The Orange County Perinatal Environment: Past, Present and Future

MOMS Orange County
Twenty-Fifth Anniversary Reflections
2017

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Introduction

In the summer of 1989, the March of Dimes Birth Defects Foundation commissioned a perinatal needs assessment and program plan for the Orange County Chapter. Ms. Dottie Andrews was the Director of Community Services for the March of Dimes at that time and responsible for the completion of the assessment and the development of strategies to address the identified needs. Many of the ideas and concepts developed to address some of the most compelling needs identified in 1989 created the seeds that became the Maternal Outreach Management System, which since 2008 has been known as MOMS Orange County (MOMS).

As part of celebrating its 25 years of service, MOMS commissioned a retrospective review of the environment out of which MOMS was born and the changes Orange County has experienced since then, using that 1989 Perinatal Needs Assessment as a foundation. In addition, MOMS is using this silver anniversary to assess and consider the current perinatal environment, identify the compelling needs of today, and explore potential opportunities for MOMS' further impact in the coming 25 years.

MOMS enlisted the assistance of many local experts in maternal and child health in Orange County to identify the compelling needs of today and recommend potential strategies for improvement. MOMS is grateful for their wisdom and insights; they are listed in **Appendix 1**.

The 1989 Perinatal Environment

The 1989 March of Dimes Perinatal Needs Assessment focused over three-quarters of its report on one crucial area: the availability and accessibility of perinatal health care services. Within the area of perinatal health care services, two top issues were identified: the availability of delivery services and women beginning prenatal care in their first trimester (early prenatal care). In addition, the assessment identified insufficient access to appropriate perinatal care for specific populations including high-risk mothers and infants, adolescents, substance-abusing mothers, and certain ethnic and linguistic populations.

In 1989, only 10 of the 25 hospitals delivering babies in Orange County had contracts to serve women who had Medi-Cal, which resulted in many of those hospitals being overcapacity for their maternity services. The situation came to public view in June of that year when UCI Medical Center introduced an "obstetrical diversion" policy. Whenever the maternity ward and emergency department were full, security guards intercepted pregnant women outside of the medical center. If a woman had not received her care at a UCI prenatal clinic, she was asked to try another delivery hospital and handed a map of other hospitals in the area. UCI Medical Center at the time delivered approximately two-third of the babies whose mothers had Medi-Cal or were uninsured. Despite putting this policy in place, in the month of June 1989, 558 babies were born at the medical center designed to handle 250 deliveries a month. Newspaper stories told of women laboring lined up in hallways in the medical center. At the time the

county was experiencing a rapid increase in the number of births each year, having gone from 38,720 in 1987 to 43,948 in 1988 to 49,239 in 1989, and an estimated 54,000 to occur in 1990, which made the lack of capacity for deliveries all the more urgent.

As follow-up, the March of Dimes commissioned a research study to analyze the obstetrical capacity of Orange County hospitals. The study found that the county had a total obstetrical capacity of 51,575 births, meaning even if births were exactly distributed to hospitals based on their capacity, there would be crowding in delivery units in 1990. The study also found that births were not equally distributed. Hospitals that accepted Medi-Cal were already at 123% of capacity. The study, along with the efforts of the perinatal services community and the support of local elected officials, brought about changes in State Medi-Cal regulations and reimbursement that allowed several hospitals to begin accepting Medi-Cal. Several hospitals also expanded their obstetrical capacity and by 1992 the crisis in obstetrical delivery had resolved. The crisis, however, began a community conversation on how to build a coordinated system of perinatal care for mothers and babies that led to the development of MOMS as a core improvement strategy.

The second major issue considered in 1989 was the rate of entry into early prenatal care and the quality of services received. In 1987, the overall rate of early prenatal care was 79.2%, ranging from a high of 87.8% for White women, 79.8% for Asian women, 73.9% for Black women and a low of 69.7% for Hispanic women. The assessment concluded that delayed entry into care for women who were uninsured or with Medi-Cal was due to several factors including: a shortage of providers accepting Medi-Cal or offering a sliding scale or reduced fee; fear among undocumented women to seek Medi-Cal even though they were eligible; the complexity of completing the Medi-Cal application and receiving coverage in order to begin care; and a lack of outreach in communities educating women on the importance of prenatal care. In addition to late entry into care, a woman's care was often fragmented. Since only 17% of private providers accepted Medi-Cal, most care for women with Medi-Cal was through county and community clinics. Only two clinics had an affiliation with a hospital for delivery. The rest of the clinics simply provided mothers with a list of facilities they could contact for delivery. In some cases, the clinics did not provide any postpartum care. MOMS was designed to address all these factors and assist women to enter early prenatal care that was comprehensive and coordinated.

