CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	98
Annual Incidence[a]	
LA County	1.02
California[b]	0.90
United States[b]	3.67
Age at Diagnosis	
Mean	34
Median	31
Range	1–86 years

[a]Cases per 100,000 population

[b]Calculated from: CDC. *Notice to Readers:* Final 2016 Reports of Nationally Notifiable Infectious Diseases and Conditions *Weekly* / January 6, 2018 / 65(52). Available at: https://www.cdc.gov/mmwr/volumes/65/wr/mm6552md.htm?s_cid=mm6552md_w

DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium spp.* are ingested. The parasite is protected by an outer shell that allows it to survive outside the body for long periods of time and makes it very tolerant to chlorine disinfection.

While this parasite can be spread in several different ways, drinking contaminated water (drinking water and recreational water) is the most common way to spread the parasite. This parasite also can be transmitted through contact with animals. Another common cause is unprotected sexual contact, particularly among men who have sex with men (MSM). The usual incubation period is 2-10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever. However, asymptomatic infection is also common. Symptoms last up to two weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, and transplant patients), young children, and pregnant women are at risk for more severe illness.

Proper hand hygiene before meals and after using the restroom is a major way to prevent infection and transmission of cryptosporidiosis. Hand washing is also important for individuals who might have direct contact with diapered or incontinent children and adults. Persons should avoid drinking untreated water that may be contaminated. Persons with diarrhea should not go swimming in recreational waters to prevent transmission to others. Fecal exposure during sexual activity such as anal intercourse and oral-anal sexual practices should also be avoided.

2016 TRENDS AND HIGHLIGHTS

- The incidence rate of cryptosporidiosis cases in LAC in 2016 was 1.02 cases per 100,000 people. This is an increase over previous years (Figure 1). This increase may be explained by the adoption of electronic lab reporting and new testing methods by LAC pathology labs.
- The greatest incidence of cryptosporidiosis was in persons 1–4 years old (1.7 cases per 100,000) followed by those 45–54 years old (1.5 cases per 100,000) (Figure 2).
- The greatest incidence of cryptosporidiosis was in Whites (0.9 cases per 100,000) followed by Blacks (0.6 cases per 100,000) (Figure 6).
- SPA 5 had the highest incidence rate with 2.0 cases per 100,000 (Figure 4).
- Information on race and risk factors are incomplete since routine interviews of cryptosporidiosis cases were discontinued as of October 1, 2015. However, surveillance continues to monitor for clusters and review of cryptosporidiosis with positive laboratory reports.
- There was no clear peak of cryptosporidiosis incidence in 2016. However, most cases occurred during the hot summer months of

June, July, August, and September, which is consistent with risk factors such as exposure to recreational water, hiking, and travel (Figure 5).

- No outbreaks of cryptosporidiosis were detected in 2016.

Reported Cryptosporidiosis Cases and Rates* per 100,000 by Age Group, Race/Ethnicity, and SPA
LAC, 2012–2016

	2012 (N=44)			2013 (N=48)			2014 (N=78)			2015 (N=56)			2016 (N=98)		
	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000
Age Group															
<1	0	-	-	0	-	-	0	-	-	0	-	-	0	-	-
1-4	2	4.5	0.4	1	2.1	0.2	2	2.6	0.4	2	3.6	0.4	8	8.2	1.7
5-14	4	9.1	0.3	2	4.2	0.2	5	6.4	0.4	5	8.9	0.4	10	10.2	0.8
15-34	13	29.5	0.5	16	33.3	0.6	29	37.2	1.0	25	44.6	0.9	34	34.7	1.2
35-44	8	18.2	0.6	8	16.7	0.6	17	21.8	1.3	9	16.1	0.7	13	13.3	1.0
45-54	8	18.2	0.6	14	29.2	1.1	15	19.2	1.2	6	10.7	0.5	20	20.4	1.5
55-64	4	9.1	0.4	2	4.2	0.2	5	6.4	0.5	6	10.7	0.5	7	7.14	0.6
65+	4	9.1	0.4	5	10.4	0.5	4	5.1	0.4	3	5.4	0.3	5	5.1	0.4
Unknown	1	2.3	-	0	-	-	1	1.3	-	-	-	-	1	1.0	-
Race / Ethnicity															
Asian	1	2.3	0.1	2	4.2	0.1	5	6.4	0.4	4	7.1	0.3	3	3.1	0.2
Black	1	2.3	0.1	12	25.0	1.5	12	15.4	1.5	2	3.6	0.3	5	5.1	0.6
Hispanic	9	20.5	0.2	7	14.6	0.2	22	28.2	0.5	16	28.6	0.3	13	13.3	0.3
White	19	43.2	0.7	24	50.0	0.9	34	43.7	1.3	21	37.5	0.8	25	25.5	0.9
Other	0	-	-	2	4.2	-	2	2.6	-	0	-	-	3	3.1	-
Unknown	14	31.8	-	1	2.1	-	3	3.8	-	13	23.2	-	49	50.0	-
SPA															
1	5	11.4	1.3	4	8.3	1.0	3	3.8	0.8	0	-	-	3	3.1	0.8
2	12	27.3	0.6	15	31.3	0.7	23	29.5	1.1	24	42.9	1.1	20	20.4	0.9
3	7	15.9	0.4	4	8.3	0.2	5	6.4	0.3	7	12.5	0.4	6	6.1	0.4
4	6	13.6	0.5	6	12.5	0.5	21	26.9	1.8	8	14.3	0.7	19	19.4	1.6
5	6	13.6	0.9	6	12.5	0.9	4	5.1	0.6	4	7.1	0.6	13	13.3	2.0
6	1	2.3	0.1	5	10.4	0.5	6	7.7	0.6	5	8.9	0.5	5	5.1	0.5
7	1	2.3	0.1	3	6.3	0.2	8	10.2	0.6	3	5.4	0.2	11	11.2	0.8
8	3	6.8	0.3	5	10.4	0.5	7	9.0	0.6	3	5.4	0.3	13	13.3	1.2
Unknown	3	6.8	-	0	-	-	1	1.3	-	2	3.6	-	8	8.2	-

*Rates calculated based on less than 19 cases or events are considered unreliable.

Figure 1. Incidence Rates of Cryptosporidiosis US, CA, and LAC, 2007-2016

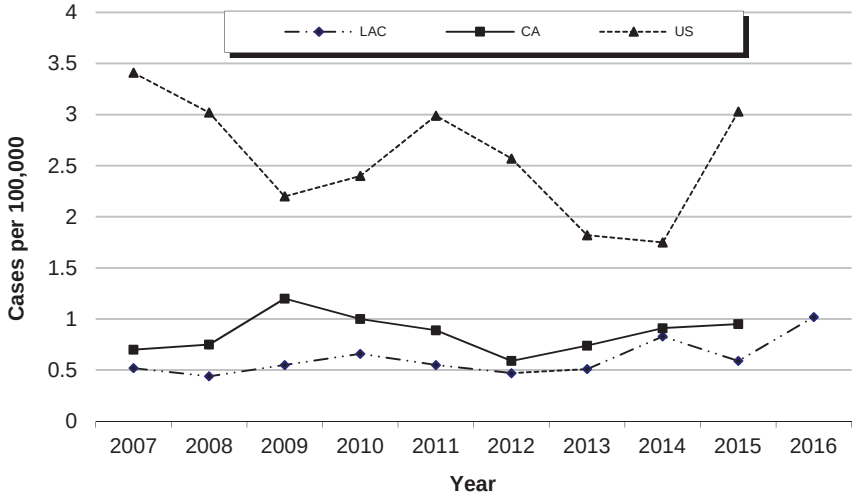


Figure 2. Incidence Rates of Cryptosporidiosis by Age Group, LAC, 2016 (N=98)

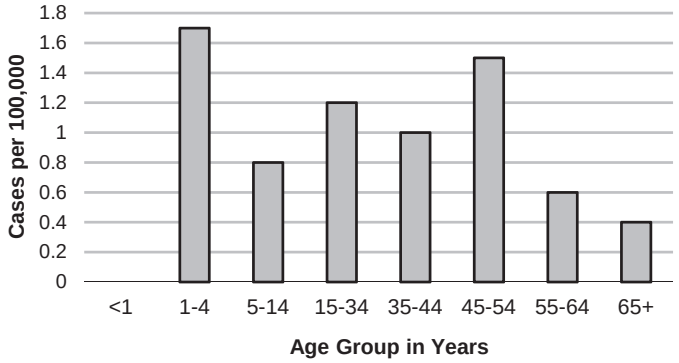
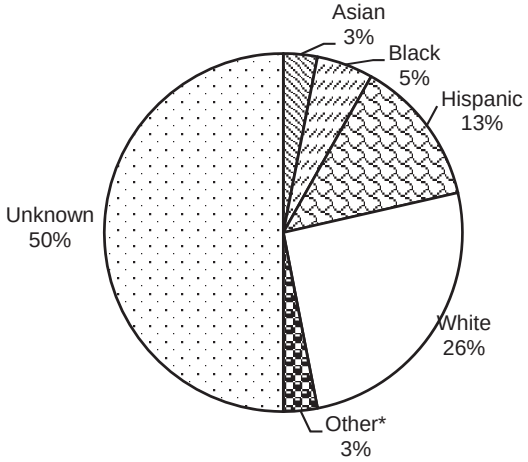


Figure 3. Percent of Cryptosporidiosis by Race/Ethnicity LAC, 2016 (*N=98)



*Other includes Native American and any additional racial/ethnic group that cannot be categorized as Asian, Black, Hispanic, and White.

Figure 4. Incidence Rates of Cryptosporidiosis by SPA LAC, 2016 (N=98)

