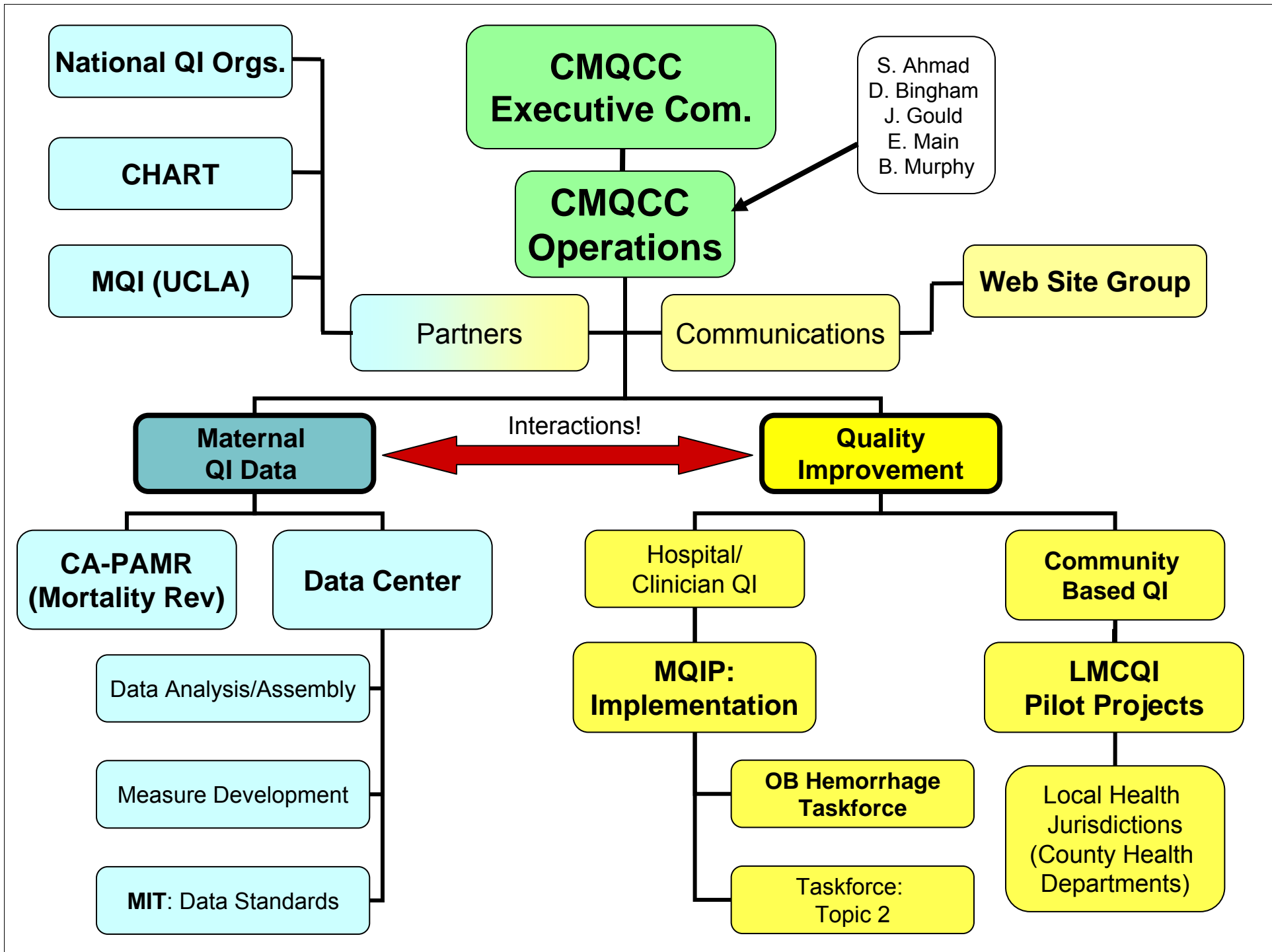
Left Arm: Action

“What good is measuring, if we don’t work on improving it?”

Our Philosophy:

Quality Improvement using a systems approach

“Every change needs a champion.”