In addition to perinatal health care services, the 1989 March of Dimes Perinatal Needs Assessment focused on three other areas: (1) education and prevention services for school-aged youth (2) data collection and coordination of information, and (3) community awareness.

Appendix 2 provides a summary of all areas of the 1989 needs assessment with comparisons to 2017 conditions.

The Current Perinatal Environment

In addition to researching statistics and information on the current perinatal environment, MOMS invited local perinatal experts to share insights into the current perinatal environment and to help choose the top areas in perinatal health that they felt most important to focus on in the next two to three years, as well as to provide recommendations for improvement. Two focus groups were held in the Spring of 2017, along with an opportunity for input via e-mail. [For the purpose of this report, we will refer to this group of participating experts as "Focus Group Participants."] Based on the input of the Focus Group Participants, five areas were selected. Two had also been high priority areas in 1989:

- Early Prenatal Care
- Substance-Exposed Infants

Three high priority areas identified by Focus Group Participants were not discussed in the 1989 needs assessment:

- Breastfeeding
- Maternal Mental Health
- Maternal Morbidity

The following section highlights information for the five areas selected and summarizes the recommendations for improvement made by the Focus Group Participants. Information and insights shared on other perinatal topics have been incorporated in the summary table in **Appendix 2**.

Early Prenatal Care

The rate of entry in early prenatal care has improved since 1989. In 1989, 79.2% of women overall received early prenatal care. In 2014, the overall percentage was 86.1%, ranging from a high of 91.6% for White women, 85.0% for Hispanic women, 82.6% for Black women and a low of 82.0% for Asian women. This was, however, a decrease from an overall high in 2005 of 91.4%. All racial and ethnic groups showed decreases between 2005 and 2014, with the largest decrease seen in Asian women.

The increase in early prenatal care between 1989 and 2005 can be attributed to several changes in the 1990s. One of the greatest contributing factors was Medi-Cal's implementation of Presumptive Eligibility in 1993. This policy guaranteed that women could start care and providers were assured payment for services rendered while the application approval process was completed. In addition, an increase in Medi-Cal reimbursement rates and the development of Medi-Cal managed care, which in Orange County became CalOptima, expanded the provider network and provided women more choice in where they could receive care.

The decline in women receiving early prenatal care since 2005 is a priority area for the community. It is one of the two perinatal objectives selected by the Orange County Health

Improvement Plan. The Plan's stated 2020 objective is to increase the rate of women receiving early prenatal care to 90% and to reduce the disparities between races and ethnicities.

Recommendations from Focus Group Participants to increase early entry into care include:

- Prenatal sites offer weekend and evening hours
- Child care available at prenatal visits
- Partner with local adolescent and well-women clinics to foster an awareness of free and reduced cost resources for prenatal care
- Develop an incentive program with WIC for women who start prenatal care within the first two months of pregnancy

In addition to timely entry into care, the Focus Group Participants are also interested that the care provided is high-quality, and many of their recommendations in this area are focused on that component, including:

- Each prenatal care visit is comprehensive, including important education and screenings
- Mental health and domestic violence screenings are conducted at prenatal visits
- Nutrition counseling is integrated into visits
- TDaP and influenza vaccine are offered to caregivers/close contacts during prenatal visits
- Available parent-to-parent support groups
- Education/support routinely provided to men
- Culturally responsive care
- All mothers receive prenatal and postpartum home visits

<u>Substance-Exposed Infants</u>

The only indicator routinely followed to track the status of maternal substance use has been the number of infants taken into protective custody as a result of testing positive for substance exposure at birth. Policies and practices have changed over the years making this indicator fairly weak in trending. The number of children taken into custody has varied between 82 and 165 per year in the last 10 years with no specific trend in any direction seen.

