

# **MATERNAL MORTALITY**

**TITLE V PERINATAL INDICATORS 2016**

**INDICATOR:** Maternal Mortality Ratio

**DEFINITION:** The number of maternal deaths per 100,000 live births

**NUMERATOR:** The number of maternal deaths defined by death due to pregnancy, childbirth and the puerperium as identified by ICD-9 codes 630-676, or by ICD-10 codes 000-099, by place of residence, in a calendar year

**DENOMINATOR:** The total number of live births, by place of residence, in a calendar year

**HEALTHY PEOPLE 2020 OBJECTIVE:**

Reduce maternal deaths to no more than 11.4 per 100,000 live births.  
(Baseline: 12.7 per 100,000 live births in 2007) (Objective MICH-5)

**RISK FACTORS:**

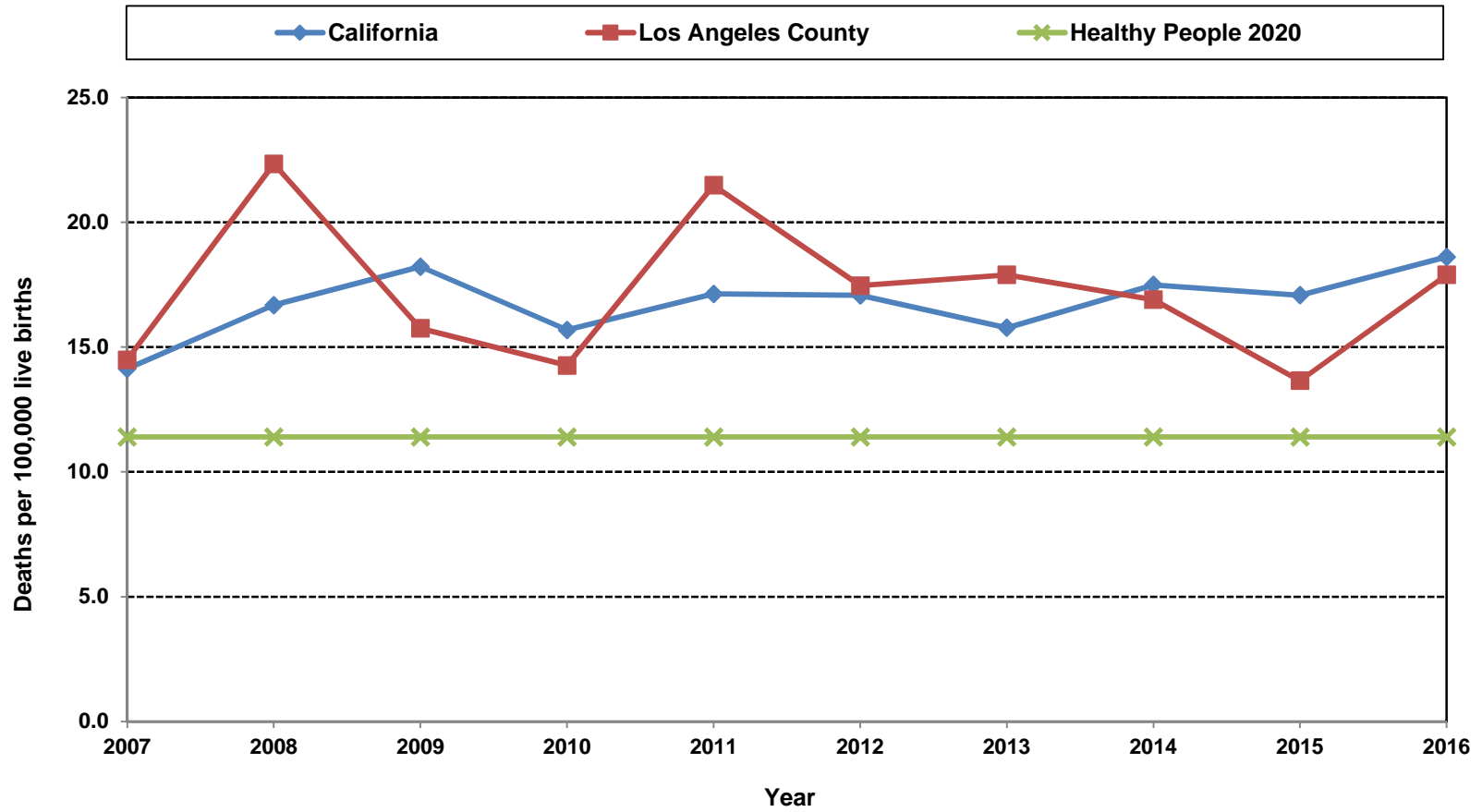
Race/ethnicity; maternal age over thirty; high parity; late entry into prenatal care; lack of comprehensive prenatal care; tobacco use during pregnancy; alcohol/substance abuse during pregnancy

