Charting a New Course to Improve the Quality of Perinatal Care

California Hospitals Lead the Nation in Breastfeeding Support

A Policy Update on California Breastfeeding and Hospital Performance

Produced by California WIC Association and the UC Davis Human Lactation Center

California Fact Sheet: 2016 Data

Exclusive Breastfeeding Protects Mothers' and Babies' Health

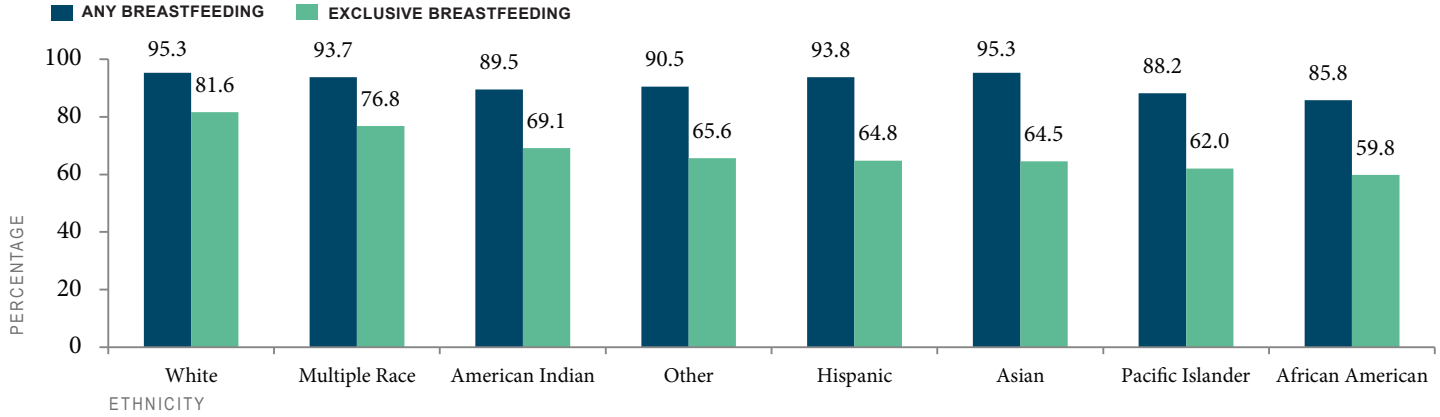
- Breast milk provides all the nutrients infants need as well as specific factors needed to build a strong immune system.[1-2] Breastfeeding saves lives everywhere in the world.[3] It is estimated that $3 billion in medical costs would be saved if all U.S. infants were fed according to the current guidelines.[4]
- In-hospital support is crucial to breastfeeding mothers' success.[5-6] Mothers who experience supportive practices are more likely to breastfeed exclusively during and after the hospital stay.[6]
- Hospitals that have instituted supportive policies have high rates of breastfeeding, no matter where they are located or what populations they serve.[7] As more California hospitals have made these quality improvements, in-hospital exclusive breastfeeding has increased since 2010 from 56.6% to 69.4%.[8]

Baby-Friendly Policies: A Focus For Improvement

- For many years, California advocates and policy-makers have used hospital-level surveillance data to promote systems change to improve the quality of perinatal care. This work has shown that evidence-based reform is possible across more than 200 hospitals in our large and diverse state.[8]
- The World Health Organization (WHO) Baby-Friendly Hospital Initiative (BFHI), through its evidence-based policies and guidelines, has provided the focus and structure for this ongoing effort.[9] Recently, WHO recommended updates to the BFHI to ensure that all mothers and babies receive the highest quality of care.[10]
- Today, California leads the nation with nearly 100 Baby-Friendly Hospitals[11] and legislation requiring that all maternity hospitals adopt these or similar policies by 2025.[12]

The UC Davis Human Lactation Center used data reported by the California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Program to create the following charts showing in-hospital breastfeeding rates.[8]

Figure 1. Any and Exclusive Breastfeeding by Ethnicity in California Hospitals (2016)



Source: California Department of Public Health Genetic Disease Screening Program, Newborn Screening Data, 2016.