More robust methodology to assess the number of substance-exposed infants has not been conducted in Orange County since 2007. That report found that 15.1% of pregnant women used alcohol, tobacco or other drugs (ATOD) at some time in their pregnancy. Based on self-report, alcohol was the most common substance used (12.9%), followed by tobacco (4.9%). The most common illicit drugs detected in urinalysis were opiates, amphetamines and marijuana.

The Focus Group Participants' recommendations to decrease the number of substance-exposed infants include:

- Education in high schools and college with case presentations by moms who have dealt with their addiction

- Preconception care assessment of families'/mothers' involvement with drugs
- Prenatal drug screening at multiple points during pregnancy
- Counseling during pregnancy
- Training of all OB staff – office and hospital- on how to care for drug-exposed infants
- Non-judgmental support
- Insurance coverage for detox
- Housing for women to get clean while pregnant
- Housing for mothers and babies to stay together during recovery
- Inpatient treatment programs specific for pregnant women
- More outpatient programs for mothers
- Designated cribs in Intensive Care Units (ICU) for exposed infants to separate them from other ICU babies - quiet, rocking beds; volunteers to hold
- Babysitting breaks available for mothers so they can go to school/counseling
- Call-in support number 24/7
- Proactive check-in calls to at-risk mothers
- Job assistance
- Increased opportunities for positive replacements to addiction such as free courses in other activities such as the arts and peer support groups
- Home Visitation Programs
- Decriminalization

Breastfeeding

Breastfeeding is the optimal way of providing young infants with the nutrients they need for healthy growth and development. Virtually all mothers can breastfeed, provided they have accurate information, and the support of their family, the health care system and society at large. The benefits increase greatly when a mother exclusively breastfeeds for the first six months of life. Breastfeeding significantly reduces infant risks for infections, visits to the doctor and number of medications compared to infants who are formula fed. Evidence also demonstrates that breastfeeding reduces the risk for cardiovascular disease, asthma and diabetes later in life and that exclusive breastfeeding can reduce the risk of childhood obesity. Breastfeeding can also provide protective health benefits for the mother. Breastfeeding mothers may experience less postpartum bleeding, menstrual blood loss, earlier return to pre-pregnancy weight and decreased risks of breast and ovarian cancers. Breastfeeding also benefits the entire family and community. It improves household food security because families need not use income to buy formula, food and bottles. Health care related expenses decrease because breastfeeding protects the mother and the infant.

In 2015, 67.1% of Orange County women were exclusively breastfeeding at time of hospital discharge, lower than the statewide rate in California at 68.6% of women. Exclusive

breastfeeding at time of discharge was highest among White women at 79.9%, followed by Multiracial (78.9%), Other races (70.5%), Black (67.7%), Hispanic (64.8%), Pacific Islander (54.3%) and Asian (52.9%) women. There was a large variability between discharge breastfeeding rates among the delivery hospitals in Orange County, the highest percentages being at the six hospitals that are certified as "Baby Friendly."

Three months after delivery, 26.1% of Orange County women surveyed by the Maternal and Infant Health Assessment (MIHA) in 2013/14 were exclusively breastfeeding, an increase from 25.1% in 2011/12 but lower than the average for women in California of 27.4%.

Increasing the number of mothers who are exclusively breastfeeding at three months is a perinatal objective of the Orange County Health Improvement Plan.

The Focus Group Participants' recommendations to increase breastfeeding include:

- Breastfeeding (BF) education provided at each prenatal visit - BF coach at each visit
- All clinics follow "Baby Friendly" policies
- Certified Lactation Educator (CLE) or Lactation Specialist in every clinic
- Lactation staff trained in cultural sensitive approaches
- Train obstetricians and pediatricians on benefits of BF
- All pediatric offices and clinics offer BF support
- Mother/families given the time to attend BF lessons
- Every hospital becomes "Baby Friendly" certified
- All mothers receive early postpartum visit with lactation educator/consultant
- Ankyglossia (tongue tie) is identified in hospital setting – more providers trained in frenotomy/frenectomy
- Every mom receives free and unlimited BF support in home
- BF support groups in every city in multiple languages
- Ensuring BF stations in community, safe harbors
- Increase work sites with BF policies – proper lactation accommodations, schedule flexibility, storage, etc.
- Baby friendly designation/award that can be won by work sites

