



# Pertussis Report

May 12, 2014

Pertussis incidence is increasing in California. The disease is cyclical and peaks every 3-5 years. The last peak in California occurred in 2010 so it is likely another peak is underway. Young infants are at greatest risk of hospitalization and death from pertussis, therefore pregnant women are encouraged to receive pertussis vaccine (Tdap) during each pregnancy in the 3<sup>rd</sup> trimester to help protect infants until they are old enough to be vaccinated. The primary DTaP vaccine series is essential for reducing severe disease in young infant and should not be delayed. DTaP can be given to infants at an accelerated schedule with the first dose given as early as 6 weeks of age. Even one dose of DTaP may offer some protection against fatal pertussis disease in infants.

- **2014: 1,711 cases with onset from January 1, 2014 – April 30, 2014** have been reported to CDPH (Table 1).
  - 77 cases have been hospitalized.
    - 50 (65%) of these are infants <4 months of age.
  - One death has been reported in a 2 month-old infant who was 5 weeks old at time of disease onset.
  - Elementary, middle and high school outbreaks have been reported from counties all over California.
  
- **2013: 2,530 cases with onset in 2013** have been reported to CDPH. Data for 2013 are still preliminary and will not be finalized until spring 2014.
  - Statewide there has been an increase in reported pertussis cases. More than twice as many cases have been reported in 2013 compared to 2012 (Figures 1 and 2).
  - 167 (7%) cases have been hospitalized
    - 117 (70%) of these are infants <4 months of age
  - One death was reported in a 2 month-old infant who was 4 weeks old at time of disease onset.
  - The majority of cases (2,096; 83%) have occurred in infants and children <18 years of age and the peak age beyond infancy is 15 years. (Figure 3).
    - 257 (12%) of pediatric cases were infants <6 months of age.
    - 1,293 (62%) of pediatric cases were children/adolescents 7-16 years of age.
  - Rates by race/ethnicity are highest for White and Hispanic infants <1 year of age and lower for Asians/Pacific Islander and Black infants (Figure 4). Among adolescents, the highest rates are in White, non-Hispanics.

Table 1. Pertussis cases and rate\* by year of onset and local health jurisdiction -- California, 2010-2014\*\*