Breastfeeding in California Hospitals

- The California Department of Public Health Maternal, Child and Adolescent Health Program (MCAH) collects infant-feeding data for all maternity hospitals in the state.[8] When babies receive only breast milk, they are said to be "exclusively breastfed." "Any breastfeeding" refers to babies who receive both breast milk and formula, as well as those who are exclusively breastfed.
- The disparity or "gap" between the "any" and "exclusive" breastfeeding rates indicates the proportion of women whose infants were given something other than breast milk in the hospital despite their decision to breastfeed.
- Ninety-four percent of mothers begin breastfeeding, but 26% of those mothers also feed their infants formula during the hospital stay. Gaps between any and exclusive breastfeeding rates have narrowed for all California women, but disparities persist (Figure 1).[8]
- Table 1 includes the 2016 "any" and "exclusive" rates, by county. Although disparities remain, rates increased in nearly all counties since 2010. Of the 41 counties with increased "exclusive" rates between 2010 and 2016, 17 increased by less than 10%, 15 increased 10% to 19%, and 8 increased 20% to 29% (Figure 2).
- The UC Davis Human Lactation Center has compiled separate lists of the 15 hospitals with the lowest (Table 2) and the highest (Table 3) breastfeeding scores in the state. The scores represent the rates of exclusive breastfeeding in each hospital and the disparity between the hospitals' "any" and "exclusive" breastfeeding rates across ethnic groups. Exclusive breastfeeding rates among lower performing hospitals exceed those in past reports. However, their rates remain 43% to 74% lower than those of this year's highest performing hospitals. The lowest-performing hospitals also are more likely to serve large numbers of low-income women of color.

Table 1. California Counties: In-Hospital Any and Exclusive Breastfeeding Rates, Lowest to Highest by Exclusive Rate (2016)

Rank	County	Total Births	% Any Breastfeeding	% Exclusive Breastfeeding
	CALIFORNIA	423,004	94.0	69.4
49	IMPERIAL	2,654	93.1	40.6
48	MADERA	911	85.8	48.0
47	SUTTER	1,900	91.0	50.1
46	TULARE	5,666	90.0	53.3
45	SANTA BARBARA	4,977	95.9	58.3
44	MONTEREY	5,140	96.6	58.7
43	SAN BENITO	419	94.7	59.7
42	SAN JOAQUIN	6,583	87.8	59.9
41	KINGS	2,124	88.9	60.9
40	LOS ANGELES	114,123	93.9	61.5
39	MERCED	3,037	92.0	62.3
38	KERN	11,299	90.2	62.7
37	SAN BERNARDINO	24,207	89.1	62.7
36	ORANGE	36,963	95.0	66.1
35	RIVERSIDE	21,506	91.9	67.1
34	TEHAMA	518	91.7	67.8
33	TUOLUMNE	462	96.1	68.4
32	LAKE	421	92.4	69.6
31	FRESNO	14,568	88.4	70.3
30	DEL NORTE	267	89.5	70.4
29	STANISLAUS	9,268	90.4	70.4
28	MENDOCINO	843	95.4	70.9
27	LASSEN	239	92.5	73.2
26	SACRAMENTO	14,359	92.4	73.3
25	BUTTE	2,673	92.2	74.9
24	VENTURA	7,941	96.8	75.8
23	HUMBOLDT	1,279	93.8	76.1
22	PLACER	7,371	96.0	78.7
21	SHASTA	1,790	93.7	79.4
20	SANTA CLARA	23,658	97.4	80.2
19	PLUMAS	62	95.2	80.6
18	SAN DIEGO	33,874	96.1	80.9
17	SOLANO	4,260	94.8	80.9
16	SAN FRANCISCO	10,679	97.5	81.0
15	CONTRA COSTA	10,267	96.8	82.3
14	ALAMEDA	16,406	97.4	82.5
13	SISKIYOU	313	94.6	82.7
12	NAPA	795	96.7	82.8
11	MONO	83	100.0	83.1
10	EL DORADO	736	96.2	83.4
9	SAN MATEO	4,913	97.3	83.6
8	AMADOR	266	96.6	86.5
7	NEVADA	733	97.7	86.6
6	SONOMA	4,545	97.4	87.0
5	YOLO	2,005	97.2	88.6
4	SAN LUIS OBISPO	2,109	97.4	89.0
3	MARIN	1,146	98.9	91.1
2	INYO	173	99.4	91.3
1	SANTA CRUZ	2,452	99.1	93.5