Maternal Mental Health (MMH)

Up to 20% of women will experience a mental health disorder during their pregnancy or their child's first year of life. In Orange County that translates to close to 8,000 women and their children impacted each year. Untreated MMH disorders significantly and negatively impact the short-and long-term health and wellbeing of affected women and their children. Symptoms lead to adverse birth outcomes, impaired maternal-infant bonding, poor infant growth, childhood emotional and behavioral problems, and significant medical and economic costs. Despite these consequences, screening for MMH disorders is not routine. Even when MMH disorders are detected, treatment occurs in less than 15% of identified cases. *(Report from CA Taskforce on Status of MMH Care).*

The Maternal Infant Health Assessment (MIHA) data shows that the highest prevalence of depressive symptoms during or after pregnancy are found among Black and Hispanic women, women of lower educational attainment, women utilizing Medi-Cal, and women in poverty. Women in families whose income is less than 100% of the federal poverty level (FPL) experience depression at over double the rate of women in families with income over 300% of FPL.

In addition to the recommendations of the participants listed below, MOMS will use the *Report from the California Task Force on the Status of Maternal Mental Health Care*, published in April 2017, as a resource in considering strategies to improve maternal mental health in Orange County.

The Focus Group Participants' recommendations to improve maternal mental health include:

- Integration of behavioral health with routine OB care; co-located when possible
- Every mom is automatically connected with a perinatal peer support group
- Warm handoff to services if screening score suggests further support/care needed
- Include Adverse Childhood Experiences (ACE's) screen at prenatal visits
- Screen for domestic violence, substance use as well as PMAD (Perinatal Mood and Anxiety Disorders) routinely through pregnancy
- Fathers-to-be receive screening and some type of specialized counseling or preparation
- Support for fathers - behavioral health for fathers going through adjustment disorders after birth
- No social stigma to accessing care, to saying I'm really struggling here
- Every pregnancy is planned
- Incorporate preconception planning into mental health services.
- Every postpartum patient should see a social worker/MH specialist in hospital before discharge.
- Intensive maternal inpatient care available – access to their babies
- MDs receive more education on MMH – OBs and pediatricians aware of signs and screenings
- Increase maternal screening for PMAD at children's well-child checks during first year of life
- Longer paid family leave
- Longer insurance coverage (Medi-Cal cover women through first year of babies' life)
- Child care assistance during appointments
- All new moms receive telephone follow-up during first few weeks
- Media awareness
- More services in Spanish and Vietnamese
- Transportation assistance to increase attendance in services
- Increase of services for severe pain meds - less shame about having pain medications

Maternal Morbidity

Maternal morbidity is a preexisting medical condition, or obstetric complication caused by pregnancy, that adversely affects a woman's perinatal health beyond what would be expected in normal pregnancy and delivery. Diabetes and hypertension are the two most commonly reported health conditions among pregnant women. Historically, hypertension had been the most common, but diabetes' increase in the last decade has made it the most common perinatal condition.

Hypertension during pregnancy can result in preeclampsia, fetal growth restriction, and early delivery. Preeclampsia is one of the top causes of maternal mortality. Diabetes in pregnancy increases the likelihood of having a serious pregnancy complication, makes a cesarean section delivery more likely, and puts a woman and her child at increased risk of developing diabetes in the future. In Orange County, diabetes in pregnancy has doubled in the last decade, going from 3.8% overall in 2000 to 7.2% overall in 2010. The highest rate of diabetes is in Asian women, 10.7% in 2010.

The Focus Group Participants' recommendations for decreasing maternal morbidity include:

- Appropriate risk assessments/screenings at every visit/hospital admission
- High-quality preconception care
- Child care available during care visits
- Involvement partner/family during visit
- Coordinated consultation with specialists
- OB office visits to hospital to schedule postpartum visits within 1-2 weeks
- Access to all services in same place
- Support services (including MOMS model) during prenatal care including morbidity care and education
- County-wide RN advice line
- An Amazon-like approach for moms with needs (prenatal vitamins, fresh veggies) "Amazon Women"
- Standardized health messages for all preconception/prenatal/postpartum visits
- Physicians paid for doing the right thing, including transferring woman to different level of care if appropriate
- Annual meeting or conference in county for OB providers to interface with public health professionals to solve problems. Make attendance State-mandated for licensure.
- Birth at the hospital capable of caring for level of care needed
- Family planning services available at delivery
- Mother baby assessment center at every hospital
- Expand Medi-Cal for postpartum moms through first year
- Expand parental leave