	2010¶		2011¶		2012¶		2013¶		2014**	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
<b>CALIFORNIA</b>	<b>9159</b>	<b>24.55</b>	<b>3016</b>	<b>8.03</b>	<b>1023</b>	<b>2.70</b>	<b>2530</b>	<b>6.62</b>	<b>1711</b>	<b>4.48</b>
ALAMEDA	423	30.21	206	14.59	62	4.35	122	8.41	60	4.14
City of Berkeley‡	13	11.51	3	2.62	6	5.20	13	11.29	13	11.29
ALPINE	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
AMADOR	4	10.56	11	29.48	1	2.74	2	5.52	0	0.00
BUTTE	32	14.55	16	7.26	3	1.36	33	14.87	3	1.35
CALAVERAS	9	19.80	5	11.08	0	0.00	2	4.39	0	0.00
COLUSA	11	51.20	1	4.65	0	0.00	0	0.00	0	0.00
CONTRA COSTA	205	19.48	114	10.74	24	2.24	69	6.37	29	2.68
DEL NORTE	16	56.06	0	0.00	0	0.00	0	0.00	0	0.00
EL DORADO	54	29.85	11	6.09	3	1.64	4	2.18	0	0.00
FRESNO	550	58.99	58	6.17	16	1.69	41	4.28	121	12.62
GLENN	1	3.55	1	3.54	0	0.00	0	0.00	0	0.00
HUMBOLDT	58	43.07	15	11.09	1	0.74	5	3.71	12	8.90
IMPERIAL	9	5.13	3	1.69	8	4.49	3	1.68	1	0.56
INYO	8	43.17	0	0.00	1	5.29	0	0.00	0	0.00
KERN	376	44.70	49	5.77	2	0.23	31	3.58	33	3.81
KINGS	26	17.03	7	4.61	0	0.00	2	1.33	3	1.99
LAKE	5	7.74	3	4.66	2	3.11	4	6.21	0	0.00
LASSEN	1	2.85	0	0.00	0	0.00	0	0.00	0	0.00
LOS ANGELES	1303	14.12	612	6.61	209	2.24	346	3.68	153	1.63
City of Long Beach‡	68	14.70	17	3.66	4	0.86	15	3.22	56	12.03
City of Pasadena‡	24	17.54	15	10.80	1	0.72	2	1.44	1	0.72
MADERA	120	79.30	8	5.26	0	0.00	9	5.88	9	5.88
MARIN	351	138.90	26	10.22	5	1.97	184	71.91	73	28.53
MARIPOSA	10	54.96	1	5.56	0	0.00	0	0.00	0	0.00
MENDOCINO	27	30.71	3	3.41	0	0.00	6	6.77	0	0.00
MERCED	131	51.19	27	10.42	0	0.00	1	0.38	3	1.14
MODOC	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
MONO	18	126.43	2	13.98	21	146.07	2	14.11	0	0.00
MONTEREY	132	31.71	38	9.05	17	4.03	49	11.54	51	12.01
NAPA	25	18.28	11	7.99	6	4.35	13	9.35	11	7.91
NEVADA	23	23.32	2	2.03	5	5.11	70	71.51	2	2.04
ORANGE	499	16.54	142	4.66	73	2.37	111	3.58	51	1.64
PLACER	80	22.84	19	5.33	11	3.05	85	23.28	32	8.76
PLUMAS	2	10.05	4	20.06	0	0.00	1	5.19	1	5.19
RIVERSIDE	467	21.31	166	7.48	46	2.04	80	3.53	63	2.78
SACRAMENTO	175	12.32	69	4.82	35	2.44	70	4.84	83	5.73
SAN BENITO	7	12.65	3	5.36	1	1.76	1	1.75	1	1.75
SAN BERNARDINO	182	8.93	115	5.60	54	2.62	38	1.83	34	1.64
SAN DIEGO	1140	36.74	398	12.73	162	5.14	407	12.79	221	6.95
SAN FRANCISCO	141	17.49	70	8.61	30	3.65	59	7.10	19	2.29
SAN JOAQUIN	84	12.23	27	3.90	15	2.15	26	3.69	27	3.84
SAN LUIS OBISPO	371	137.54	15	5.55	14	5.17	17	6.25	5	1.84
SAN MATEO	191	26.54	58	7.97	23	3.13	104	14.00	27	3.64
SANTA BARBARA	66	15.57	18	4.23	11	2.58	28	6.48	8	1.85
SANTA CLARA	478	26.76	176	9.74	45	2.46	257	13.86	71	3.83
SANTA CRUZ	87	33.05	22	8.28	13	4.84	54	19.89	15	5.52
SHASTA	32	18.03	27	15.16	2	1.12	7	3.92	2	1.12
SIERRA	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
SISKIYOU	10	22.27	0	0.00	2	4.41	5	11.05	1	2.21
SOLANO	40	9.68	12	2.90	10	2.38	15	3.54	15	3.54
SONOMA	246	50.82	116	23.83	18	3.68	49	9.95	310	62.97
STANISLAUS	159	30.86	43	8.30	11	2.10	16	3.03	13	2.47
SUTTER	5	5.28	1	1.06	0	0.00	2	2.06	0	0.00
TEHAMA	10	15.75	1	1.57	0	0.00	0	0.00	18	28.38
TRINITY	0	0.00	0	0.00	0	0.00	0	0.00	3	22.32
TULARE	230	51.91	77	17.20	27	5.97	25	5.48	5	1.10
TUOLUMNE	32	58.03	4	7.27	1	1.85	1	1.84	1	1.84
VENTURA	372	45.09	163	19.63	15	1.80	36	4.28	45	5.36
YOLO	17	8.44	5	2.47	6	2.93	4	1.94	6	2.91
YUBA	3	4.15	0	0.00	1	1.37	4	5.46	0	0.00