Note: Nine counties had too few births with known feeding to report: Alpine, Calaveras, Colusa, Glenn, Mariposa, Modoc, Sierra, Trinity, and Yuba.

Source: California Department of Public Health Genetic Disease Screening Program, Newborn Screening Data, 2016.

Table 2. California's Lowest-Scoring Hospitals, by Rank (2016)

RANK	HOSPITAL	COUNTY	TOTAL BIRTHS	% ANY	% EXCLUSIVE	% MEDI-CAL BIRTHS
1	WHITTIER HOSPITAL MEDICAL CENTER	LOS ANGELES	3,026	91.6	19.5	55.7
2	MONTEREY PARK HOSPITAL	LOS ANGELES	1,547	93.4	28.3	56.2
3	MONTCLAIR HOSPITAL MEDICAL CENTER	SAN BERNARDINO	1,072	76.8	14.6	29.9
4	ANAHEIM GLOBAL MEDICAL CENTER	ORANGE	840	92.6	31.4	87.3
5	VICTOR VALLEY GLOBAL MEDICAL CENTER	SAN BERNARDINO	1,183	77.0	22.1	73.0
6	GARDEN GROVE HOSPITAL	ORANGE	1,365	95.8	35.2	51.2
7	GREATER EL MONTE COMMUNITY HOSPITAL	LOS ANGELES	316	91.8	33.5	71.2
8	FOUNTAIN REGIONAL MEDICAL CENTER	ORANGE	3,430	93.6	34.7	36.9
9	PIH HEALTH HOSPITAL - DOWNEY	LOS ANGELES	928	88.8	33.1	51.9
10	GARFIELD MEDICAL CENTER	LOS ANGELES	3,088	96.5	38.5	45.0
11	ST. FRANCIS MEDICAL CENTER*	LOS ANGELES	4,413	84.7	31.0	90.2
12	NATIVIDAD MEDICAL CENTER*	MONTEREY	2,144	96.8	41.2	88.8
13	HEMET VALLEY MEDICAL CENTER	RIVERSIDE	975	80.0	33.2	90.2
14	CALIFORNIA HOSPITAL MEDICAL CENTER	LOS ANGELES	3,214	89.0	39.8	95.4
15	SOUTH COAST GLOBAL MEDICAL CENTER	ORANGE	1,089	83.9	37.0	65.5

Table 3. California's Highest-Scoring Hospitals, by Rank (2016)

RANK	HOSPITAL	COUNTY	TOTAL BIRTHS	% ANY	% EXCLUSIVE	% MEDI-CAL BIRTHS
1	KAISER WALNUT CREEK MEDICAL CENTER	CONTRA COSTA	2,885	98.6	93.5	6.8
2	SCRIPPS MEMORIAL HOSPITAL ENCINITAS*	SAN DIEGO	1,738	97.9	93.0	5.5
3	SUTTER MATERNITY AND SURGERY CENTER*	SANTA CRUZ	1,038	99.4	93.9	26.7
4	EL CAMINO HOSPITAL LOS GATOS*	SANTA CLARA	538	99.3	92.9	9.9
5	WOODLAND MEMORIAL HOSPITAL*	YOLO	624	97.4	91.3	59.9
6	KAISER SANTA ROSA	SONOMA	1,968	98.6	91.9	22.9
7	EL CAMINO HOSPITAL	SANTA CLARA	3,546	99.2	92.0	11.9
8	MARIN GENERAL HOSPITAL*	MARIN	1,146	98.9	91.1	49.0
9	POMERADO HOSPITAL	SAN DIEGO	1,060	95.1	88.5	11.8
10	SAN FRANCISCO KAISER HOSPITAL	SAN FRANCISCO	2,668	98.9	91.0	5.9
11	KAISER OAKLAND MEDICAL CENTER	ALAMEDA	2,689	98.8	90.4	9.6
12	SCRIPPS MEMORIAL HOSPITAL LA JOLLA	SAN DIEGO	2,879	97.6	89.5	1.2
13	MARSHALL MEDICAL CENTER*	EL DORADO	421	96.7	88.8	68.4
14	UC SAN FRANCISCO HOSPITAL	SAN FRANCISCO	2,419	97.9	89.1	21.2
15	SIERRA VISTA REGIONAL MEDICAL CENTER*	SAN LUIS OBISPO	1,094	97.5	88.8	37.6