- Home visiting programs regardless of income status
- Access to healthy food
- Focus on obesity prevention
- Healthy neighborhood prevention and support services

The Future

This 25-year retrospective process spotlighted important improvements that have been made in Orange County in terms of increased access to perinatal care for vulnerable populations and resources that have been added to address postpartum and early childhood needs. Yet the process also revealed new perinatal concerns and reinforced the urgency of issues that are as relevant today as they were 25 years ago. The work is far from finished.

As an organization, MOMS has recently embarked upon a more formal Advocacy platform to explore opportunities to improve the future of our community's youngest members. The platform's four overarching priorities are as follows – and, not surprisingly, reflect the key issues that were identified in recent Focus Group discussions:

• Protecting and improving access to maternal and child healthcare and support services

• Expanding access to maternal mental health screening, treatment, and support services

• Expanding access to gestational diabetes screening, prevention education, treatment, and support services

• Promoting breastfeeding education and support services

MOMS Orange County looks forward to using the information collected in our 25th anniversary review and the continued wisdom and support of the perinatal community to consider the actions we can take as an organization so that our organization continues to help mothers and their families have healthy babies. MOMS Orange County invites you to join us as we prepare for the next 25 years to realize our vision for healthy babies, empowered mothers and strong families throughout Orange County. To become further involved, please contact Michele Silva at msilva@momsorangecounty.org or 714-352-3420

REFERENCES

Berkman, Leslie. "Maternity Room Crowding in OC has Disappeared." Los Angeles Times. 12 November 1992.

Devane, D., Richwald, G., Andrews, D., Beukema, P. 1989 Community Perinatal Needs Assessment and Program Plan for Orange County. Orange County, CA: March of Dimes Birth Defects Foundation, 1989.

California Maternal Quality Care Collaborative; cmqcc.org

A Report from the California Task Force on the Status of Maternal Mental Health Care, April 2017.

The 22nd Annual Report on the Conditions of Children in Orange County, Orange County Children's Partnership, July 2016 ochealthinfo.com/phs/about/family/occp/report

Curtis Condon, PhD Ryan Ramos, MS, MS David Thiessen, MS, David Núñez, MD, Helene Calvet, MD. *Mothers with a Higher Pre-Pregnancy Body Mass Index are at Increased Risk for Gestational Diabetes Mellitus*; 2012.

Jones, Lanie. "Can County Deliver Enough Maternity Beds?" Los Angeles Times. 31 March 1990.

MCAH Bulletin: Maternal Morbidity, Center for Family Health: Maternal Child and Adolescent Health, CA Department of Public Health, December 2012.

MIHA Report, 2013-2014: Data from the Maternal and Infant Health Assessment (MIHA) Survey. Sacramento: California Department of Public Health, Maternal, Child and Adolescent Health Division, 2016.

Orange County Community Indicators 2016, http://www.ocgov.com/civicax/filebank/blobdload.aspx?BlobID=55530

OC Health Profile 2013, http://www.ochealthinfo.com/about/admin/pubs/hp

"Substance Exposed Babies in Orange County, 2007 Prevalence Study" Orange County Health Care Agency, Orange County, California. January 2008.

Warner, Gary A. "Hospital to Turn Away Women in Labor." Orange County Register. 5 June 1989.