Year	California				Los Angeles County			
	Maternal Mortality		95% Confidence Interval		Maternal Mortality		95% Confidence Interval	
	Deaths	Ratio	Lower	Upper	Deaths	Ratio	Lower	Upper
2007	80	14.1	11.0	17.2	22	14.5	8.4	20.5
2008	92	16.7	13.3	20.1	33	22.3	14.7	30.0
2009	96	18.2	14.6	21.9	22	15.8	9.2	22.3
2010	80	15.7	12.2	19.1	19	14.3	7.9	20.7
2011	86	17.1	13.5	20.8	28	21.5	13.5	29.4
2012	86	17.1	13.5	20.7	23	17.5	10.3	24.6
2013	78	15.8	12.3	19.3	23	17.9	10.6	25.2
2014	88	17.5	13.8	21.2	22	16.9	9.8	24.0
2015	84	17.1	13.4	20.7	17	13.7	7.2	20.1
2016	91	18.6	14.8	22.4	22	17.9	10.4	25.4

Year	Denominator: Live Births	
	California	LA County
2007	566,137	151,813
2008	551,567	147,684
2009	526,774	139,679
2010	509,979	133,160
2011	502,023	130,313
2012	503,788	131,697
2013	494,392	128,523
2014	502,973	130,150
2015	491,748	124,507
2016	488,827	122,941

Sources: California Department of Public Health, Birth and Death Statistical Master Files, 2007-2016  
Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death on CDC WONDER Online Database, released December, 2018, 2014-2016