* Baby-Friendly Hospital

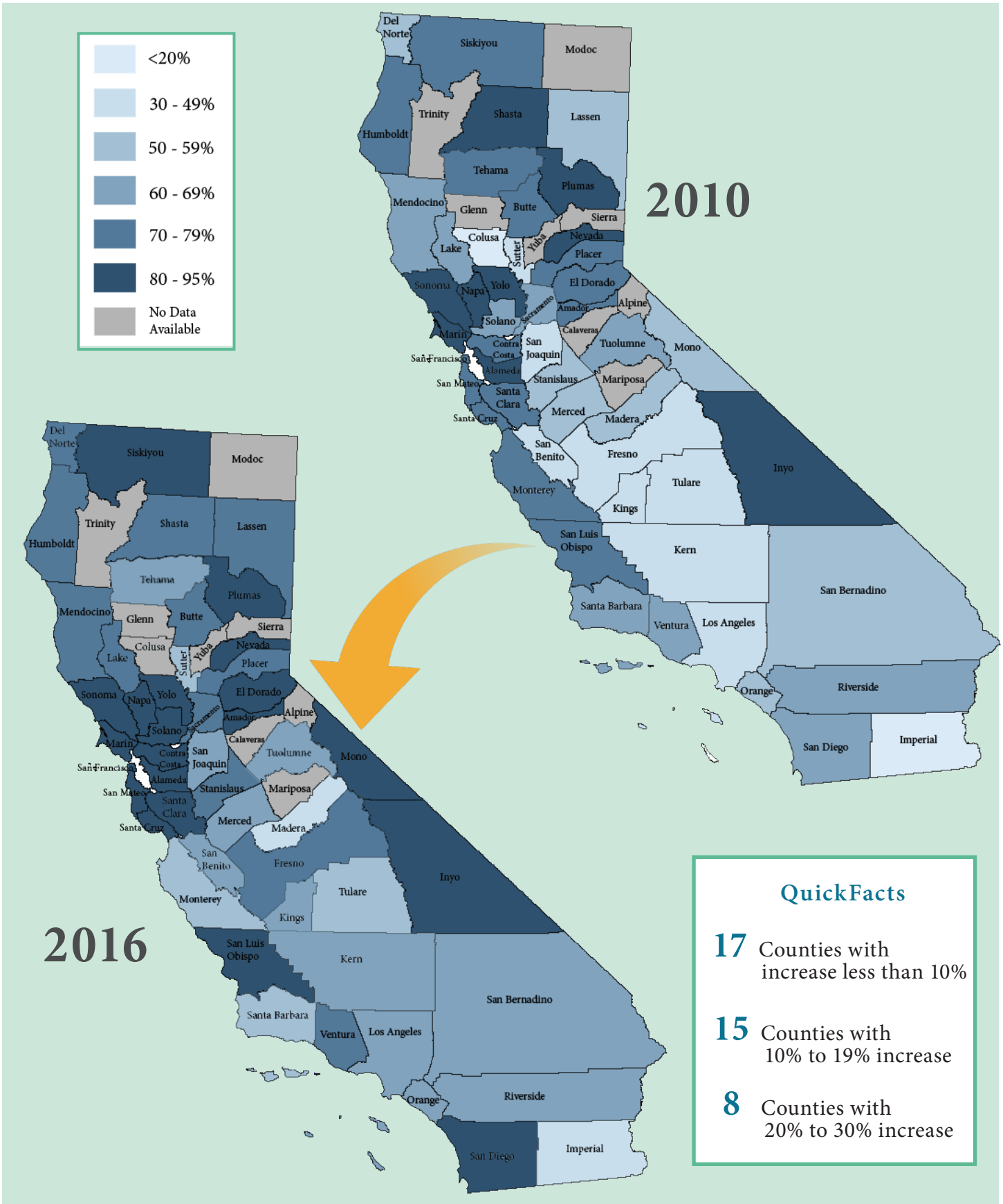
Notes: Estimated Medi-Cal birth rates are included as a way to approximate the levels of service to low-income women.