Appendix 1
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Appendix 1
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Appendix 1
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Appendix 2: Orange County's Perinatal Landscape
1989-2017 Summary

1989	Interim Notable Data/Events	2017
Population and Total Number of Births		
2.2 million residents 1987: 38,720 births *unless noted, all birth statistics below for 1987 births	The number of births rose rapidly to over 54,000 in 1990 before beginning to slowly decline	3.2 million residents 2014: 38,610 births ***unless noted, all birth statistics below for 2014 births** 2015 births: 37,621
Percent of Total Births by Race/Ethnicity		
Non-Hispanic (NH) White 51.2% Hispanic 35.2% Asian 9.4% Black 2.3%		Hispanic 42.6% Non-Hispanic (NH) White 30.7% Asian 23.4% Black 1.2%
Percent of Total Births by Maternal Age		
≤19 8.3% 20-29 58.5% 30-39 31.7% ≥40 1.4%		≤19 4.1% 20-29 38.3% 30-39 52.7% ≥40 4.9%
Teen Births		
3,229 (8.3%) births were to females under 20 years of age	Teen birth rates began dropping significantly starting in 1991 In 2005 7.0% of births to teens In 2005, teen birth rate was 30.4 per 1,000 females 15-19 years of age	1,583 (4.1%) births were to females under 20 years of age Teen birth rate 14.8 (CA 21.1 US 24.2) per 1,000 females. Biggest changes have happened in rate of Hispanic teen births, from 65.8 per 1,000 females in 2005 to 28.6 in 2014

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1989	Interim Notable Data/Events	2017
First trimester (Early) prenatal care		
Overall 79.2% NH White 87.8%, Asian 79.8%, Black 73.9%, Hispanic 69.7%	Presumptive Eligibility for Medi-Cal implemented 1993 Had risen to 91.6% in 2003, 91.4% in 2005 and has been declining since	Overall 86.1% NH White 91.6%, Hispanic 85%, Black 82.6%, Asian 82.0% *Orange County Health Improvement Plan (OCHIP) lists objective that by 2020 rate of early prenatal care increases to 90% and disparities are reduced*
Infant Mortality (Death of infant before first birthday)		
Overall 6.8/1,000 live births	Has continued to slowly decrease across the years 1994 – 5.9/1,000 live births 2003 – 4.4/1,000 live births	Overall 3.0/1,000 live births Asian: 1.7 White 2.5 Hispanic 3.9
Low Birth Weight (born weighing less 2,500 grams – 5 pounds, 8 ounces)		
Overall 5.1%	Has continued slow increase over the years, 5.3% in 1994, 6.0% in 2003, highest was 6.7% in 2011	Overall 6.3% Black 10.9% Asian 6.7% Hispanic 6.1% NH Hispanic 6.0%
Preterm Births (born at less than 37 weeks of gestation)		
No OC-specific statistics General statistic cited was between 5-7%, virtually unchanged for 30 years	By 2005 had risen to 9.8%, has made slow decline since then	Overall 7.4% Black 10.3% Hispanic 7.7% NH White 7.4% Asian 6.6%

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1989-2017 Summary

1989	Interim Notable Data/Events	2017
Substance-Exposed Infants		
In 1989, SSA received 25 referrals/month for infants who had a newborn positive toxicology screen (No data on # taken into protective custody)	In FY95/96, 240 infants were taken into protective custody Number of infants taken into protective custody has varied between 82-165/FY since '04/'05	In FY 14/15, 121 infants were taken into protective custody as a result of positive test for drug exposure at birth
	Last study of substance-exposed infants in OC was conducted in 2007 and found: - The prevalence rate of (Alcohol, Tobacco, Other Drugs) ATOD use at any time during pregnancy was 15.1% and 8.9% during the past month of pregnancy based on self-report surveys. The prevalence rate of illicit drug use at any time during pregnancy was 3.5%. - Based on self-reported use, alcohol was the most common substance used (12.9%) during pregnancy, followed by tobacco (4.9%). - The most common illicit drugs detected in urinalysis were opiates, amphetamines and marijuana.	
No hospital routinely conducted newborn screens for drugs		Referral to SSA must be based on at least one factor in addition to positive toxicology screen. Mandatory use of Maternal Substance Abuse Assessment Protocol.
Drugs of choice were alcohol, cocaine (most prevalent illicit drug), amphetamines and heroin		Data from 2011-13 show drug of choice for women in OC who entered treatment was methamphetamines (50%), followed by alcohol (19%), heroin (16%) and 2% or less for cocaine/opiates/sedatives and other drugs
UCI had only resource for infants born exposed to drugs - Infants of Substance Abusing Mothers Clinic		
No residential treatment programs for		Heritage House/Heritage House North