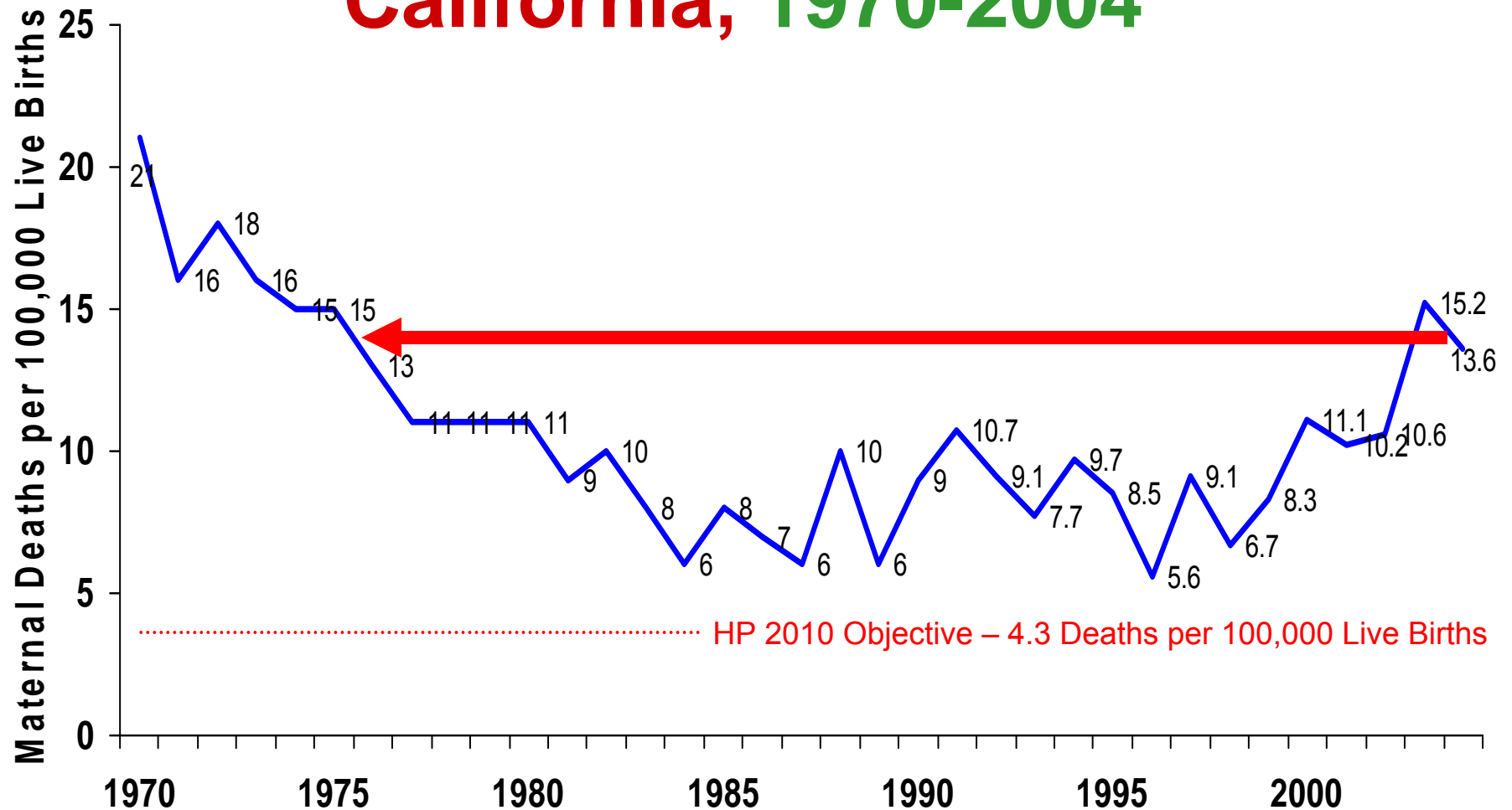




Importance of Data

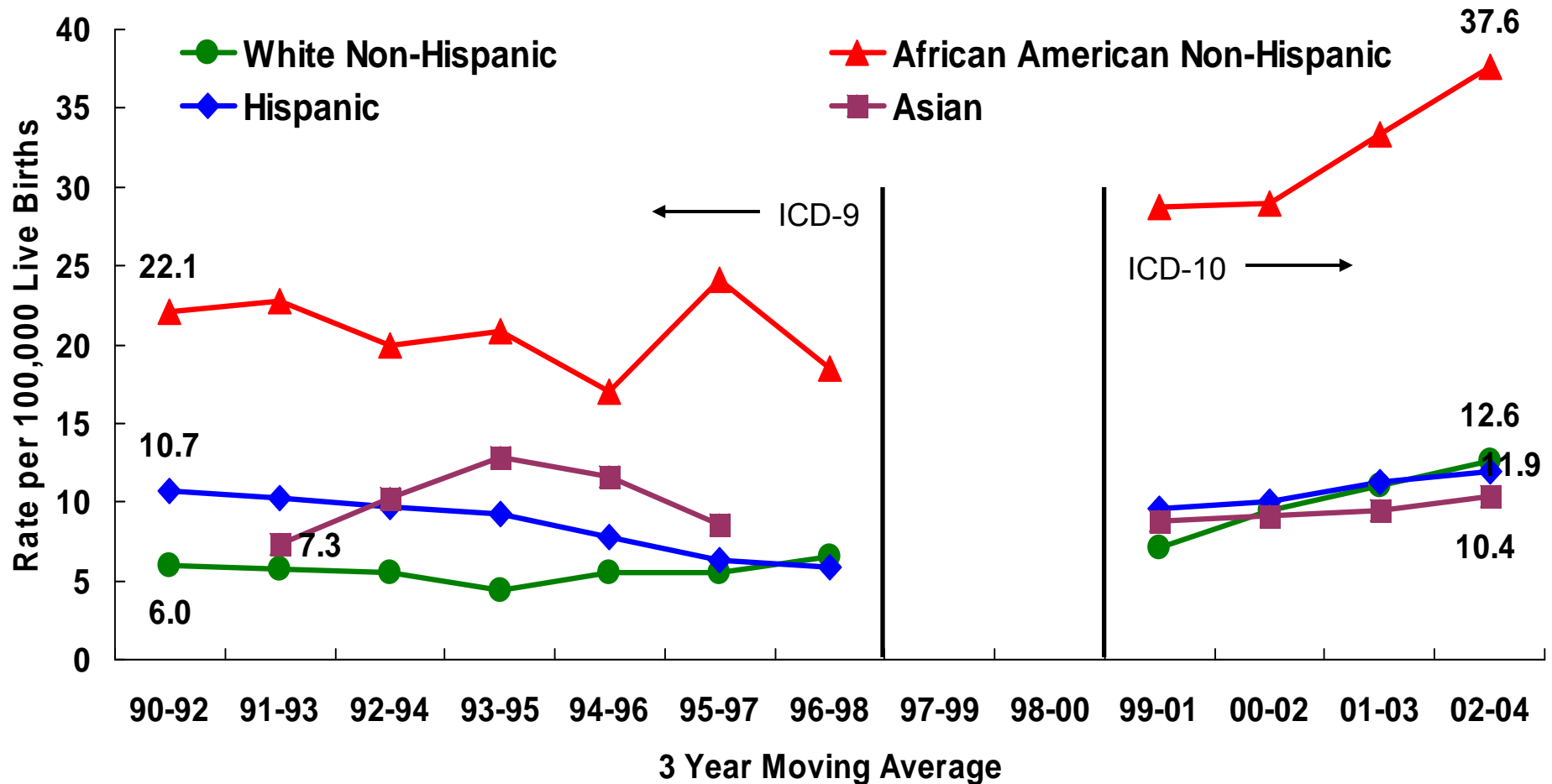
**“If you can’t measure it
you can’t improve it!”**

Maternal Mortality Rate, California, 1970-2004



SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1970-2004.
 Produced by California Department of Public Health, Maternal, Child and Adolescent Health Program, October, 2007.

Pregnancy-Related Mortality Rates by Race/Ethnicity, California Residents: 1990-2004



SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1990-2004. Maternal mortality (deaths ≤ 42 days postpartum) calculated 1990-1998 using ICD-9 classification. Pregnancy-related mortality (deaths ≤ 365 days postpartum) calculated beginning 1999 using ICD-10 classification. Maternal single race code used 1990-1999; multirace code used beginning 2000. Asian women had too few deaths during 1996-1998 period to calculate rate. Produced by California Department of Public Health, Maternal, Child and Adolescent Health Program, October 2007.

One Source of Data...

California Pregnancy-Associated Mortality Review (CA-PAMR)



CA-PAMR Advisory Committee - Physician and nursing leaders statewide review cases:

- Causes of death