Selection Criteria: Only operating hospitals with at least 20 infants with known feeding data in three or more ethnicities were eligible for listing. Ranking was based on three criteria: 1) exclusive breastfeeding rate; 2) the "any" breastfeeding rate; and 3) the difference between the "any" breastfeeding and exclusive breastfeeding rates. Hospitals with the 15 lowest and highest scores are listed above.

Terminology: "Any Breastfeeding" includes those exclusively breastfeeding and those supplementing with formula. "Exclusive Breastfeeding" includes those who breastfeed only.

Source: California Department of Public Health Genetic Disease Screening Program, Newborn Screening Data, 2016.

Figure 2. Changes in In-Hospital Exclusive Breastfeeding Rates by County, 2010 and 2016[8]



Notes: Specific county rates for 2010 available at http://calwic.org/factsheets2012 and for 2016 in Table 1 of this fact sheet.

For classification purposes, rates were rounded to nearest whole number.

Figure 3. Summaries of the 2017 WHO Recommendations[10]

1. **Early and uninterrupted skin-to-skin** contact as soon as possible after birth.
2. Support mothers to **initiate breastfeeding as soon as possible** after birth.
3. Provide **practical support to enable mothers to breastfeed** and manage common difficulties.
4. Mothers should be taught how to **express breast milk**.
5. Facilities providing maternity and newborn services should **enable mothers and their infants to practice rooming-in**.
6. Mothers should be supported to **practice responsive feeding**.
7. Mothers should be **discouraged from giving any food or fluids other than breast milk**, unless medically indicated.
8. Mothers should be supported to **recognize their infants' cues** and enabled to **respond to these cues with a variety of options**.
9. For **preterm** infants who are unable to breastfeed directly, **non-nutritive sucking** may be beneficial.
10. Feeding methods such as **cups, spoons or feeding bottles and teats** may be used with **term** infants.
11. For **preterm** infants, feeding methods such as **cups or spoons are preferable to feeding bottles and teats**.
12. Facilities should have a **breastfeeding policy** that is routinely communicated.
13. **Health-facility staff** should have **sufficient knowledge, competence and skills** to support women to breastfeed.
14. **Pregnant women** and their families should be **counselled about the benefits and management** of breastfeeding.
15. **Discharge plans** should ensure that parents and their infants have **access to ongoing support and care**.