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1989-2017 Summary

1989	Interim Notable Data/Events	2017
substance-abusing women		
HCA ran Perinatal Drug Treatment Program		Perinatal Substance Abuse Services Initiative/Assessment and Coordination Team (PSASI/ACT)
Three residential programs for alcohol-using women		
HCA ran four OP alcohol treatment programs		
Breastfeeding		
Not discussed in 1989 Needs Assessment		2015: 67.1% exclusive breastfeeding at discharge with huge variability between hospitals (CADPH) @ 3 mos. 2014 data shows 25% exclusively breastfeed (13-14 CA MIHA survey) Of the 17 delivery hospitals in OC, six have "Baby-Friendly" designation Orange County Health Improvement Plan has Infant and Child Health Goal to increase the proportion of mothers exclusively breastfeeding at 3 months by 10%
Maternal Morbidity (Diabetes/Gestational Diabetes Mellitus (GDM), hypertension, cardiac conditions)		
Not discussed in 1989 Needs Assessment	GDM 2000: 3.8% Overall GDM 2006-08: 6.4% Overall	GDM: 2010 Overall 7.2% Asian 10.7%

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1989	Interim Notable Data/Events	2017
		Hispanic 7.6% Black 6.0% NH white 5.4%
	California Maternal Quality Care Collaborative founded in 2006. Multiple resources available including for Preeclampsia, hemorrhage, cardiovascular conditions.	The rates of maternal hypertension and asthma have also increased since 1999. The two leading causes of preventable maternal mortality are preeclampsia and obstetrical hemorrhage
Maternal Mental Health		
Not discussed in 1989 Needs Assessment	California Maternal Mental Health Collaborative founded in 2011, now called 2020 Mom National Coalition for Maternal Mental Health formed in 2014 California Task Force on the Status of Maternal Mental Health formed in 2015. Task Force published report and recommendations in April 2017	No OC-specific statistic on Perinatal Mood and Anxiety Disorders (PMAD) General statistic is 15-20% of pregnant/ postpartum women experience significant symptoms of depression and/or anxiety. Maternal depression is the most common complication of pregnancy in the United States (surpassing gestational diabetes and preeclampsia combined).
		OCHCA developed a PMAD Maternal Screening and Care Pathway with resource list for use by providers
	Mental Health Services Act (MHSA) was implemented in January 2005 as a result of passage of Prop 63, which implemented a 1% additional income tax on incomes over $1 million. Over $ 1 billion has come to	MHSA-funded Orange County Postpartum Wellness Program served 475 women in FY14/15 and expects to serve 600 in FY16/17. Services are provided in English, Spanish, Vietnamese

Appendix 2: Orange County's Perinatal Landscape
1989-2017 Summary

1989	Interim Notable Data/Events	2017
	Orange County to be used to provide prevention, early intervention and direct services for mental health.	and Farsi. Program consists of 12-week *Mothers and Babies* curriculum and cognitive behavioral therapy as appropriate.
Perinatal Service Delivery System		
Only 10 of the 25 hospitals providing delivery services had Medi-Cal contracts – many of these hospitals were operating overcapacity in their labor and delivery areas. UCIMC implemented an "obstetrical diversion" program where, during times that UCI was at capacity in their obstetrical unit women, who had not received prenatal care at UCI were met at the ED doors and provided maps of other hospitals to deliver. 52 of the 309 physicians providing perinatal care accepted FFS Medi-Cal (17%) Seven community clinics provided prenatal care to 2,600 women, six had no linkage with a hospital for delivery services HCA operated four prenatal clinics – provided prenatal care for 1,400 women in 1988, no linkage for delivery services or postpartum care UCIMC ran three different prenatal care clinics, providing care to 3,000 women	1995 – Medi-Cal Managed Care/CalOptima implemented HCA clinics closed in 1994 Affordable Care Act (ACA)	Today, 17 hospitals provide delivery services – virtually all take Medi-Cal/CalOptima CalOptima, through its health networks, contracts with a wide variety of perinatal providers across the county