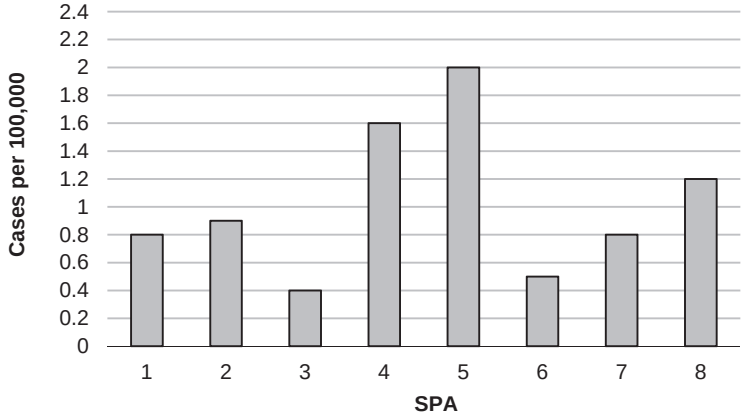
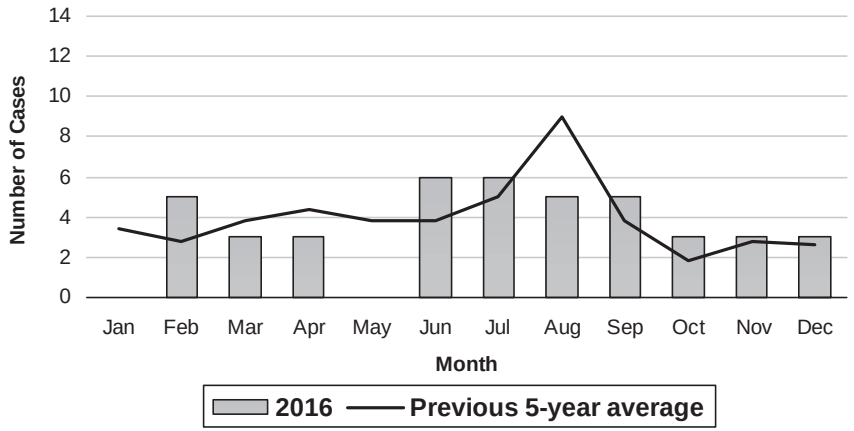
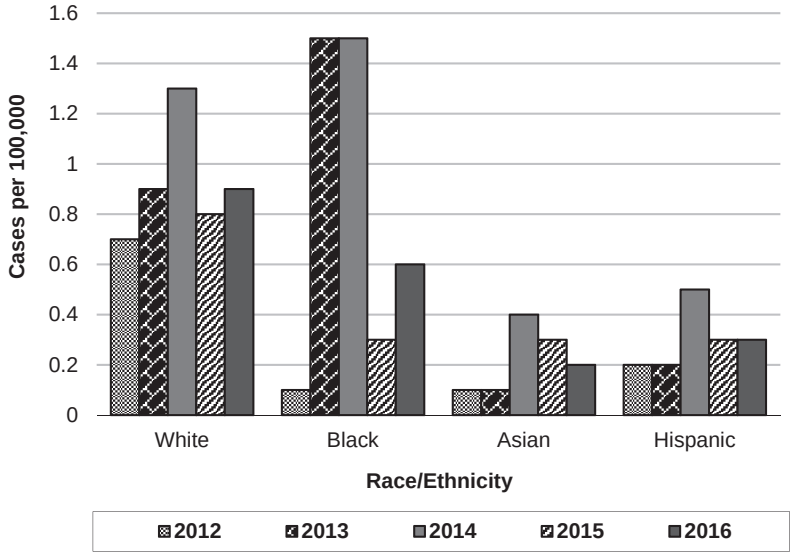


Figure 5. Reported Cryptosporidiosis Cases by Month of Onset, LAC, 2016 (N=98)

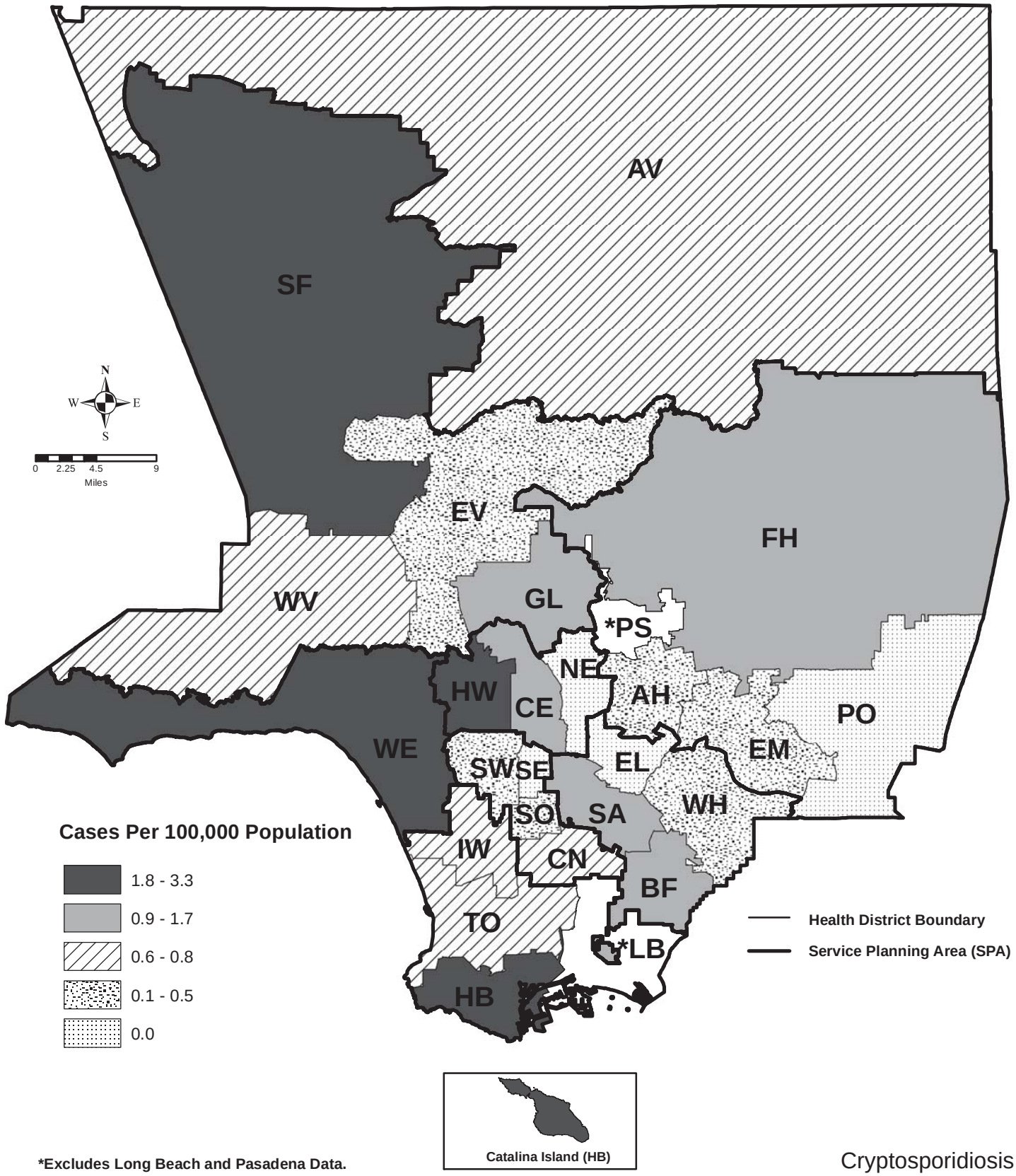


*Date of onset missing on 19 out of 56 cases.

Figure 6. Incidence Rates of Cryptosporidiosis by Race/Ethnicity LAC, 2012-2016



Map 4. Cryptosporidiosis
Rates by Health District, Los Angeles County, 2016*



*Excludes Long Beach and Pasadena Data.

CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	56
Annual Incidence[a]	
LA County	0.59
California[b]	0.95
United States[b]	3.03
Age at Diagnosis	
Mean	34
Median	32
Range	1–89 years

[a]Cases per 100,000 population

[b]Calculated from: CDC. *Notice to Readers:* Final 2015 Reports of Nationally Notifiable Infectious Diseases and Conditions *Weekly* / November 25, 2016 / 65(46);1306–1321. Available at: www.cdc.gov/mmwr/volumes/65/wr/mm6546a9.htm

DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium spp.* are ingested. The parasite is protected by an outer shell that allows it to survive outside the body for long periods of time and makes it very tolerant to chlorine disinfection.

While this parasite can be spread in several different ways, drinking contaminated water (drinking water and recreational water) is the most common way to spread the parasite. This parasite also can be transmitted through contact with animals. Another common cause is unprotected sexual contact, particularly among men who have sex with men (MSM). The usual incubation period is 2-10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever. However, asymptomatic infection is also common. Symptoms last up to two weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, and transplant patients), young children, and pregnant women are at risk for more severe illness.

Proper hand hygiene before meals and after using the restroom is a major way to prevent infection and transmission of cryptosporidiosis. Hand washing is also important for individuals who come in contact with diapered/incontinent children and adults. Persons should avoid drinking untreated water that may be contaminated. Persons with diarrhea should not go swimming in recreational waters in order to prevent transmission to others. Fecal exposure during sexual activity such as anal intercourse and oral-anal sexual practices should also be avoided.

2015 TRENDS AND HIGHLIGHTS

- The incidence of cryptosporidiosis cases in LAC decreased from 0.83 to 0.59 cases per 100,000 in 2014 and 2015 respectively. However, no trend exists over the last decade (Figure 1).
- The greatest incidence of cryptosporidiosis was in persons 15–34 years old (0.9 cases per 100,000) followed by those 35–44 years old (0.9 cases per 100,000) (Figure 2).
- The greatest incidence of cryptosporidiosis was in Whites (0.8 cases per 100,000) followed by Hispanic, Asians, and Blacks, respectively (0.3 cases per 100,000) (Figure 6).
- SPA 2 had the highest incidence rate, 1.1 cases per 100,000 (Figure 4). The reasons for this outcome are unclear since routine interviews of cryptosporidiosis cases were discontinued beginning October 1, 2015.
- Information on race and/or risk factors are incomplete. However, surveillance continues to monitor for clusters and review of cryptosporidiosis with positive laboratory reports.
- The number of reported cases peaked in August, which was consistent with the previous five years and is consistent with risk factors such as exposure to recreational water, hiking, and travel, which occur more commonly in the summer (Figure 5).
- The male to female ratio for 2015 was almost 2:1 compared with 2014 when the ratio was approximately 3:2. Males have consistently comprised the larger proportion of cases.
- No outbreaks of cryptosporidiosis were detected in 2015.

Reported Cryptosporidiosis Cases and Rates* per 100,000 by Age Group, Race/Ethnicity, and SPA
LAC, 2011–2015

	2011 (N=51)			2012 (N=44)			2013 (N=48)			2014 (N=78)			2015 (N=56)		
	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000
Age Group															
<1	0	-	-	0	0	0	0	-	-	0	-	-	0	-	-
1-4	3	5.9	0.5	2	4.5	0.4	1	2.1	0.2	2	2.6	0.4	2	3.6	0.4
5-14	6	11.8	0.5	4	9.1	0.3	2	4.2	0.2	5	6.4	0.4	5	8.9	0.4
15-34	16	31.4	0.5	13	29.5	0.5	16	33.3	0.6	29	37.2	1.0	25	44.6	0.9
35-44	10	19.6	0.7	8	18.2	0.6	8	16.7	0.6	17	21.8	1.3	9	16.1	0.7
45-54	6	11.8	0.4	8	18.2	0.6	14	29.2	1.1	15	19.2	1.2	6	10.7	0.5
55-64	3	5.9	0.3	4	9.1	0.4	2	4.2	0.2	5	6.4	0.5	6	10.7	0.5
65+	7	13.7	0.7	4	9.1	0.4	5	10.4	0.5	4	5.1	0.4	3	5.4	0.3
Unknown	0	-	-	1	2.3	-	0	-	-	1	1.3	-			
Race/Ethnicity															
Asian	3	5.9	0.2	1	2.3	0.1	2	4.2	0.1	5	6.4	0.4	4	7.1	0.3
Black	6	11.8	0.7	1	2.3	0.1	12	25.0	1.5	12	15.4	1.5	2	3.6	0.3
Hispanic	11	21.6	0.2	9	20.5	0.2	7	14.6	0.2	22	28.2	0.5	16	28.6	0.3
White	20	39.2	0.7	19	43.2	0.7	24	50.0	0.9	34	43.7	1.3	21	37.5	0.8
Other	0	-	-	0	-	-	2	4.2	-	2	2.6	-	0	-	-
Unknown	11	21.6	-	14	31.8	-	1	2.1	-	3	3.8	-	13	23.2	-
SPA															
1	6	11.8	1.6	5	11.4	1.3	4	8.3	1.0	3	3.8	0.8	0	-	-
2	15	29.4	0.7	12	27.3	0.6	15	31.3	0.7	23	29.5	1.1	24	42.9	1.1
3	4	7.8	0.2	7	15.9	0.4	4	8.3	0.2	5	6.4	0.3	7	12.5	0.4
4	8	15.7	0.7	6	13.6	0.5	6	12.5	0.5	21	26.9	1.8	8	14.3	0.7
5	5	9.8	0.8	6	13.6	0.9	6	12.5	0.9	4	5.1	0.6	4	7.1	0.6
6	4	7.8	0.4	1	2.3	0.1	5	10.4	0.5	6	7.7	0.6	5	8.9	0.5
7	1	2.0	0.5	1	2.3	0.1	3	6.3	0.2	8	10.2	0.6	3	5.4	0.2
8	1	2.0	0.1	3	6.8	0.3	5	10.4	0.5	7	9.0	0.6	3	5.4	0.3
Unknown	7	13.7	-	3	6.8	-	0	-	-	1	1.3	-	2	3.6	-

*Rates calculated based on less than 19 cases or events are considered unreliable.