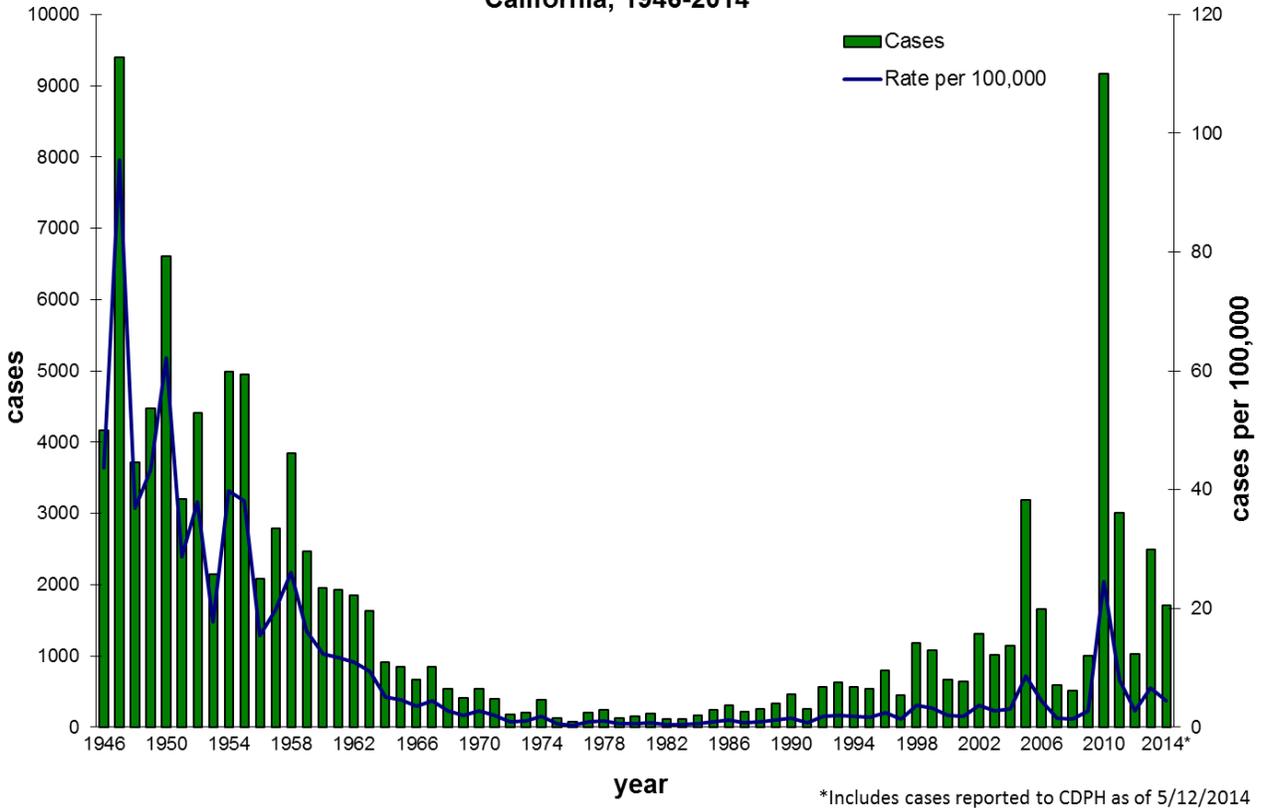
\*Incidence rate per 100,000 persons

\*\*Includes cases reported to CDPH as of 5/12/2014 and with disease onset prior to 5/1/2014

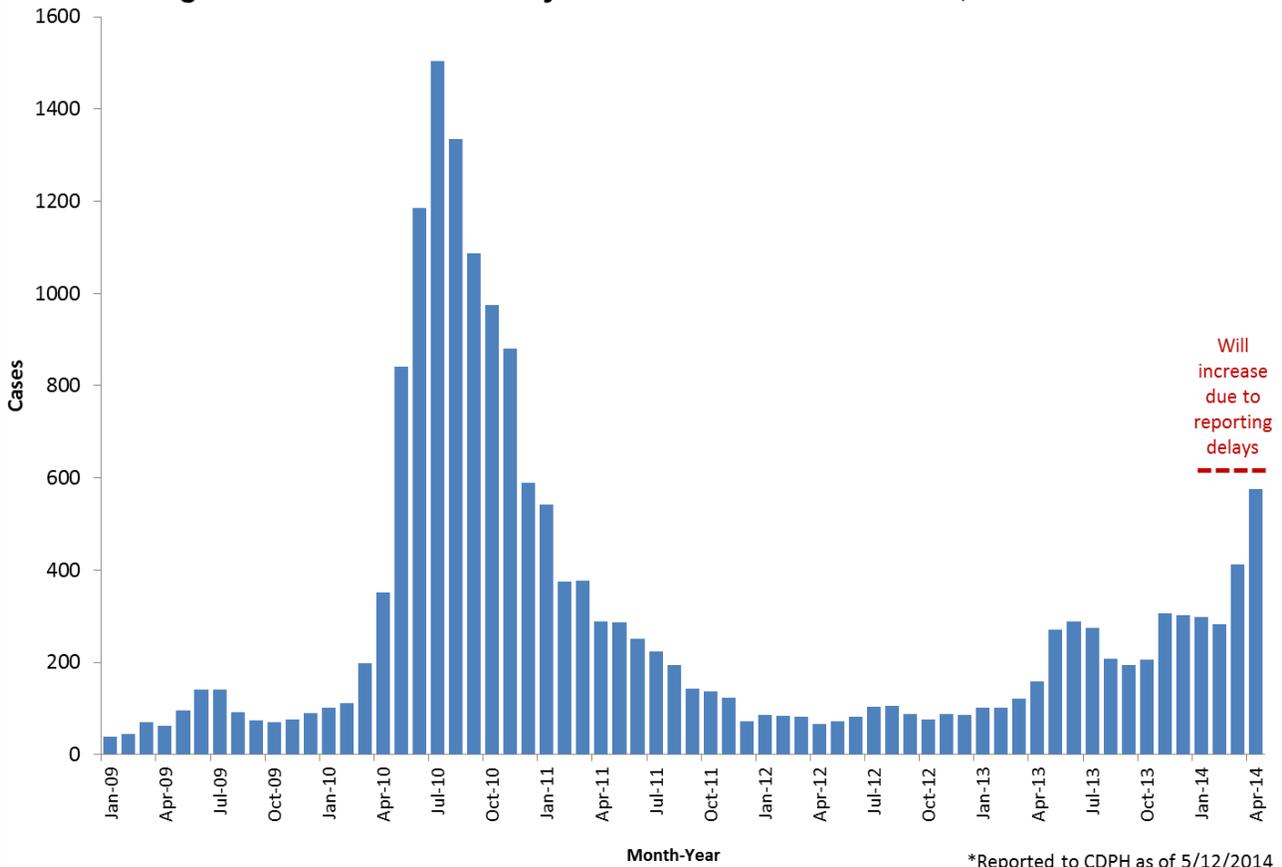
¶Data have been updated from previous reports; population denominator data from the Department of Finance have been standardized with 2010 Census data