- Contributing factors
- Quality improvement opportunities

■ Quantitative Analysis

Identifies the Populations most at risk

■ Quality Improvement Opportunities Analysis

Provides A Blueprint for Action!

CA-PAMR Advisory Committee Members (Case Review Group)

■ Physician and nursing leaders statewide

- Elliott Main, MD, Chair, CMQCC (San Francisco)
- Debra Bingham, MS, RN, CMQCC (Palo Alto)

- Lisa Bollman, MS, RN, RPPC, Perinatal Profiles (Los Angeles)
- Conrad Chao, MD, UCSF Fresno (Fresno)
- Sheila Cohen, MD, OB Anesthesia, Stanford (Palo Alto)
- Patsy Dailey, MD, OB Anesthesia, CSA (Burlingame)
- Maurice Druzin, MD, Stanford (Palo Alto)
- Kristi Gabel, MS, RN, Regional Perinatal Programs #2&3 (Sacramento)
- Dodi Gauthier, MEd, RN, AWHONN (Santa Barbara)
- Katherine Gregory, MD, MPH, ACOG (San Francisco)
- Michael Fassett, MD, Kaiser So California (Los Angeles)
- Kim Gregory, MD, MPH, UCLA/Cedars Sinai (Los Angeles)
- Thomas Kelly, MD, UC San Diego (San Diego)
- Barbara Murphy, MS, RN, CPQCC (Palo Alto)
- Larry Newman, MD, Kaiser No California (Oakland)
- Carolina Reyes, MD, LA Best Babies (Los Angeles)
- Linda V. Walsh, CNM, PhD, ACNM (San Francisco)
- Lynn Yonekura, MD, USC (Los Angeles)