Figure 1. Incidence Rates of Cryptosporidiosis US, CA, and LAC, 2006-2015

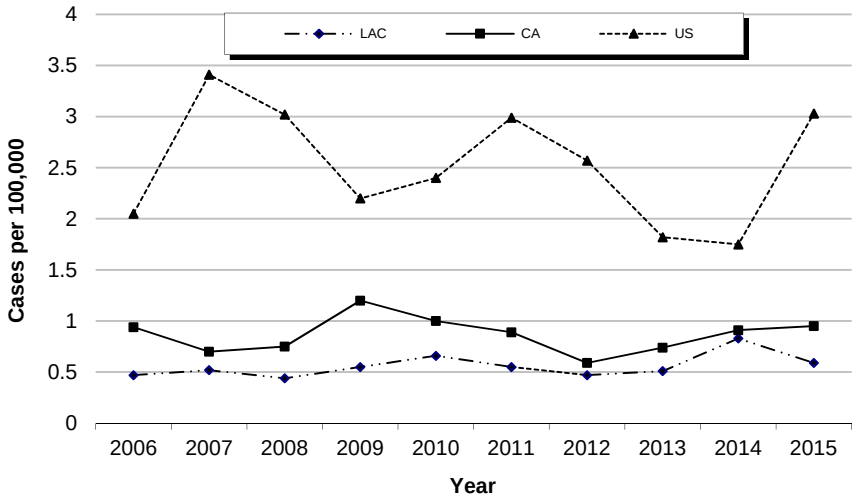


Figure 2. Incidence Rates of Cryptosporidiosis by Age Group, LAC, 2015 (N=56)

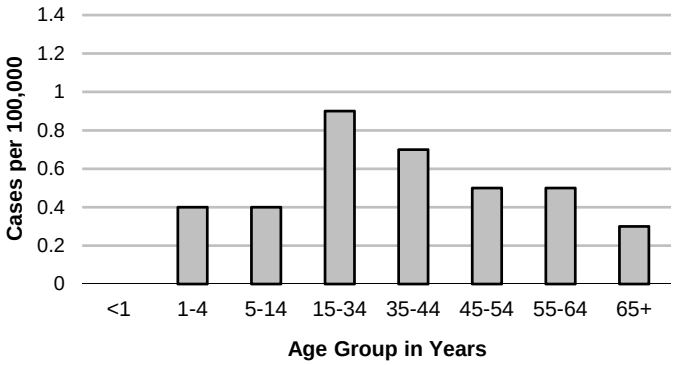
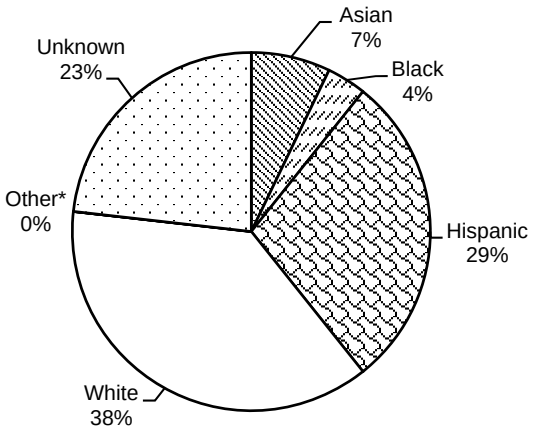


Figure 3. Percent of Cryptosporidiosis by Race/Ethnicity LAC, 2015 (*N=56)



Other includes Native American and any additional racial/ethnic group that cannot be categorized as Asian, Black, Hispanic, and White.

Figure 4. Incidence Rates of Cryptosporidiosis by SPA LAC, 2015 (N=56)

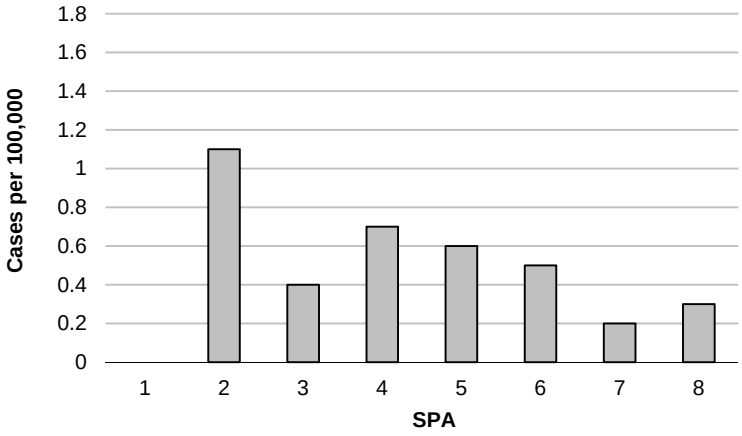
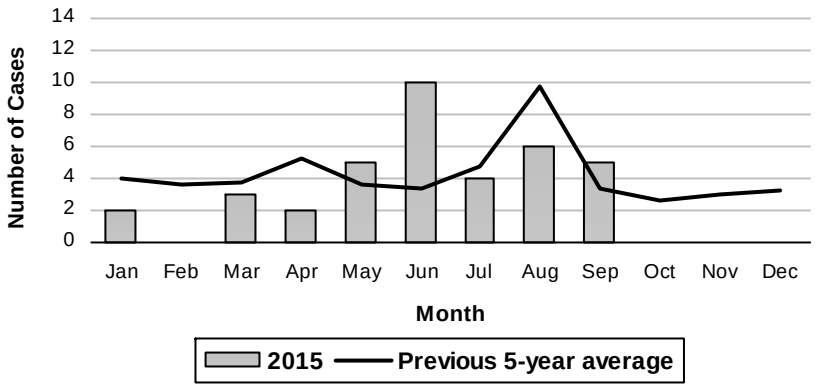
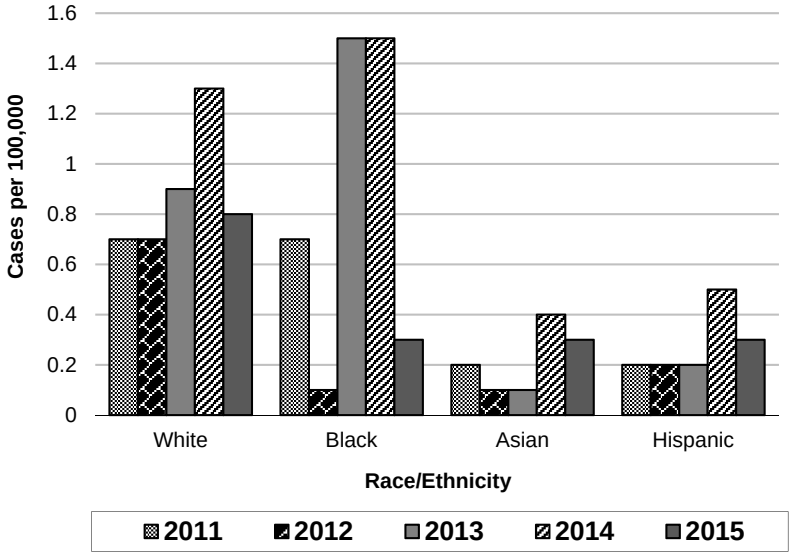


Figure 5. Reported Cryptosporidiosis Cases by Month of Onset, LAC, 2015 (N*=56)

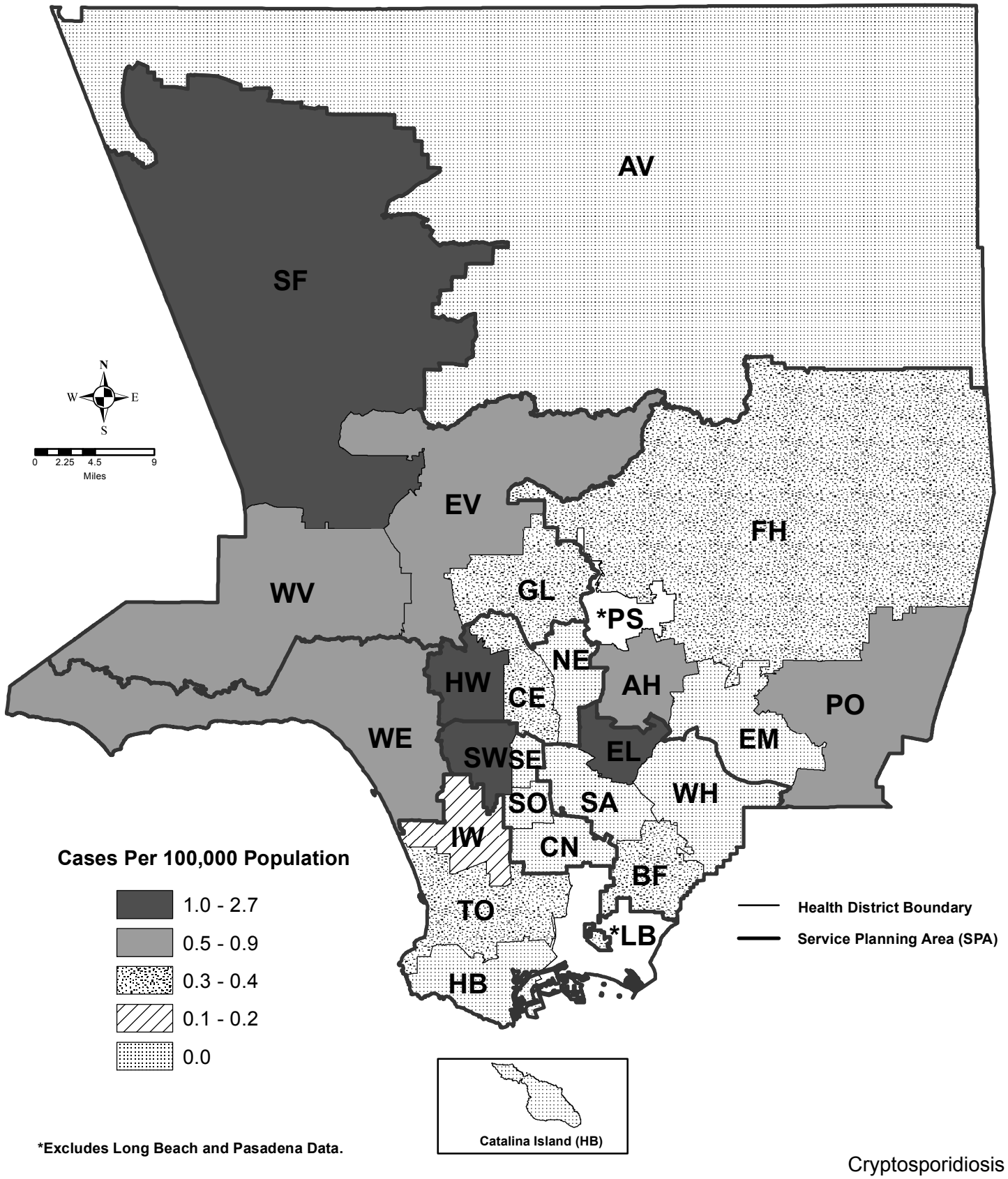


*Date of onset missing on 19 out of 56 cases.