Appendix 2: Orange County's Perinatal Landscape
1989-2017 Summary

1989	Interim Notable Data/Events	2017
Comprehensive Perinatal Services Program (CPSP) was provided by HCA clinics, UCI, some community clinics and a handful of private providers		
Outreach and Resources for Varied Populations		
Limited material available in many of the diverse languages spoken		Technology has made information more available and accessible
Limited outreach in ethnic communities to educate women on importance prenatal care		Limited information/support for LGBTQ families
Identification of and Services for High-Risk Infants		
Family Support Network provided support to families whose child was in a NICU with peer support and resource information		Family Support Network still providing support to families whose child is in a NICU
UCI and CHOC clinics provided medical and developmental assessments		CHOC-UCI Early Developmental Services: Early Development Assessment Center
Home visits were conducted by: - HCA High Risk Infant Program - VNA High Risk Infant Program - UCP Early Intervention Program Included medical, developmental and psycho-social assessments		Home visits conducted through: - MOMS Orange County - Bridges (CFC) Infant Home Visitation through Children's Bureau and CAPC - HCA High Risk Infant Program UCP services contracted through RCOC

Appendix 2: Orange County's Perinatal Landscape
1989-2017 Summary

1989	Interim Notable Data/Events	2017
Biggest identified need was better information and referral processes for parents and professionals		Help Me Grow Family Resource Centers RCOC: Early Start Program/Family Resource Center
Data Collection and Information Availability/Sharing		
Few maternal and child health needs assessments conducted		Annual Conditions of Children Report (22nd report in 2016) published by Orange County Children's Partnership Orange County Health Improvement Partnership guides community health assessments for Orange County Community Health Needs Assessments by 10 nonprofit hospitals include maternal and child health
Small amount of data available from State was published late and narrowly covered hospital-based care information.	California Maternal Quality Care Collaborative started in 2006 with several maternity-related foci. Operates Maternal Data Center – all hospital collected data	Annual California Maternal and Infant Health Assessment (MIHA) survey includes many social and behavioral data points
OCHCA did not routinely publish health data/indicators No information collected on changing social and physical environment and how that impacts the health and health care needs of the community	*Healthy Places, Healthy People* published 2012	Since December 2014, OC Healthier Together Dashboards publishes over 200 indicators Annual OC Community Indicators (20th report on 2015)
Collection of perinatal data was stated goal		OCPC still in existence though there is

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1989-2017 Summary

1989	Interim Notable Data/Events	2017
of OC Regional Perinatal Program/Council and the Maternal and Perinatal Care Committee of the Orange County Medical Association		difficulty collecting Orange County-specific data through Perinatal Council because county was broken up with north county hospital data being included with LA County
Few coalitions/collaborative bodies		Orange County Children's Partnership Orange County Women's Health Project OC Healthier Together Health Improvement Partnership – Health Improvement Plan 2017-19 identifies Infant and Child Health as a priority and early prenatal care and exclusive breastfeeding as target foci
Community Awareness		
Determined as a focus area based on assessment committee and community survey		Participants agreed that community awareness of perinatal issues can always be greater
Other Areas to consider		
		Oral Health Pre- and inter- conception care, including education on and access to long acting reversible contraception

Appendix 2: Orange County's Perinatal Landscape
1989-2017 Summary

1989 Priority Recommendations

- Increase access to hospital delivery services for women who have Medi-Cal or are uninsured
    - Increase public awareness of this issue and lobby for appropriate administrative and legislative changes
- Develop linkages so that all prenatal care services include connections to a delivery hospital and postpartum care
- Increase access to (early)prenatal care for women who have Medi-Cal or are uninsured
    - Support additional community clinics to begin providing prenatal care services, including two mobile clinics
    - Advocate changes to make Medi-Cal easier to obtain
    - Lower barriers such as transportation and childcare
- Increase outreach and educational materials to minority (Hispanic, Vietnamese, Cambodian, Korean, Filipino, Chinese) and adolescent populations
- Increase organizational understanding of minority issues by inviting representation on planning and advisory committees
- Increase residential treatment for substance-abusing pregnant women and mothers
- Increase outreach to substance abusing pregnant women to connect them with appropriate programs and care
- Increase prematurity prevention programs for low income women
- Increase identification of children's high-risk conditions and provision of information and referrals to parents
    - Decrease confusion among providers and parents about where, when and how to access services
- Build a systematic, comprehensive program of education and prevention services for school-aged youth
- Develop a comprehensive, centralized source of perinatal data collection and information management
- Increase community awareness of the maternal and child health needs of Orange County