Administrative Support:

- CDPH MCAH Program
 - Shabbir Ahmad, Acting Chief
 - **Amy Godecker, Principle Investigator, CA-PAMR**
 - Kate Marie
 - Jennifer Troyan
 - Zhiwei Yu
 - Archana Minnal
 - Connie Mitchell
- Public Health Institute
 - Sue Holtby
 - Christy McCain
 - Nicole Lordi
- California Maternal Quality Care Collaborative
 - Sanary Lou
 - Valerie Cape
- California Perinatal Quality Care Collaborative
 - Jeff Gould
 - Barbara Murphy

CMQCC: Transforming Maternity Care

**73% of the cases reviewed were
determined to have:
Some, Good, or a Strong chance
to prevent the death!**

Overview of QI Opportunities Identified:

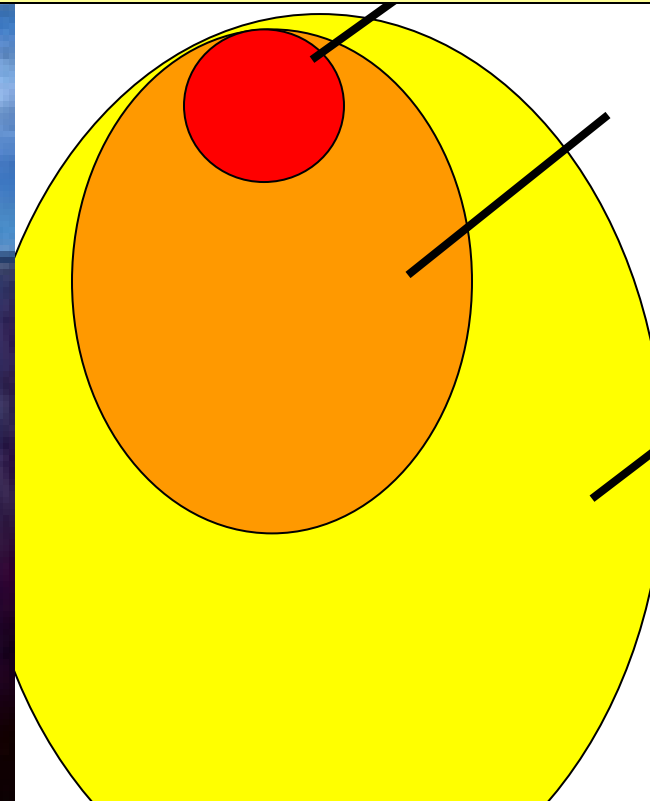
- **Underuse – 77%**
- **Misuse – 8%**
- **Overuse - 21%** (Pregnancy-Related only)
 - Induction
 - Previous Cesarean Section

Top Seven Clinical Conditions with more than One QI Opportunity Identified

- Cardiovascular
- Hemorrhage
- Hypertension
- Preeclampsia/Eclampsia
- Amniotic Fluid Embolism
- DIC
- Venous thromboembolism

Why Maternal Mortality Matters:

Approx. 75 Pregnancy Related Mortalities per year in CA



**Near Misses: 1-3
per 1,000 or
~1,200 births/yr**

**Serious
Morbidity: ~1%
or 50,000
births/yr**

**Maternal complications
4th leading cause of infant death in 2005**

Kung HC, Hoyert DL, Xu J, Murphy SL. Deaths:
Preliminary data for 2005. Health E-Stats. Sept 2007.

California Maternity Outcomes Show Large Variation

- Examples:
- County Level Data
 - Maternal Mortality
 - Risk-adjusted Cesarean Birth
- Hospital Level Data
 - Risk-adjusted Cesarean Birth
 - Exclusive Breast-feeding at Discharge
 - 3rd/4th Lacerations

MQI: Maternal Quality (Morbidity) Indicator Project

- Based at UCLA/Cedars (M. Lu, Chair)
- Reviewed hospital discharge data (2002) for every hospital in CA
- Two key maternal outcomes that exhibit great variability:

- Hemorrhage (range: 0.43% to 14.2%)
- Maternal Infection (range: 0.05% to 1.67%)
- *Large variation found in both unadjusted and risk-adjusted populations*

Other Data Sources Are Needed:

- Development of Quality Improvement Measurements
 - Confidential Release
 - Public Release
- Development of Benchmarking Reports

Most clinicians and hospitals do not know how they compare to each other on key outcome variables.



Importance of Action

“What good is measuring if we don’t act on what we know?”

Multi-Level Collaborative Action Needed:

- Clinicians and Hospitals
- Communities and Counties
- State and Federal Government

CMQCC's Mission is Large-scale OB Quality Improvement

- Develop and implement OB QI activities
 - Tool Kits: Policies, Articles, Slide sets
- Teach Rapid-Cycle and other QI techniques (capacity building)
- Meaningful measures, accurately collected
- Confidential benchmarking,
- Consultation for Public Release by others
- Regional approach for QI activities

The California Challenge...