Figure 6. Incidence Rates of Cryptosporidiosis by Race/Ethnicity LAC, 2011-2015



Map 4. Cryptosporidiosis
Rates by Health District, Los Angeles County, 2015*



*Excludes Long Beach and Pasadena Data.

CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	78
Annual Incidence[a]	
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California[b]	0.91
United States[b]	1.75
Age at Diagnosis	
Mean	36
Median	37
Range	3–75 years

[a]Cases per 100,000 population.

[b]Calculated from Final 2014 Reports of Nationally Notifiable Infectious Diseases. MMWR 64(36):1019–1033.

DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium spp.* are ingested. Common causes include contact with animals, unprotected sexual contact, particularly among men who have sex with men (MSM), and ingestion of contaminated recreational or untreated water. The usual incubation period is 2 to 10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Proper hand hygiene before meals and after using the restroom is a major way to prevent infection and transmission of cryptosporidiosis. Hand washing is also important for individuals who come in contact with diapered/incontinent children and adults. Persons with diarrhea should not go swimming in recreational waters in order to prevent transmission to others. Fecal exposure during sexual activity, anal intercourse and oral-anal sexual practices, should also be avoided. Lastly, persons should avoid drinking untreated water that may be contaminated.

2014 TRENDS AND HIGHLIGHTS

- The incidence of cryptosporidiosis cases in LAC increased from 0.51 to 0.83 cases per 100,000 in 2013 and 2014 respectively; however, over the last decade no trend exists (Figure 1).
- The greatest incidence of cryptosporidiosis was in persons 35-44 (1.3 cases per 100,000) followed by those 45-54 years of age (1.2 cases per 100,000). (Figure 2).
- The greatest incidence of cryptosporidiosis was in blacks (1.5 cases per 100,000) followed by whites (1.3 cases per 100,000) (Figure 6).
- SPA 4 had the highest incidence rate, 1.8 cases per 100,000 (Figure 4). This may be related to the greater proportion of MSM in that area.
- The number of cases reported peaked in August, which was consistent with the previous 5 years, consistent with risk factors such as exposure to recreational water, hiking and travel, which occur more commonly in the summer. (Figure 5).
- The male to female ratio for 2014 was almost 3:2 compared with 2013 when the ratio was approximately 4:1. Males have consistently comprised the larger proportion of cases.
- Complete risk factor data were available for all cases. More than one risk factor was identified for several cases. The most frequently reported risk factor was contact with animals (35%), of those, the majority had contact with dogs at home (85%), followed by MSM (26%). Other reported risk factors were travel to another country (24%), HIV positive status (19%) of which two-thirds were among MSM, exposure to recreational water (18%), hiking (14%), and diaper contact (10%).

Reported Cryptosporidiosis Cases and Rates* per 100,000 by Age Group, Race/Ethnicity, and SPA
Los Angeles County, 2010–2014

	2010 (N=61)			2011 (N=51)			2012(N=44)			2013(N=48)			2014 (N=78)		
	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000
Age Group															
<1	0	-	-	0	-	-	0	0	0	0	-	-	0	-	-
1-4	2	3.3	0.3	3	5.8	0.5	2	4.6	0.4	1	2.1	0.2	2	2.6	0.4
5-14	5	8.2	0.4	6	11.7	0.5	4	9.1	0.3	2	4.2	0.2	5	6.4	0.4
15-34	15	24.6	0.5	16	31.3	0.5	13	29.5	0.5	16	33.3	0.6	29	37.2	1.0
35-44	14	23	1.0	10	19.6	0.7	8	18.2	0.6	8	16.7	0.6	17	21.8	1.3
45-54	13	21.3	1.0	6	11.7	0.4	8	18.2	0.6	14	29.1	1.1	15	19.2	1.2
55-64	5	8.2	0.5	3	5.8	0.3	4	9.1	0.4	2	4.2	0.2	5	6.4	0.5
65+	7	11.5	0.7	7	13.7	0.7	4	9.1	0.4	5	10.4	0.5	4	5.1	0.4
Unknown	0	-	-	0	-	-	1	2.2	-	0	-	-	0	-	-
Race / Ethnicity															
Asian	2	3.3	0.1	3	5.8	0.2	1	2.3	0.1	2	4.2	0.1	5	6.4	0.4
Black	11	18.0	1.3	6	11.7	0.7	1	2.3	0.1	12	25	1.5	12	15.4	1.5
Hispanic	13	21.3	0.3	11	21.5	0.2	9	20.4	0.2	7	14.5	0.2	22	28.2	0.5
White	22	36.1	0.8	20	39.2	0.7	19	43.2	0.7	24	50.0	0.9	34	43.6	1.3
Other	0	-	-	0	-	-	0	-	-	2	4.2	-	2	2.6	-
Unknown	13	21.3	-	11	21.5	-	14	31.8	-	1	2.1	-	3	3.8	-
SPA															
1	3	4.9	0.8	6	11.7	1.6	5	11.4	1.3	4	8.3	1.0	3	3.8	0.8
2	16	26.2	0.7	15	29.4	0.7	12	27.3	0.6	15	31.3	0.7	23	29.5	1.1
3	9	14.8	0.5	4	7.8	0.2	7	15.9	0.4	4	8.3	0.2	5	6.4	0.3
4	10	16.4	0.8	8	15.7	0.7	6	13.6	0.5	6	12.5	0.5	21	26.9	1.8
5	5	8.2	0.8	5	9.8	0.8	6	13.6	0.9	6	12.5	0.9	4	5.1	0.6
6	10	16.4	0.9	4	7.8	0.4	1	2.3	0.1	5	10.4	0.5	6	7.7	0.6
7	1	1.6	0.1	1	2.0	0.5	1	2.3	0.1	3	6.3	0.2	8	10.2	0.6
8	4	6.6	0.4	1	2.0	0.1	3	6.8	0.3	5	10.4	0.5	7	9.0	0.6
Unknown	0	-	-	7	13.7	-	3	6.8	-	0	-	-	0	-	-

*Rates calculated based on less than 19 cases or events are considered unreliable.

Figure 1. Incidence Rates of Cryptosporidiosis US, CA and LAC, 2005-2014

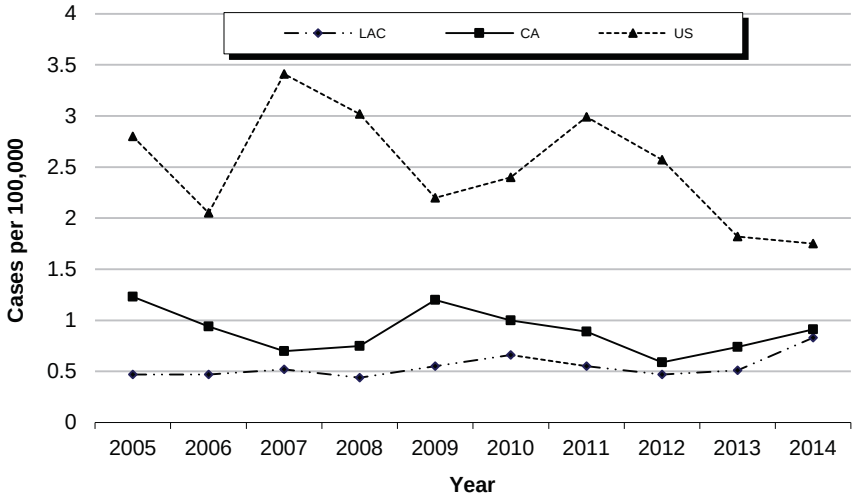


Figure 2. Incidence Rates of Cryptosporidiosis by Age Group, LAC, 2014 (N=78)

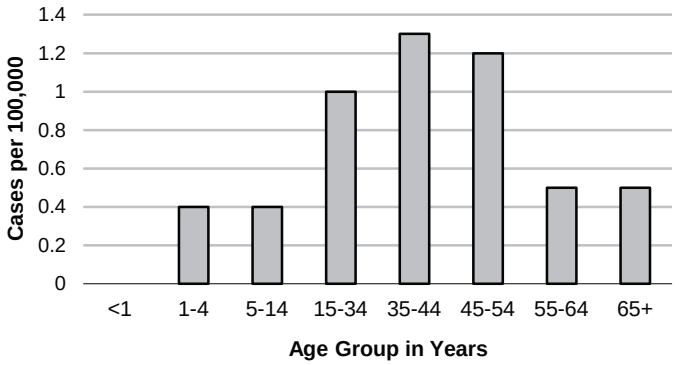


Figure 3. Percent of Cryptosporidiosis by Race/Ethnicity LAC, 2014 (*N=78)

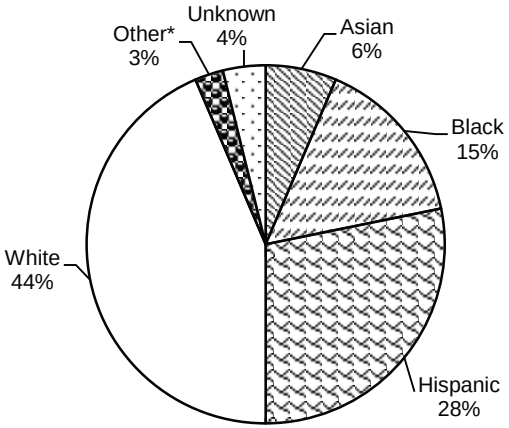
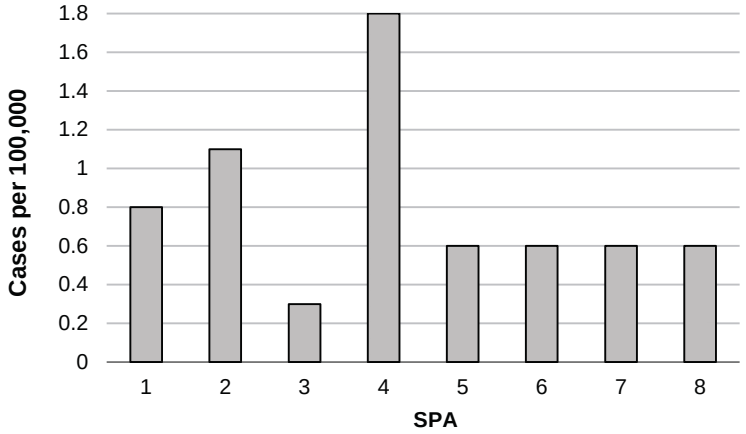


Figure 4. Incidence Rates of Cryptosporidiosis by SPA LAC, 2014 (N=78)



* Other includes Native American and any additional racial/ethnic group that cannot be categorized as Asian, black, Hispanic, and white.