New Recommendations From WHO

- Recently, the WHO completed a comprehensive review of the research related to each component of the BFHI.[10] While the evidence reaffirmed the life-saving benefits of breastfeeding and supportive hospital practices, an expert group developed 15 recommendations that may be used to update the initiative (Figure 3).[10]
- While most of the recommendations do not differ from current guidelines, differences included recommendations specifically related to the care of preterm infants, requirements for staff to have specific knowledge, skills, and competencies rather than attendance for a specific number of hours of training, and options for the use of pacifiers and artificial nipples for soothing and feeding some infants.
- The expert committee based their recommendations on evidence from 22 systematic reviews that followed standardized methods.[13] The reviews included studies that evaluated each of the "Ten Steps to Successful Breastfeeding" separately even though they are intended to be used together to guide policy and practice in Baby-Friendly maternity facilities.
- The overall quality of the available evidence was rated from "very low" to "high" based on epidemiologic standards that are described in the report. For example, the term "high quality evidence" was assigned to reports of randomized controlled trials; observational studies were rated as "low" quality. Adjustments to quality ratings were made based on other criteria. For example, the quality rating was increased when there was consistent evidence from more than one study and decreased when there was inconsistency across studies or only one study available.[10]
- While these ratings are meaningful, relatively few studies related to the BFHI would have the highest ratings given that it would not be considered ethical to randomly assign mothers and babies to groups that did not receive support for breastfeeding. Consistency in outcomes is also challenging among the diversity of study settings involved. Therefore, the recommendations include those based on "low quality evidence" because it was clear to the expert committee that the related practices were effective, valued, and acceptable even when data from randomized trials were not available.[10]
- In making their recommendations, the expert group also considered the balance of benefits and harms, values and preferences of mothers, acceptability to health workers, resource implications, feasibility, and equity and human rights considerations of all interventions reviewed.[10]
- While the final guidance for implementation of these recommendations has not been approved or released,[14] California's law (SB 402)[12] is not affected by the proposed changes. As California moves closer to full implementation of SB 402, administrators and policy-makers can use the latest evidence and recommendations from WHO to update and improve hospital policies and practices. Through ongoing improvements in the quality of perinatal care, California can build on the existing momentum toward expanding support for new mothers and babies, while ensuring that none of the past gains are lost.

Charting a Course to Improve Perinatal Care

- The new WHO recommendations should be reviewed and evaluated for possible updates to the California Department of Public Health (CDPH) Breastfeeding Model Hospital Polices and/or for continuous quality improvement efforts in California hospitals. Any changes to these policies should be clearly and widely disseminated and include explanations of the evidence-base used to make the changes.
- Hospitals, government and public health agencies, advocates, and community partners must continue to collaborate and ensure updated evidence-based policies are implemented to support breastfeeding mothers in all California hospitals.
- To maintain benefits achieved in hospitals, efforts should be expanded to support breastfeeding after hospital discharge and ensure that workplace and childcare environments promote and protect breastfeeding throughout the first year postpartum.
- The CDPH must continue to make in-hospital breastfeeding rates available to the public, to drive quality improvement within hospital systems and to monitor the effects of SB 402, legislation requiring all hospitals to become Baby-Friendly or adopt the CDPH Breastfeeding Model Hospital Policies or policies aligned with the BFHI by 2025.
- With so many hospitals implementing the policies aligned with the BFHI, California has a unique opportunity to obtain data related to how differences in implementation strategies influence maternal and child health outcomes. The outcomes from trials or quality improvement projects related to updating and implementing policies should be widely disseminated.
- Resources and coordinated systems are needed to ensure continuity of care and to drive and monitor changes in breastfeeding rates after hospital discharge.

NOTES:

• All nonmilitary hospitals providing maternity services are required to complete the Newborn Screening Test Form [Version NBS-I(D) (12/08)].

• Infant-feeding data presented in this report include all feedings since birth to time of specimen collection, usually 24 to 48 hours since birth. Upon completing the form, staff must select from the following three categories to describe 'all feeding since birth': (1) Only Human Milk; (2) Only Formula; (3) Human Milk & Formula.

• The numerator for "Exclusive Breastfeeding" includes records marked "Only Human Milk." The numerator for "Any Breastfeeding" includes records marked "Only Human Milk" or "Human Milk & Formula." The denominator excludes cases with unknown method of feeding and those receiving TPN at time of specimen collection. Statewide, approximately 1.9% of cases have missing feeding information and/or are on TPN at time of specimen collection.

• Excludes data for infants who were in a Neonatal Intensive Care Unit (NICU) nursery at the time of specimen collection.

• Excludes cases that were not collected by facilities listed as "Kaiser" and/or "Regular" maternity hospitals in the newborn screening database.

• Data for counties include information for all births occurring in a "Regular" or "Kaiser" facility providing maternity services in that county. Counties and facilities with fewer than 50 births with known type of feeding are not reported.

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December 2017

This project was supported by Kaiser Foundation Hospitals and the California Breastfeeding Coaltion.

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