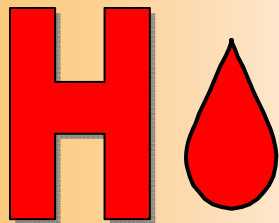
Countries	2005 Births
France	830,900
Germany	679,981
Great Britain	648,516
California	550,142
Italy	505,757
Spain	404,120
Texas	385,963
Canada	354,148



Hospital Action Projects:

Example: Obstetric Hemorrhage Taskforce

David Lagrew, MD (Sadleback, UCI)
Co-Chair Hemorrhage Taskforce
dlagrew@memorialcare.org

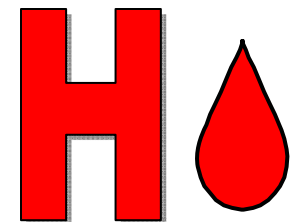


Audrey Lyndon, RNC, PhD, CNS (UCSF)
Co-Chair Hemorrhage Taskforce
audrey.lyndon@nursing.ucsf.edu

Example of a CMQCC Action Project...

Multi-Disciplinary Hemorrhage Taskforce

- Objectives:
 - Perform a baseline process, structure, & barriers assessment of California hospital's ability to respond effectively to OB hemorrhage.
 - Identify best practices for identification and management of maternal hemorrhage
 - Develop improvement strategies (education, materials, guidelines, kits, drills, etc)
 - Develop strategies for widespread implementation (targeting **ALL** 300 California hospitals and birthing centers)



CMQCC Hemorrhage Task Force:

- **David Lagrew, MD (Sadleback, UCI, LA), Co-Chair**
- **Audrey Lyndon, PhD, RNC, CNS (UCSF, San Francisco), Co-Chair**

- Elliott Main, MD (CMQCC)
- Debra Bingham, MS, RN (CMQCC)

- James Bryne, MD (Santa Clara Valley Medical Center)
- Mary Campbell Bliss, MS, RN, CNS (Sutter, Sacramento)
- Leslie Kasper, MD (Kaiser, Southern California)
- Patricia Dailey, MD (Mills Peninsula, San Mateo – OB Anesthesia)
- Maurice Druzin, MD (Stanford, Palo Alto)
- Lynda Garrett, MPH, RN (Kaiser, Northern California)
- Kimberly Gregory, MD (Cedars-Sinai Medical Center, LA)
- Andrew Hull, MD (University of California, San Diego)
- Richard H. Lee, MD (Women's & Children's Hospital, LA)
- Jennifer McNulty, MD (University of California, Irvine, LA)
- Suellen Miller, PhD, MHA, CNM (University of California, San Francisco, Dir. Safe Motherhood)
- Connie Mitchell, MD, MPH (Maternal Child and Adolescent Health, Sacramento)
- Barbara Murphy, MSN, RN (CPQCC)
- Larry Shields, MD (Central Coast)
- Jean-Claude Veille, MD (Sutter Health, Sacramento)

Immediate Goals

- Reach consensus on best practices recommendations by September meeting
- Analyze survey data
- Produce and disseminate toolkits January 2009

Progress to Date

- Preliminary literature review
- Survey
- 3 meetings
- 23 presentations
- Agreement in principle on template, initial products, and timeline
- Amazing web resources...

Hemorrhage Taskforce “Toolkit”

Background

Definitions/Incidence – *Kim Gregory*

Clinical techniques for measurement of EBL – *Mark Rosen, Suellen Miller*

Lessons learned from other state-wide collaborative efforts to address maternal hemorrhage – *JC Veille & Larry Shields*

Recognition and Classification of Potential Risks

Clinical Trigger Tools for Early Recognition and Possible Prevention of Hemorrhage, i.e., National Health Services (NHS) and Maternal Quality Indicator (MQI) – *Kim Gregory*

Identification of “at risk” patients – *Kim Gregory, Andy Hull & JC Veille*

Acquired and congenital hemostatic disorders (eg Von Willebrand Disease) (including when to screen for them) – *David Lagrew*

Preparation and counseling for patients with previous cesarean section/placenta previa and other conditions leading to prenatally diagnosed placenta accreta/percreta – *Rich Lee*

Management changes, legal issues, and preparation for patients who are Jehovah's Witness – *Elliot Main, Rich Lee*

Hemorrhage Taskforce “Toolkit”

Stage I - General Recommendations for All Patients

Active Management of 3rd Stage – *Suellen Miller, Andy Hull, & JC Veille*

General OB Hemorrhage Protocols/Policies/Guidelines *Druzin, Shields*

Stage II – Excessive bleeding [defined by EBL or by VS stability]