Figure 5. Reported Cryptosporidiosis Cases by Month of Onset, LAC, 2014 (N=78)

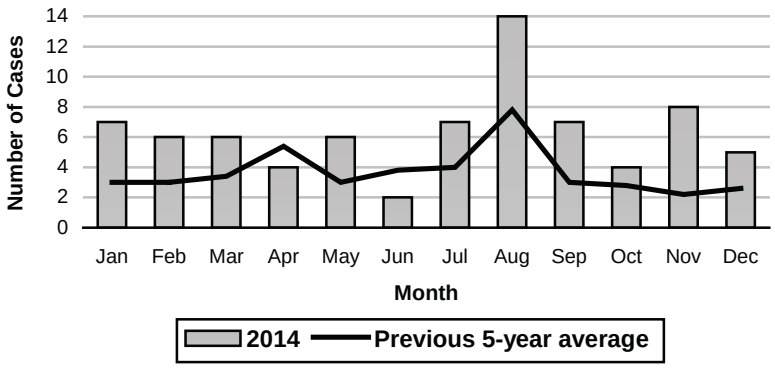
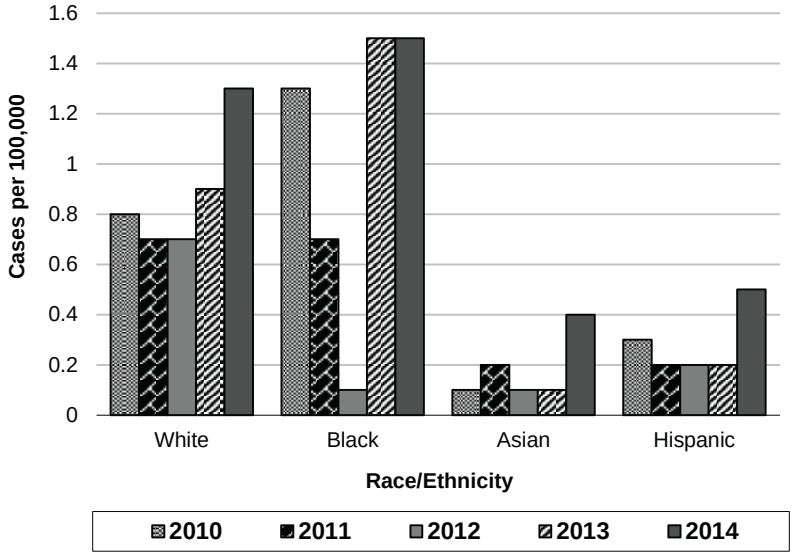
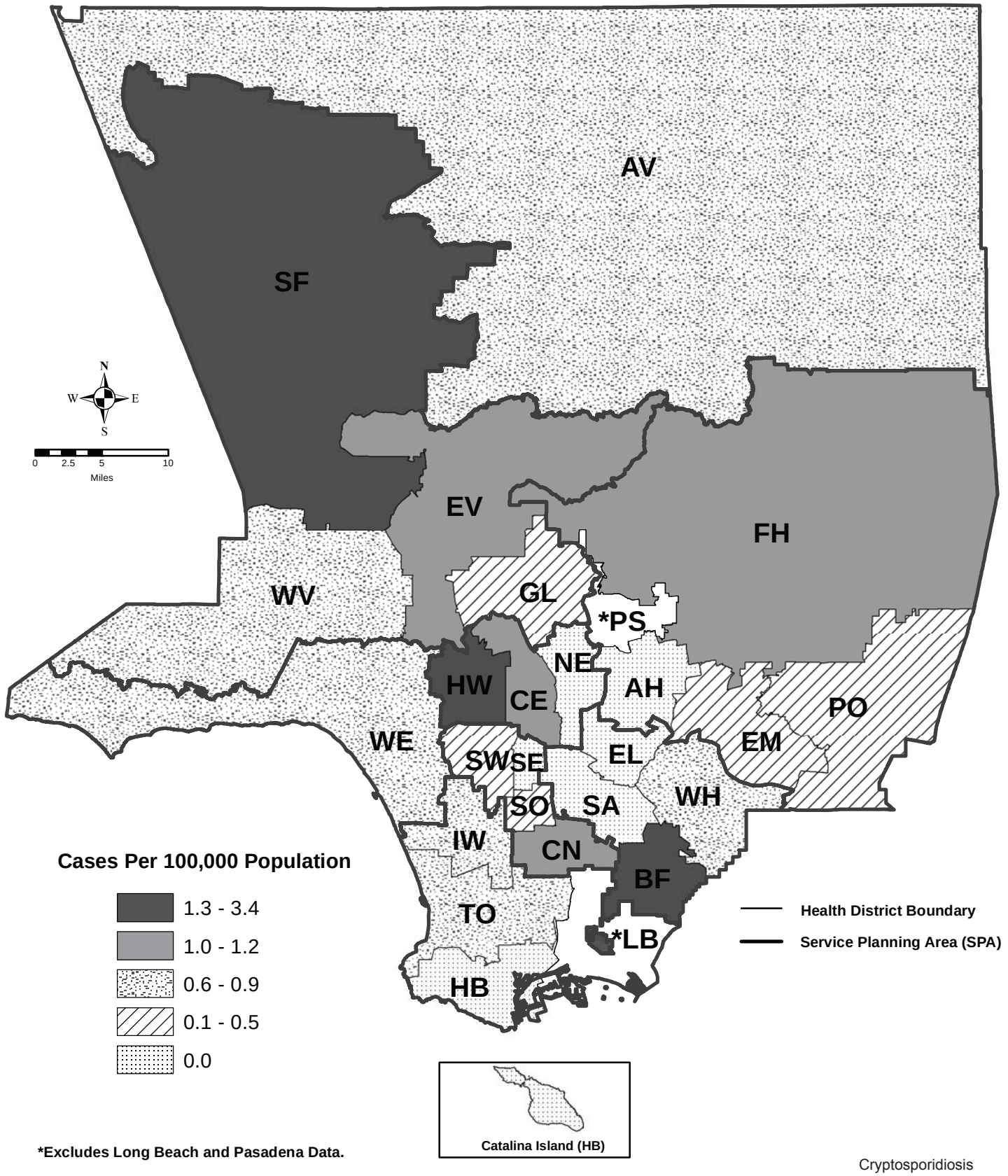


Figure 6. Incidence Rates of Cryptosporidiosis by Race/Ethnicity LAC, 2010-2014, 2014 (N=78)



Map 4. Cryptosporidiosis
Rates by Health District, Los Angeles County, 2014*



*Excludes Long Beach and Pasadena Data.

CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	48
Annual Incidence[a]	
LA County	0.51
California[b]	0.74
United States[b]	1.82
Age at Diagnosis	
Mean	40
Median	43
Range	2-90 years

[a]Cases per 100,000 population.
[b]Calculated from Final 2013 Reports of Nationally Notifiable Infectious Diseases. MMWR 63(32):702-716.

DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium spp.* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and ingestion of contaminated recreational or untreated water. The usual incubation period is 2 to 10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Proper hand hygiene before meals and after using the restroom is a major way to prevent infection and transmission of cryptosporidiosis. Hand washing is also important for individuals who come in contact with diapered/incontinent children and adults. Persons with diarrhea should not go swimming in order to prevent transmission to others. Persons should avoid drinking untreated water that may be contaminated. Lastly, it is important to avoid fecal exposure during sexual activity.

2013 TRENDS AND HIGHLIGHTS

- The incidence of cryptosporidiosis cases in Los Angeles County (LAC) increased slightly from 0.47 to 0.51 cases per 1000,000 in 2012 and 2013 respectively (Figure 1).
- The 45-54 year old age group had the highest incidence rates for cryptosporidiosis, with 1.1 cases per 100,000 followed by the 15-34 and 35-44 age-groups both with 0.6 cases per 100,000 each. (Figure 2). The 35-44 year old age group has consistently had the highest incidence rate in previous reporting periods.
- Whites (24, 50%) accounted for the largest proportion of cases in 2013 (Figure 3). Blacks had the highest incidence rate of all the race/ethnicity groups, 1.5 cases per 100,000.
- Service Planning Area (SPA) 2 reported the largest proportion of cases (15, 31%) and SPA 1 had the highest incidence rate, 1.0 cases per 100,000. (Figure 4).
- The number of cases reported peaked in August, which was consistent with the previous 5 years. (Figure 5).
- The male to female ratio for 2013 was almost 4:1 compared with 2012 when the ratio was approximately 2:1. Males have consistently comprised the larger proportion of cases.
- Complete risk factor data were available for all cases. The most frequently reported risk factor was HIV positive status (20, 42%) of which (13, 65%) were among MSM (men who have sex with men). In total, 18 (38%) cryptosporidiosis cases reported MSM activity. Other reported risk factors were contact with animals (14, 29%), of those, the majority had contact with dogs at home (10, 71%).

Reported Cryptosporidiosis Cases and Rates* per 100,000 by Age Group, Race/Ethnicity, and SPA
Los Angeles County, 2009 - 2013

	2009 (N=51)			2010 (N=61)			2011 (N=51)			2012(N=44)			2013(N=48)		
	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000
Age Group															
<1	0	0	0.0	0	0	0.0	0	0	0.0	0	0.0	0.0	0	--	-
1-4	4	7.8	0.7	2	3.3	0.3	3	5.8	0.5	2	4.6	0.4	1	2.1	0.2
5-14	4	7.8	0.3	5	8.2	0.4	6	11.7	0.5	4	9.1	0.3	2	4.2	0.2
15-34	16	31.4	0.6	15	24.6	0.5	16	31.3	0.5	13	29.5	0.5	16	33.3	0.6
35-44	13	25.5	0.9	14	23	1.0	10	19.6	0.7	8	18.2	0.6	8	16.7	0.6
45-54	4	7.8	0.3	13	21.3	1.0	6	11.7	0.4	8	18.2	0.6	14	29.1	1.1
55-64	6	11.8	0.6	5	8.2	0.5	3	5.8	0.3	4	9.1	0.4	2	4.2	0.2
65+	4	7.8	0.4	7	11.5	0.7	7	13.7	0.7	4	9.1	0.4	5	10.4	0.5
Unknown	0	0.0		0			0			1	2.2				
Race/Ethnicity															
Asian	1	2.0	0.1	2	3.3	0.1	3	5.8	0.2	1	2.3	0.1	2	4.2	0.1
Black	8	15.7	0.9	11	18.0	1.3	6	11.7	0.7	1	2.3	0.1	12	25	1.5
Hispanic	10	9.6	0.2	13	21.3	0.3	11	21.5	0.2	9	20.4	0.2	7	14.5	0.2
White	16	31.4	0.5	22	36.1	0.8	20	39.2	0.7	19	43.2	0.7	24	50	0.9
Other	1	2.0		0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	2	4.2	
Unknown	15	29.4		13	21.3		11	21.5		14	31.8		1	2.1	
SPA															
1	5	9.8	1.4	3	4.9	0.8	6	11.7	1.6	5	11.4	1.3	4	8.3	1.0
2	12	23.5	0.5	16	26.2	0.7	15	29.4	0.7	12	27.3	0.6	15	31.3	0.7
3	5	9.8	0.3	9	14.8	0.5	4	7.8	0.2	7	15.9	0.4	4	8.3	0.2
4	11	21.6	0.9	10	16.4	0.8	8	15.7	0.7	6	13.6	0.5	6	12.5	0.5
5	4	7.8	0.6	5	8.2	0.8	5	9.8	0.8	6	13.6	0.9	6	12.5	0.9
6	5	9.8	0.5	10	16.4	0.9	4	7.8	0.4	1	2.3	0.1	5	10.4	0.5
7	3	5.9	0.2	1	1.6	0.1	1	2.0	0.5	1	2.3	0.1	3	6.3	0.2
8	4	7.8	0.4	4	6.6	0.4	1	2.0	0.1	3	6.8	0.3	5	10.4	0.5
Unknown				0	0.0		7	13.7		3	6.8		--	--	--

*Rates calculated based on less than 19 cases or events are considered unreliable.