‡City health jurisdictions not included in county total

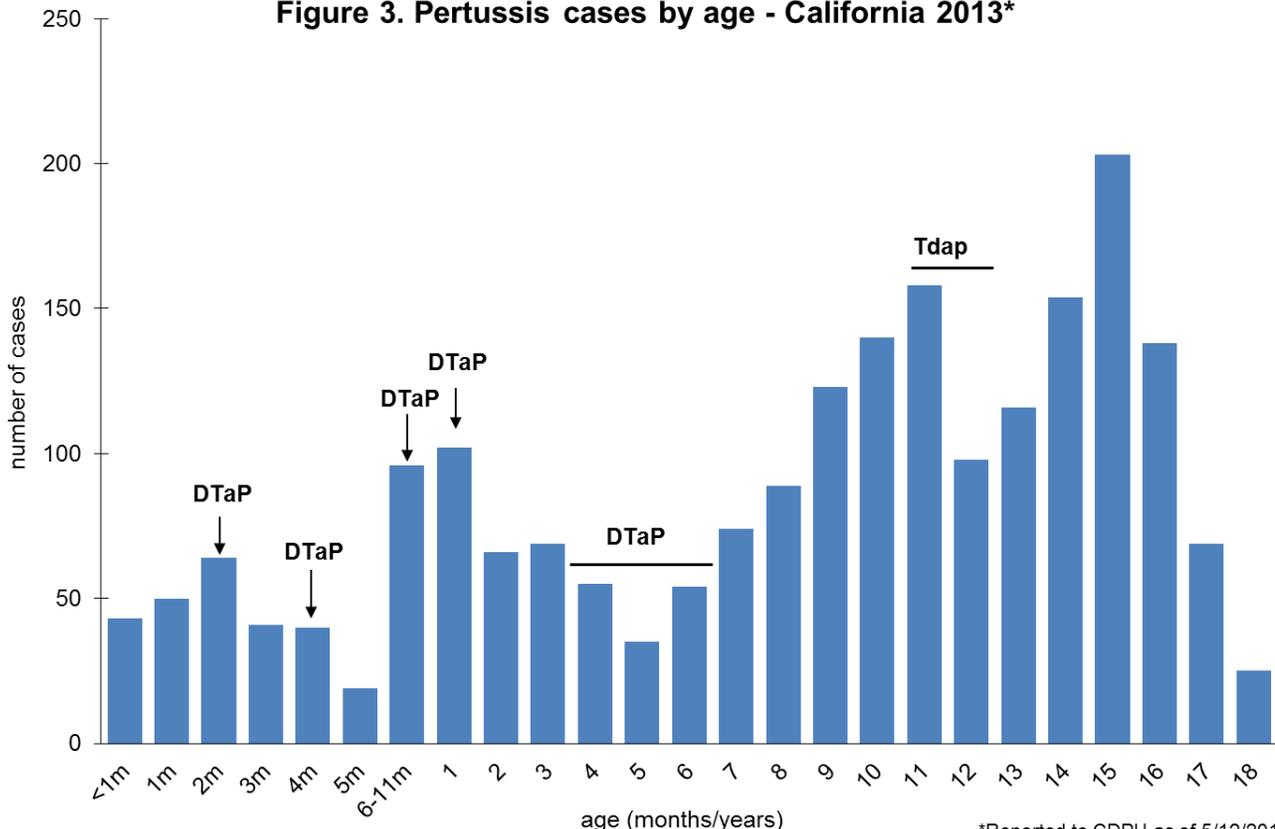
**Figure 1. Number and incidence of reported pertussis cases by year of onset -- California, 1946-2014\***