Algorithms for blood products and for DIC – *Rich Lee, Jennifer McNulty*

Medications for excessive bleeding to treat atony - *Andy Hull, JC Veille*

Intrauterine Balloons - *Elliot Main*

Uterine Hemostatic Sutures (B-Lynch) - *Andy Hull, JC Veille*

Arterial Embolization - *Andy Hull, JC Veille*

Adjunct Equipment, i.e. Rapid infusers, cell saver, oximetry – *Mark Rosen*

Stage III – Management of the patient with massive hemorrhage

Massive Transfusion Protocol - *Maury Druzin, Connie Mitchell, Mark Rosen*

rFactor VIIa - *Andy Hull, JC Veille*

Surgery: Uterine Ligations and Cesarean Hysterectomy - *Andy Hull, JC Veille*

Stabilization for transport/movement: Anti-Shock Garments, etc – *Suellen Miller*

Hemorrhage Taskforce “Toolkit”

System Preparation & Responsiveness

Documentation during event and deliveries (“Code Sheet”) - *Audrey Lyndon & Jim Byrne*

Team work – *Leslie Casper & Lynda Garrett*

Communication - *Leslie Casper & Lynda Garrett*

Drills/Training/Simulations (especially low complexity) – *Druzin, Weeber, Casper, Garrett*

“Carts/Kits/Trays” – *Rich Lee, Leslie Casper & Lynda Garrett*

Other systems supports - *Leslie Casper & Lynda Garrett*

Patient/Family education and support - *Audrey Lyndon & Jim Byrne*

Regional blood banking capacity - *Holly Mason*

www.CMQCC.org/resources/ob_hemorrhage



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Search Resources

Author (partial ok)

Title/Abstract (partial ok)

Year Exact Since

Profile in Improvement



Learn how Audrey Lyndon [applied a systematic approach with the PDCA/FOCUS model to improve induction processes at Anne Arundel Medical Center.](#)



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 - Massive Transfusion
 - r-Factor VIIa
 - Jehovah's Witness
 - DIC/Blood Products
 - Placenta Accreta

OB Hemorrhage - Drills/Simulations Resources

We wish to make this resource list valuable and shared with a wide community. Should you have other citations we have overlooked, we encourage you to [send them to our attention](#).

Resources found: Medical literature = 12, Web resources = 1, Documents = 1.

Medical literature (12)

- Anderson ER, Black R, Brocklehurst P. *Acute obstetric emergency drill in England and Wales: a survey of practice*. BJOG 03/01/2005; 112: 372-5. [Abstract](#) [Download](#)
- Birch L, Jones N, Doyle PM, Green P, McLaughlin A, Champney C, Williams D, Gibbon K, Taylor K. *Obstetric skills drills: evaluation of teaching methods*. Nurse Educ Today 11/01/2007; 27: 915-22. [Abstract](#) [Download](#)
- Black RS, Brocklehurst P. *A systematic review of training in acute obstetric emergencies*. BJOG 09/01/2003; 110: 837-41. [Abstract](#) [Download](#)
- Cameron M, Hinshaw K. *A systematic review of training in acute obstetric emergencies*. BJOG 03/01/2004; 111: 288. [Download](#)
- ★ Crofts JF, Ellis D, Draycott TJ, Winter C, Hunt LP, Akande VA. *Change in knowledge of midwives and obstetricians following obstetric emergency training: a randomised controlled trial of local hospital, simulation centre and teamwork training*. BJOG 2007; 114: 1534-1541. [Abstract](#) [Download](#)
- Daniels K, Parness AJ. *Development and Use of Mechanical Devices for Simulation of Seizure and Hemorrhage in Obstetrical Team Training*. Sim Healthcare 2008; 3: 42-46. [Abstract](#) [Download](#)
- Maslovitz S, Barkai G, Lessing JB, Ziv A, Many A. *Recurrent obstetric management mistakes identified by simulation*. Obstet Gynecol 06/01/2007; 109: 1295-300. [Abstract](#) [Download](#)
- Nielsen PE, Goldman MB, Mann S, Shapiro DE, Marcus RG, Pratt SD, Greenberg P, McNamee P, Salisbury M, Birnbach DJ, Gluck PA, Pearlman MD, King H,

Search Resources

Author (partial ok)

Title/Abstract (partial ok)

Year Exact Since

Profile in Improvement



Learn how Sheila Marton [increased skin to skin and decreased the separation between Mothers and Babies postpartum](#) at an Orange County hospital.



Hospital Action Projects:

Forming: Obstetric Emergency Task Force

James Byrne, MD
Co-Chair Obstetric Emergency Task Force

Julie Arafah, MS, RNC (Stanford CAPE)
Co-Chair Obstetric Emergency Task Force

3rd Co-Chair, OB Anesthesiologist : to be confirmed



Public Health and Clinician Community Action Projects:

**Building Partnerships with
Public Health and Clinicians**

Involving Local Health Departments in Maternal Quality Improvement Projects:

- Engagement and development of additional partnerships
- Identification of new QI strategies and projects
- Public Health partners

Thinking outside the box....