Figure 1. Incidence Rates of Cryptosporidiosis US, CA and LAC, 2002 - 2013

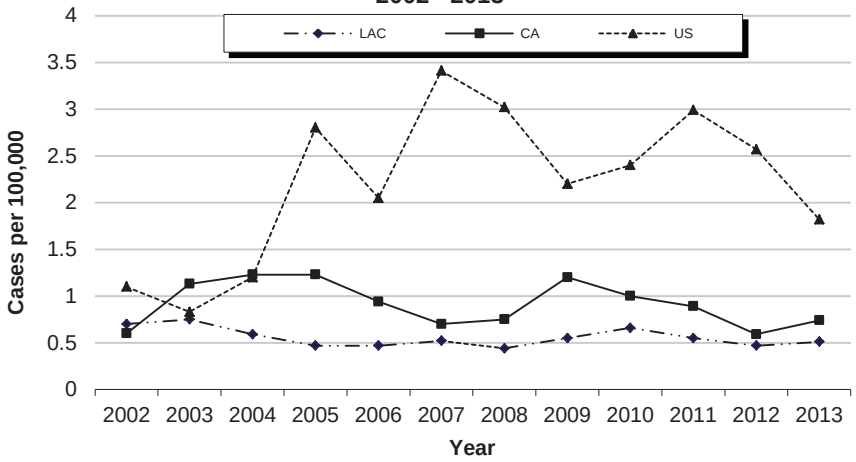


Figure 2. Incidence Rates of Cryptosporidiosis by Age Group, LAC, 2013, N=48

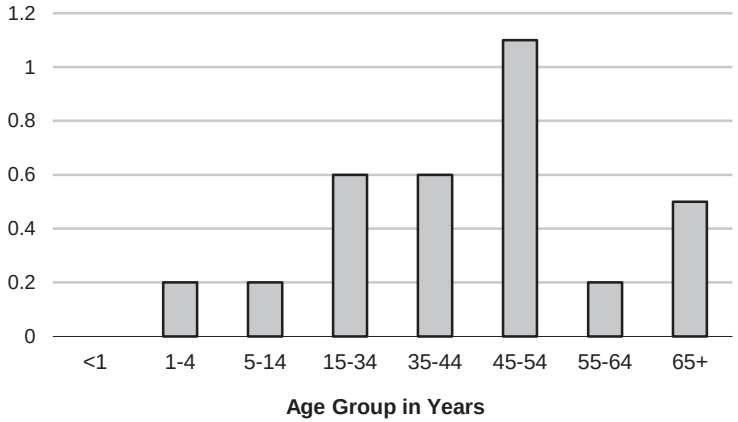


Figure 3. Proportion of Cryptosporidiosis by Race/Ethnicity LAC, 2013, N=48

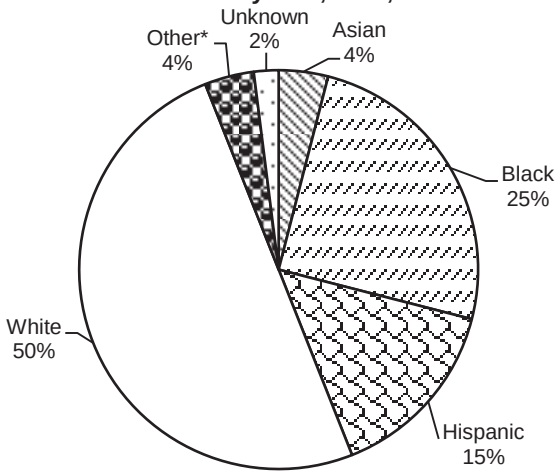
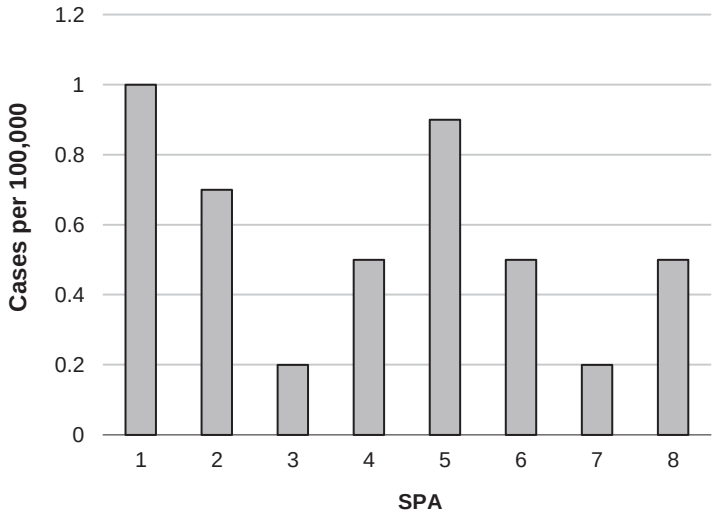


Figure 4. Incidence Rates of Cryptosporidiosis by SPA LAC, 2013, N=48



* Other includes Native American and any additional racial/ethnic group that cannot be categorized as Asian, black, Hispanic, and white.

Figure 5. Reported Cryptosporidiosis Cases by Month of Onset, LAC, 2013

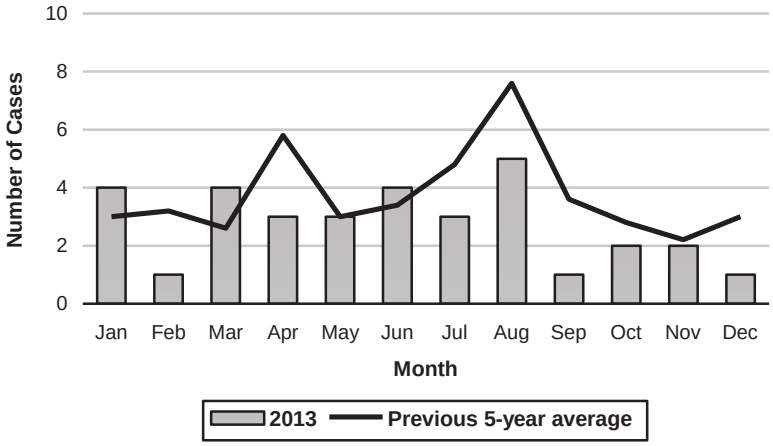
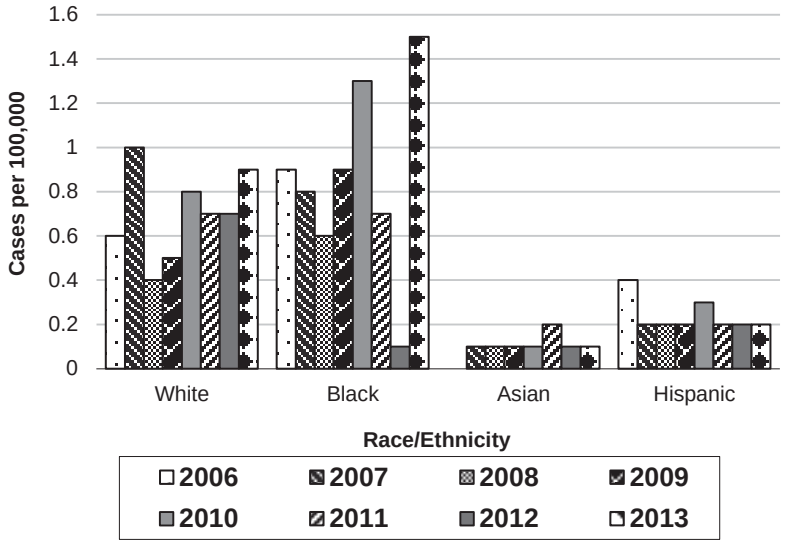


Figure 6. Cryptosporidiosis Incidence by Race/Ethnicity LAC, 2006 - 2013, N=48



CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	44
Annual Incidence[a]	
LA County	0.47
California[b]	0.59
United States[b]	2.57
Age at Diagnosis	
Mean	37
Median	36
Range	2-100 years

[a]Cases per 100,000 population.
[c]Calculated from Final 2012 Reports of Nationally Notifiable Infectious Disease. MMWR 62(33);669-682.

DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium spp.* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and ingestion of contaminated recreational or untreated water. The usual incubation period is 2 to 10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Proper hand hygiene before meals and after using the restroom is a major way to prevent infection and transmission of cryptosporidiosis. Hand washing is also important for individuals who come in contact with diapered/incontinent children and adults. Persons with diarrhea should not go swimming in order to prevent transmission to others. Persons should avoid drinking untreated water that may be contaminated. Lastly, it is important to avoid fecal exposure during sexual activity.

2012 TRENDS AND HIGHLIGHTS

- The incidence of cryptosporidiosis cases in Los Angeles County (LAC) decreased slightly from 0.55 to 0.47 cases per 1000,000 in 2011 and 2012, respectively (Figure 1). This decline is consistent with the previous two years, 2010 and 2011.
- The 35-44 and 45-54 year old age groups had the highest incidence rates for cryptosporidiosis, each with 0.6 cases per 100,000 (Figure 2). The 35-44 age-group has consistently had the highest incidence rate in previous reporting periods.
- Whites (19, 43%) accounted for the largest proportion of cases in 2012, though a large percentage (32%) of cases had unknown race/ethnicity data (Figure 3). Whites had the highest incidence rate of all the race/ethnicity groups, 0.7 cases per 100,000.
- Service Planning Area (SPA) 2 (12, 27%) reported the largest proportion of cases and SPA 1 had the highest incidence rate, 1.3 cases per 100,000. (Figure 4).
- The number of cases reported peaked in April, compared with the previous 5 years when the number of reported cases peaked in August (Figure 5).
- The male to female ratio for 2012 was approximately 6:5 which differs from 2011 when the ratio was approximately 2:1. Males have consistently comprised the larger proportion of cases.
- Complete risk factor data were available for 91% of cases. The most frequently reported risk factor was contact with animals (21, 48%), of those, the majority had contact with dogs at home (15, 34%). Other reported risk factors were HIV positive status (11, 25%) of which (7, 16%) were MSM (men who have sex with men). In total, 9 (20%) cryptosporidiosis cases reported MSM.