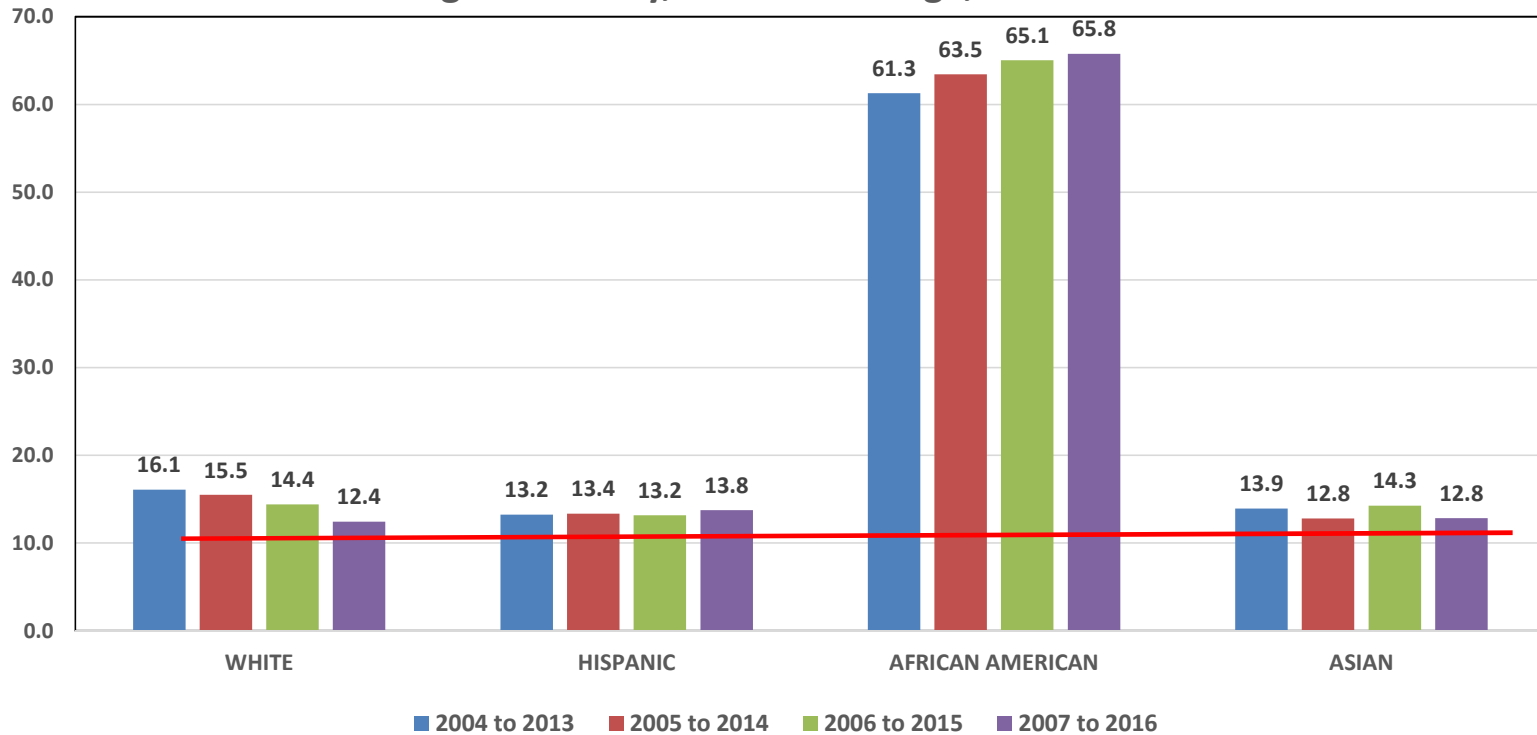
**Maternal Deaths per 100,000 Live Births  
California vs. Los Angeles County, 2007-2016**



Sources: California Department of Public Health, Birth and Death Statistical Master Files, 2007-2016

Centers for Disease Control and Prevention, National Center for Health Statistics. Underlying Cause of Death on CDC WONDER Online Database, released December, 2018, 2014-2016