Hospital



Pilot Projects Funded:

- San Bernardino – ***Reduce Non-Medically Indicated Inductions***
- San Diego – ***Reduce Fragmentation with Women Carried Prenatal Records***
- Ventura – ***Improve Interconception Care for High-Risk Women***
- Los Angeles – ***Improve Prevention, Recognition, and Tracking of Maternal Hemorrhage***
- Bay Area Collaborative (Alameda, Berkeley, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Sonoma) – ***Increase Mental Health & Substance Abuse Screening & Treatment***

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550,000 Annual Births

Advancing California Maternity Care Through Data-Driven Quality Improvement

Profile in Improvement

Learn how David Lagrew of Saddleback Memorial Medical Center is helping providers [lower elective nulliparous inductions](#)

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CMQCC...
We are devoted to **eliminating preventable maternal mortality and morbidity and racial disparities** in California by bringing resources, tools, measures, and quality improvement techniques to providers, administrators, and public health leaders. This is a long term collaborative effort of many organizations and individuals (see [about us](#) for more information) with sponsorship of the California Department of Public Health (Maternal, Child and Adolescent Health Program) and the California Perinatal Quality Care Collaborative (CPQCC). We are over 100 clinicians, maternity care leaders, and representatives of the public all devoted to improving childbirth outcomes.

The Go-To Place for Maternal Quality Improvement...
Our site brings you current information about California maternal outcomes, the specific projects that we are tackling, annotated bibliographies of important topics, resources that we have developed or have received from other organizations, key links, and specific information that will assist your organization in performing quality improvement for maternity topics. The site also serves as a communications tool for the many CMQCC committees that are working on state-wide projects.

We wish to work with all organizations who are addressing these goals and we welcome additional resources from everyone! To contact us or to send references or PDFs please click [contact us](#).

Maternal Mortality in California


Maternal Mortality | California Maternal Quality Care Collaborative - Mozilla Firefox

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http://www.cmqcc.org/maternal_mortality

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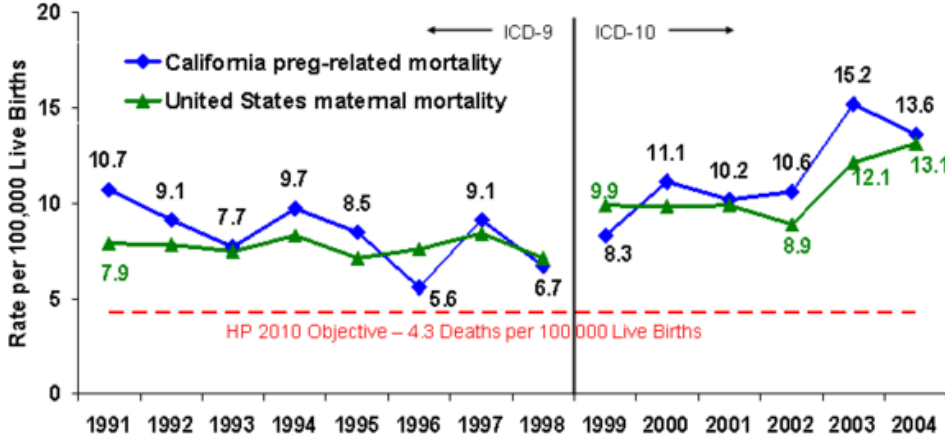
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Maternal Mortality

Maternal Mortality Rates Are Increasing

Pregnancy-related mortality rates in the state of California have increased significantly in each of the last three years. No one is sure why. In the 1990's California's rates ranged from 5.6 to 10.7 deaths per 100,000 live births, which is consistent with the overall US rate. Beginning in 2000 the rate climbed to 11.1 and in the last three reported years it has averaged over 14. Also concerning is a similar rise in the entire US rate. These rates are much higher than the Healthy People 2010 goal of 4.3 maternal deaths per 100,00 live births. **Definitions are critically important** and are reviewed on a [related page](#).

Maternal/Pregnancy-Related Mortality Rate, California Residents & United States: 1991-2004




Year	California preg-related mortality	United States maternal mortality
1991	10.7	7.9
1992	9.1	7.9
1993	7.7	7.9
1994	9.7	8.5
1995	8.5	7.9
1996	5.6	7.9
1997	9.1	8.5
1998	6.7	7.9
1999	8.3	9.9
2000	11.1	9.9
2001	10.2	9.9
2002	10.6	8.9
2003	15.2	12.1
2004	13.6	13.1

SOURCE: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1991-2004. Maternal mortality (deaths ≤ 42 days postpartum) calculated 1991-1998 using ICD-9 classification. Pregnancy-related mortality (deaths ≤ 365 days postpartum) calculated beginning 1999 using ICD-10 classification. United States data and HP2010 Objective are for maternal mortality. Produced by California Department of Public Health, Maternal, Child and Adolescent Health Program, October 2007.