Reported Cryptosporidiosis Cases and Rates* per 100,000 by Age Group, Race/Ethnicity, and SPA
Los Angeles County, 2008 - 2012

	2008 (N=41)			2009 (N=51)			2010 (N=61)			2011 (N=51)			2012(N=44)		
	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000
Age Group															
<1	0	0.0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0.0	0.0
1-4	2	4.9	0.4	4	7.8	0.7	2	3.3	0.3	3	5.8	0.5	2	4.6	0.4
5-14	7	17.1	0.5	4	7.8	0.3	5	8.2	0.4	6	11.7	0.5	4	9.1	0.3
15-34	10	24.4	0.3	16	31.4	0.6	15	24.6	0.5	16	31.3	0.5	13	29.5	0.5
35-44	15	36.6	1.0	13	25.5	0.9	14	23	1.0	10	19.6	0.7	8	18.2	0.6
45-54	4	9.8	0.3	4	7.8	0.3	13	21.3	1.0	6	11.7	0.4	8	18.2	0.6
55-64	1	2.4	0.1	6	11.8	0.6	5	8.2	0.5	3	5.8	0.3	4	9.1	0.4
65+	2	4.9	0.2	4	7.8	0.4	7	11.5	0.7	7	13.7	0.7	4	9.1	0.4
Unknown	0	0.0		0	0.0		0			0			1	2.2	
Race/Ethnicity															
Asian	1	2.4	0.1	1	2.0	0.1	2	3.3	0.1	3	5.8	0.2	1	2.3	0.1
Black	5	12.2	0.6	8	15.7	0.9	11	18.0	1.3	6	11.7	0.7	1	2.3	0.1
Hispanic	10	24.4	0.2	10	9.6	0.2	13	21.3	0.3	11	21.5	0.2	9	20.4	0.2
White	12	29.3	0.4	16	31.4	0.5	22	36.1	0.8	20	39.2	0.7	19	43.2	0.7
Other	2	4.9	8.1	1	2.0		0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Unknown	11	26.8		15	29.4		13	21.3		11	21.5		14	31.8	
SPA															
1	2	4.9	0.5	5	9.8	1.4	3	4.9	0.8	6	11.7	1.6	5	11.4	1.3
2	14	34.1	0.6	12	23.5	0.5	16	26.2	0.7	15	29.4	0.7	12	27.3	0.6
3	0	0.0	0.0	5	9.8	0.3	9	14.8	0.5	4	7.8	0.2	7	15.9	0.4
4	12	29.3	0.9	11	21.6	0.9	10	16.4	0.8	8	15.7	0.7	6	13.6	0.5
5	5	12.2	0.8	4	7.8	0.6	5	8.2	0.8	5	9.8	0.8	6	13.6	0.9
6	1	2.4	0.1	5	9.8	0.5	10	16.4	0.9	4	7.8	0.4	1	2.3	0.1
7	3	7.3	0.2	3	5.9	0.2	1	1.6	0.1	1	2.0	0.5	1	2.3	0.1
8	4	9.8	0.4	4	7.8	0.4	4	6.6	0.4	1	2.0	0.1	3	6.8	0.3
Unknown	0	0.0					0	0.0		7	13.7		3	6.8	

*Rates calculated based on less than 19 cases or events are considered unreliable.

Figure 1. Incidence Rates of Cryptosporidiosis US, CA and LAC, 2002 - 2012

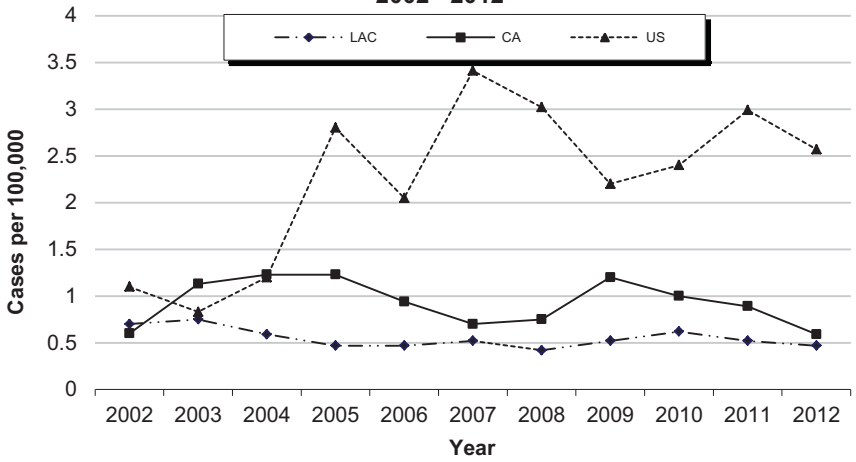


Figure 2. Incidence Rates of Cryptosporidiosis by Age Group, LAC, 2012, N=44

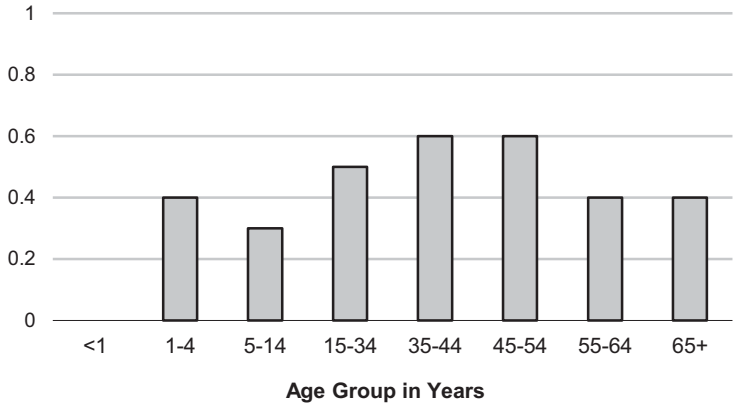


Figure 3. Proportion of Cryptosporidiosis by Race/Ethnicity LAC, 2012, N=44

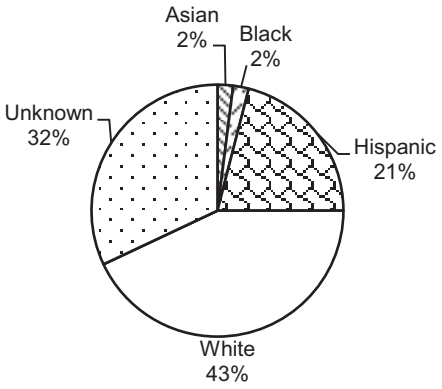
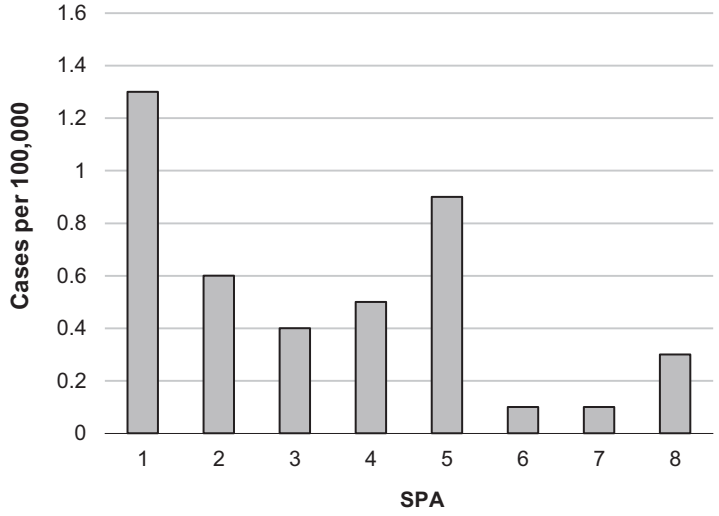


Figure 4. Incidence Rates of Cryptosporidiosis by SPA LAC, 2012, N=44



* Other includes Native American and any additional racial/ethnic group that cannot be categorized as Asian, black, Hispanic, and white.

Figure 5. Reported Cryptosporidiosis Cases by Month of Onset LAC, 2012, N=44

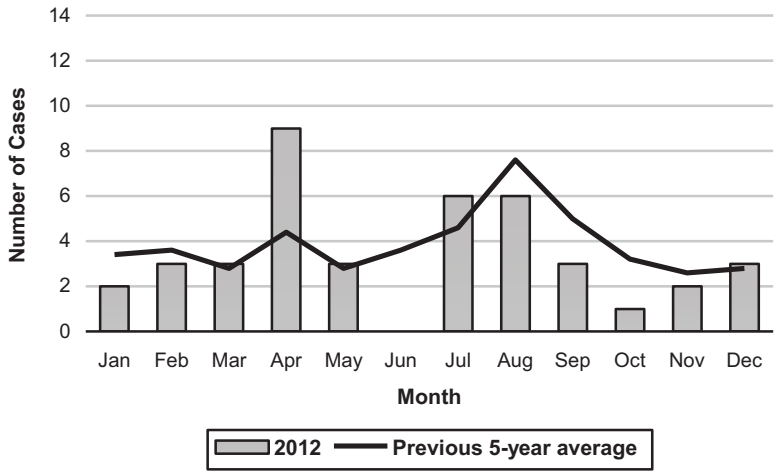
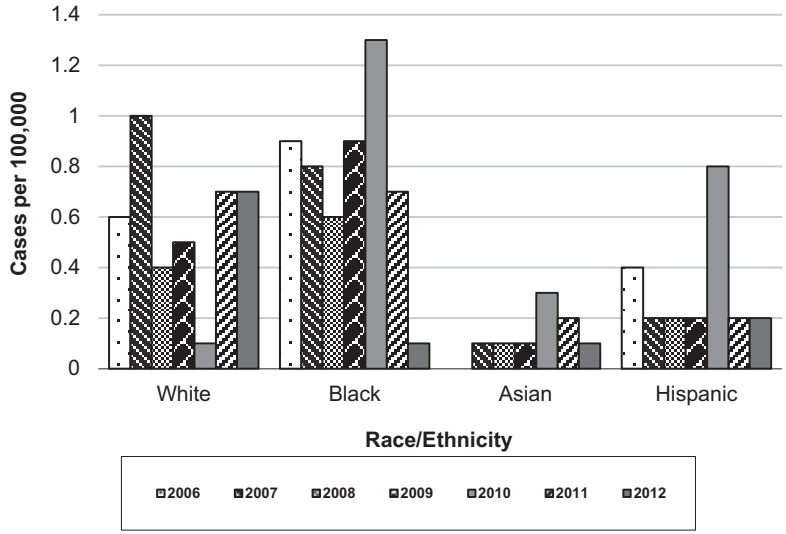


Figure 6. Cryptosporidiosis Incidence by Race/Ethnicity LAC, 2006 - 2012, N=44



CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases[a]	51
Annual Incidence	
LA County	0.52
California[b]	0.89
United States[b]	2.99
Age at Diagnosis	
Mean	36
Median	36
Range	2-87 years

[a]Cases per 100,000 population.
[b]Calculated from Final 2011 Reports of Nationally Notifiable Infectious Disease. MMWR 61(32);625-637.

DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium spp.* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and ingestion of contaminated recreational or untreated water. The usual incubation period is 2 to 10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Proper hand hygiene before meals and after using the restroom is a major way to prevent infection and transmission of cryptosporidiosis. It is also important for individuals who come in contact with diapered/incontinent children and adults to ensure they are properly washing their hands. Persons with diarrhea should not go swimming in order to prevent transmission to others. Persons should avoid drinking untreated water that may be contaminated. Lastly, it is important to avoid fecal exposure during sexual activity.