**Figure 2. Pertussis cases by month of onset -- California, 2009-2014\***

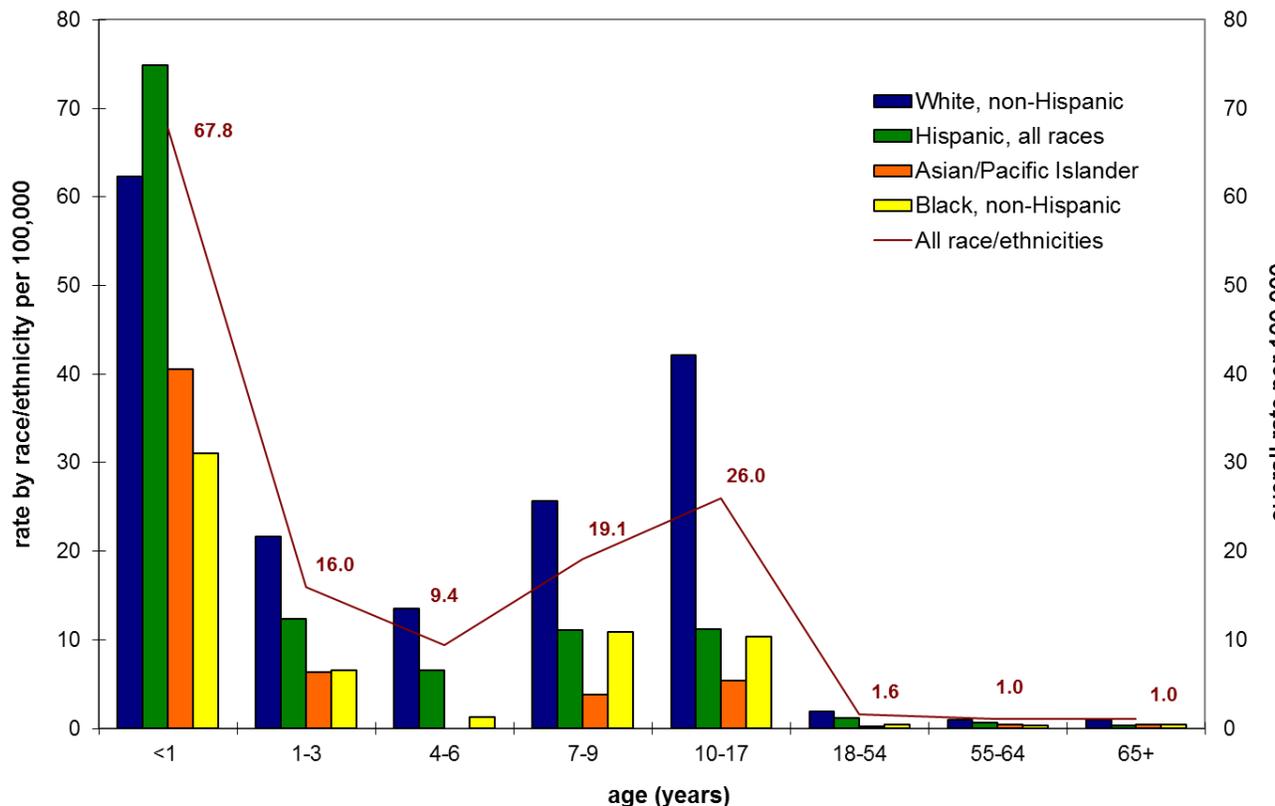


**Figure 3. Pertussis cases by age - California 2013\***



\*Reported to CDPH as of 5/12/2014  
 annotations in black indicated recommended vaccine doses

**Figure 4. Pertussis rates by age and race/ethnicity -- California, 2013\***



\*Reported to CDPH as of 5/12/2014