Related Resources

- [Maternal Mortality](#)
- [International](#)
- [US](#)
- [Methods](#)
- [Reports](#)
- [Racial Disparity](#)

Profile in Improvement



Learn how David Lagrew of Saddleback Memorial Medical Center is helping providers [lower elective nulliparous inductions](#)

Maternal Mortality Definitions

The screenshot shows a Mozilla Firefox browser window displaying the website http://www.cmoqc.org/maternal_mortality/definicions. The browser's address bar and search engine (Google) are visible. The website header includes the CMOCC logo and navigation links for "Login" and "Contact Us".

Definicions

Maternal Mortality Rate vs Ratio
Maternal mortality is calculated by counting **deaths associated with any pregnancy outcome (livebirth, stillbirth, ectopic, termination or miscarriage) in the numerator** and using **all livebirths as the denominator**. Thus, there are multiple cases in the numerator that are not present in the denominator indicating that the proper term would be "Maternal Mortality Ratio". However, the use of "Maternal Mortality Rate" is so ingrained in the literature that ACOG, CDC and most current authors continue to use "Maternal Mortality Rate". Therefore, in this website, we use "Maternal Mortality Rate".

CDC/ACOG Definicions
Pregnancy-associated death: The death of a woman while pregnant or within 1 year of termination of pregnancy, irrespective of cause.
Pregnancy-related death: The death of a woman while pregnant or within 1 year of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by her pregnancy or its management, but not from accidental or incidental causes.

(From: [Berg C, Danel I, Atrash H, Zane S, Bartlett L \(Editors\). Strategies to reduce pregnancy-related deaths: from identification and review to action](#). Atlanta: Centers for Disease Control and Prevention; 2001. **NOTE: 2.9MB**)

ICD-10 (US Death Certificate) Definicions
"Maternal deaths" are defined by the World Health Organization as "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes."
"Late maternal deaths" are defined as "the deaths of a woman from direct or indirect obstetric causes more than 42 days but less than one year after termination of pregnancy."

Profile in Improvement
Learn how Audrey Lyndon [applied a systematic approach with the PDCA/FOCUS model to improve induction processes at Anne Arundel Medical Center.](#)

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Maternal Mortality Resources

We wish to make this resource list valuable and shared with a wide community. Should you have other citations we have overlooked, we encourage you to [send them to our attention](#).

Medical Literature

Safe Motherhood: Triennial Report 2003-2005. [Download](#)

★ Berg C, Danel I, Atrash H, Zane S, Bartlett L (Editors). *Strategies to reduce pregnancy-related deaths: from identification and review to action*. Centers for Disease Control and Prevention 2002; 1-214. [Download](#)

Berg CJ, Atrash HK, Koonin LM, Tucker M. *Pregnancy-Related Mortality in the United States, 1987-1990*. *Obstet Gynecol* 1996; 88: 161-167.

Berg CJ, Chang J, Callaghan WM, Whitehead SJ. *Pregnancy-Related Mortality in the United States, 1987-1990*. *Obstet Gynecol* 2003; 101: 289-296.

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Burtelow M, Riley E, Druzin M, Fontaine M, Viele M, Goodnough LT. *How we treat: management of life-threatening primary postpartum hemorrhage with a standardized massive transfusion protocol*. *Transfusion* 2007; 47: 1564-1572.

Campbell OMR, Graham WJ. *Strategies for Reducing Maternal Mortality: Getting on with What Works*. *Lancet* 2006; 368: 1284 - 1299.

Centers for Disease Control and Prevention. *Surveillance Summaries*. Morbidity and Mortality Weekly Report 2003; 52: [Download](#)

★ Confidential Enquiry into Maternal and Child Health. *Perinatal Mortality Surveillance, 2004: England, Wales and Northern Ireland*. CEMACH 2006; 1 - 31. [Download](#)

Profile in Improvement

 Learn how Elliott Main of Sutter's California Pacific Medical Center is [improving the care for first labors and births](#).

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Summary:

- CA Data has shown multiple opportunities for improving maternity outcomes and aligning incentives with quality that will:
 - Save lives
 - Reduce harm
 - Save money
- Maternity safety, quality and action methodologies need to be more fully developed
 - **Data:** Many partners are needed to develop & implement effective data sources and data flow
 - **Action:** Many partners are needed to develop & implement effective action and change methodologies
- CMQCC is a multi-stakeholder, collaborative organization that builds partners, reduces silos and other traditional barriers to change.
- 14% of U.S. births occur in California; what we accomplish in California is a major challenge that has implications for the entire nation



Comments? Questions?

Quality Measurement and Improvement for California Maternity Services

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