**Maternal Mortality Ratio (per 100,000 live births) by Race/Ethnicity, Los Angeles County, 10-Year Average, 2004-2016**



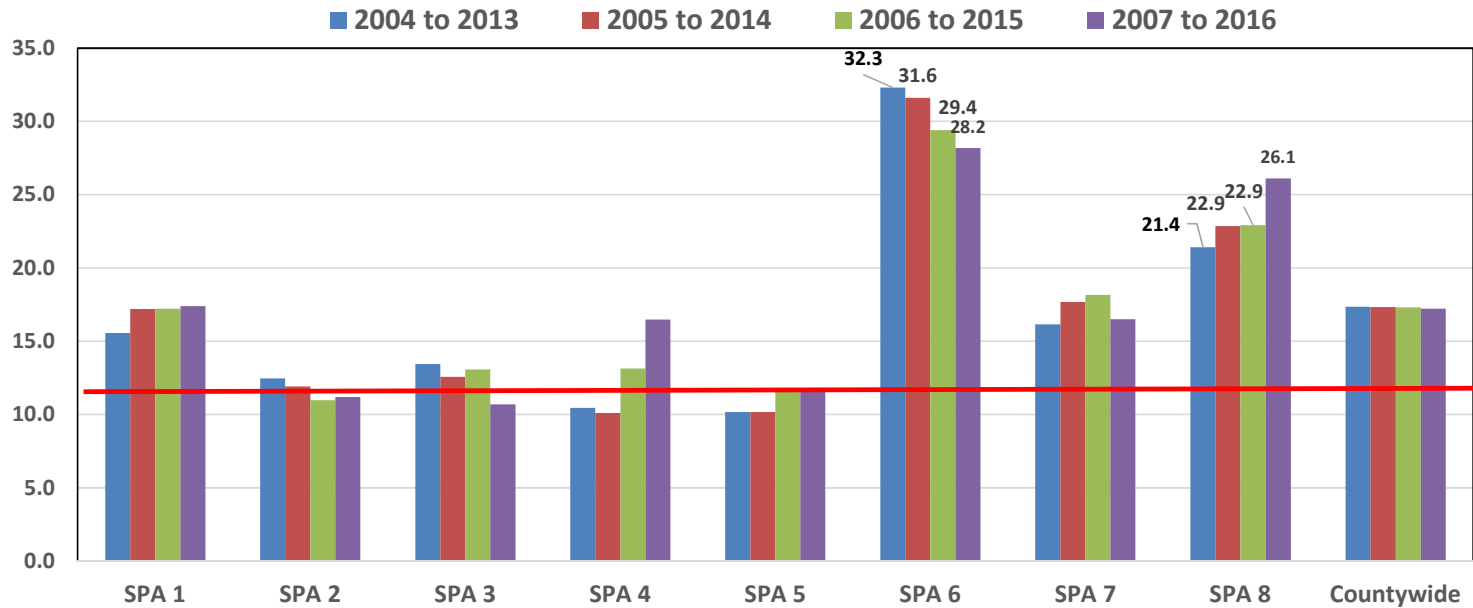
	WHITE			HISPANIC			AFRICAN AMERICAN			ASIAN		
	Deaths	Live Births	MMR	Deaths	Live Births	MMR	Deaths	Live Births	MMR	Deaths	Live Births	MMR
<b>2004 to 2013</b>	39	242,414	16.1	115	869,044	13.2	64	104,378	61.3	23	164,883	13.9
<b>2005 to 2014</b>	37	238,803	15.5	113	845,716	13.4	65	102,406	63.5	22	171,516	12.8
<b>2006 to 2015</b>	34	235,872	14.4	108	820,660	13.2	65	99,907	65.1	25	175,169	14.3
<b>2007 to 2016</b>	29	233,025	12.4	109	791,836	13.8	64	97,263	65.8	23	179,017	12.8

HP 2020 Objective Reduce maternal deaths to no more than 11.4 per 100,000 live births.

Note: Maternal Mortality Ratio is defined as the number of maternal deaths defined by death due to pregnancy, childbirth and the puerperium as identified by ICD-10 codes O00-O99 per 100,000 live births.

Source: California Department of Public Health, 2004-2016 Birth and Death Statistical Files

**Maternal Mortality Ratio (per 100,000 live births) by Service Planning Area  
Los Angeles County, 10-Year Average, 2004-2016**



	2004 to 2013			2005 to 2014			2006 to 2015			2007 to 2016		
	Deaths	Live Births	MMR	Deaths	Live Births	MMR	Deaths	Live Births	MMR	Deaths	Live Births	MMR
SPA 1	9	57,844	15.6	10	58,107	17.2	10	58,071	17.2	10	57,486	17.4
SPA 2	34	272,579	12.5	32	268,572	11.9	29	263,990	11.0	29	258,786	11.2
SPA 3	33	245,274	13.5	31	246,691	12.6	32	244,838	13.1	26	243,184	10.7
SPA 4	16	152,910	10.5	15	148,469	10.1	19	144,467	13.2	23	139,497	16.5
SPA 5	7	68,863	10.2	7	68,867	10.2	8	68,728	11.6	8	68,551	11.7
SPA 6	67	207,356	32.3	64	202,442	31.6	58	197,230	29.4	54	191,470	28.2
SPA 7	32	197,953	16.2	34	192,325	17.7	34	187,067	18.2	30	181,709	16.5
SPA 8	45	209,972	21.4	47	205,567	22.9	46	200,655	22.9	51	195,284	26.1
Countywide	246	1,416,590	17.4	242	1,395,236	17.3	237	1,369,301	17.3	231	1,340,405	17.2

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Note: Maternal Mortality Ratio is defined as the number of maternal deaths defined by death due to pregnancy, childbirth and the puerperium as identified by ICD-10 codes O00-O99 per 100,000 live births.

Sum of SPAs may not equal to the Countywide total as deaths which could not be allocated to a SPA are excluded from the analyses.

Source: California Department of Public Health, 2004-2016 Birth and Death Statistical Files