2011 TRENDS AND HIGHLIGHTS

- The incidence of cryptosporidiosis cases in Los Angeles County (LAC) decreased slightly from 0.62 to 0.52 cases per 1000,00 in 2010 and 2011, respectively (Figure 1). This is consistent with years previous to 2010.
- The 35 to 44 and 65+ year old age groups had the highest incidence rates for cryptosporidiosis, 0.7 cases per 100,000 (Figure 2). The 35-44 age group has consistently had the highest incidence rate in previous reporting periods. The 15-34 year age group had the largest proportion of cases reported. This is similar to previous years.
- Whites (20, 39%) accounted for the largest proportion of cases in 2011. A large percentage (22%) of cases had unknown race/ethnicity data (Figure 3). Blacks and whites had the highest incidence rate of all the race/ethnicity groups, reporting 0.7 cases per 100,000.
- Service Planning Area (SPA) 2 (15, 29%) reported the largest proportion of cases in 2011. SPA 1 had the highest incidence rate, with 1.6 cases per 100,000; this differs from previous reporting periods where SPA 4 and 5 have had the highest incidence rates (Figure 4).
- In 2011, the number of cases reported peaked in August, consistent with previous years (Figure 5).
- The male to female ratio for 2011 was approximately 2:1. Males have consistently comprised the larger proportion of cases.
- Complete risk factor data were available for 100% of cases. The most frequently reported risk factor was contact with animals (30, 59%), the majority of which was contact with dogs at home. Other reported risk factors were HIV positive status (13, 25%), especially among MSM (12,24%).

Reported Cryptosporidiosis Cases and Rates* per 100,000 by Age Group, Race/Ethnicity, and SPA
Los Angeles County, 2007 - 2011

	2007 (N=50)			2008 (N=41)			2009 (N=51)			2010 (N=61)			2011 (N=51)		
	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000
Age Group															
<1	0	0.0	0.0	0	0.0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
1-4	2	4.0	0.3	2	4.9	0.4	4	7.8	0.7	2	3.3	0.3	3	5.8	0.5
5-14	4	8.0	0.3	7	17.1	0.5	4	7.8	0.3	5	8.2	0.4	6	11.7	0.5
15-34	15	30.0	0.5	10	24.4	0.3	16	31.4	0.6	15	24.6	0.5	16	31.3	0.5
35-44	13	26.0	0.9	15	36.6	1.0	13	25.5	0.9	14	23	1.0	10	19.6	0.7
45-54	10	20.0	0.8	4	9.8	0.3	4	7.8	0.3	13	21.3	1.0	6	11.7	0.4
55-64	1	2.0	0.1	1	2.4	0.1	6	11.8	0.6	5	8.2	0.5	3	5.8	0.3
65+	5	10.0	0.5	2	4.9	0.2	4	7.8	0.4	7	11.5	0.7	7	13.7	0.7
Unknown	0	0.0		0	0.0		0	0.0		0			0		
Race/Ethnicity															
Asian	1	2.0	0.1	1	2.4	0.1	1	2.0	0.1	2	3.3	0.1	3	5.8	0.2
Black	7	14.0	0.8	5	12.2	0.6	8	15.7	0.9	11	18.0	1.3	6	11.7	0.7
Hispanic	8	16.0	0.2	10	24.4	0.2	10	9.6	0.2	13	21.3	0.3	11	21.5	0.2
White	29	58.0	1.0	12	29.3	0.4	16	31.4	0.5	22	36.1	0.8	20	39.2	0.7
Other	2	4.0	9.6	2	4.9	8.1	1	2.0		0	0.0	0.0	0	0.0	0.0
Unknown	3	6.0		11	26.8		15	29.4		13	21.3		11	21.5	
SPA															
1	3	6.0	0.8	2	4.9	0.5	5	9.8	1.4	3	4.9	0.8	6	11.7	1.6
2	19	38.0	0.9	14	34.1	0.6	12	23.5	0.5	16	26.2	0.7	15	29.4	0.7
3	3	6.0	0.2	0	0.0	0.0	5	9.8	0.3	9	14.8	0.5	4	7.8	0.2
4	7	14.0	0.6	12	29.3	0.9	11	21.6	0.9	10	16.4	0.8	8	15.7	0.6
5	7	14.0	1.1	5	12.2	0.8	4	7.8	0.6	5	8.2	0.8	5	9.8	0.8
6	1	2.0	0.1	1	2.4	0.1	5	9.8	0.5	10	16.4	0.9	4	7.8	0.4
7	3	6.0	0.2	3	7.3	0.2	3	5.9	0.2	1	1.6	0.1	1	2.0	0.4
8	7	14.0	0.6	4	9.8	0.4	4	7.8	0.4	4	6.6	0.4	1	2.0	1.9
Unknown	0	0.0		0	0.0					0	0.0		7	13.7	

*Rates calculated based on less than 19 cases or events are considered unreliable.

Figure 1. Incidence Rates of Cryptosporidiosis US, CA and LAC, 2002 - 2011

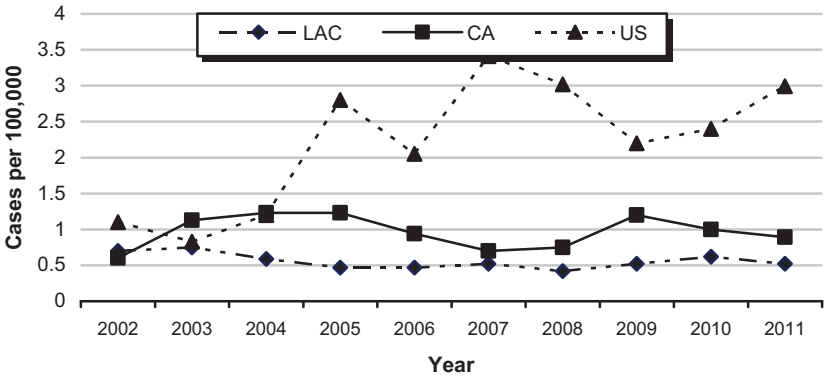


Figure 2. Incidence Rates of Cryptosporidiosis by Age Group, LAC, 2011

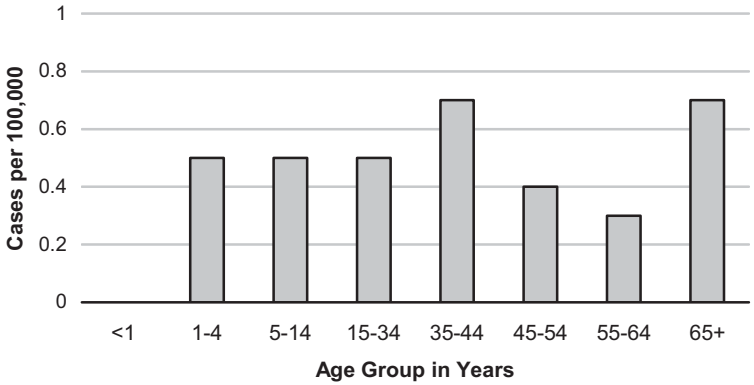
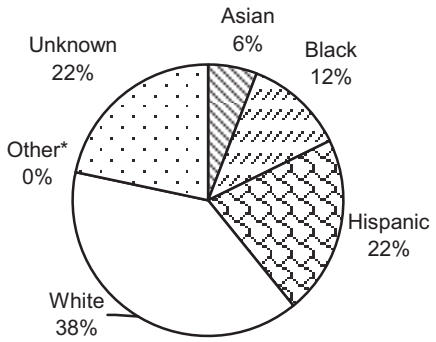


Figure 3. Proportion of Cryptosporidiosis by Race/Ethnicity LAC, 2011



* Other includes Native American and any additional racial/ethnic group that cannot be categorized as Asian, black, Hispanic, and white.

Figure 4. Incidence Rates of Cryptosporidiosis by SPA LAC, 2011

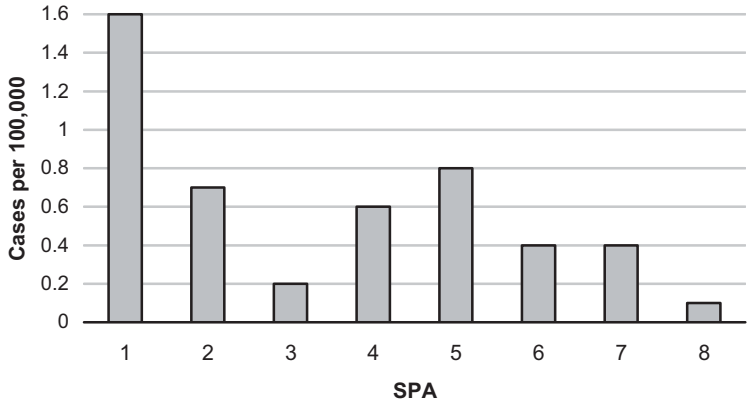


Figure 5. Reported Cryptosporidiosis Cases by Month of Onset LAC, 2011

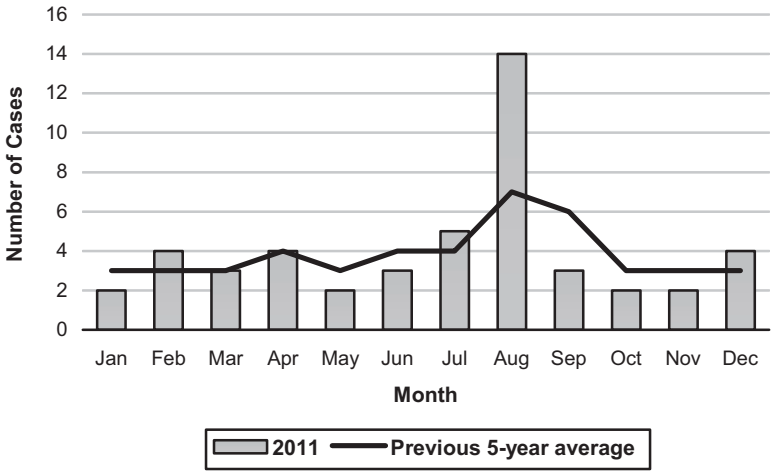
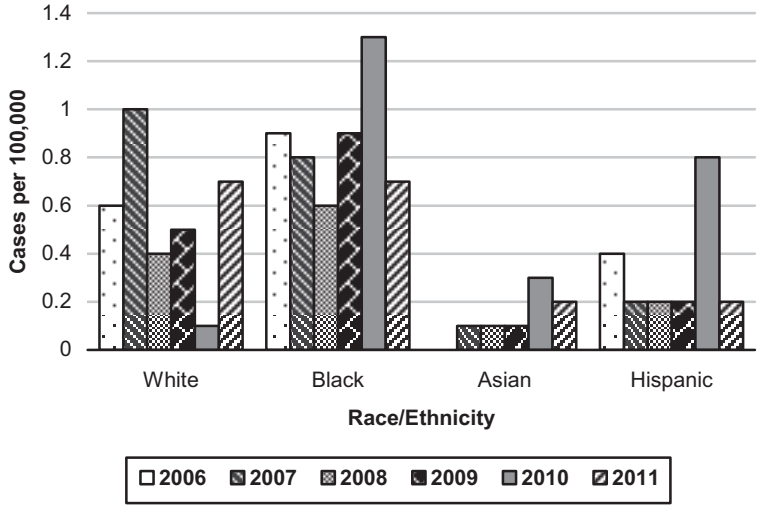
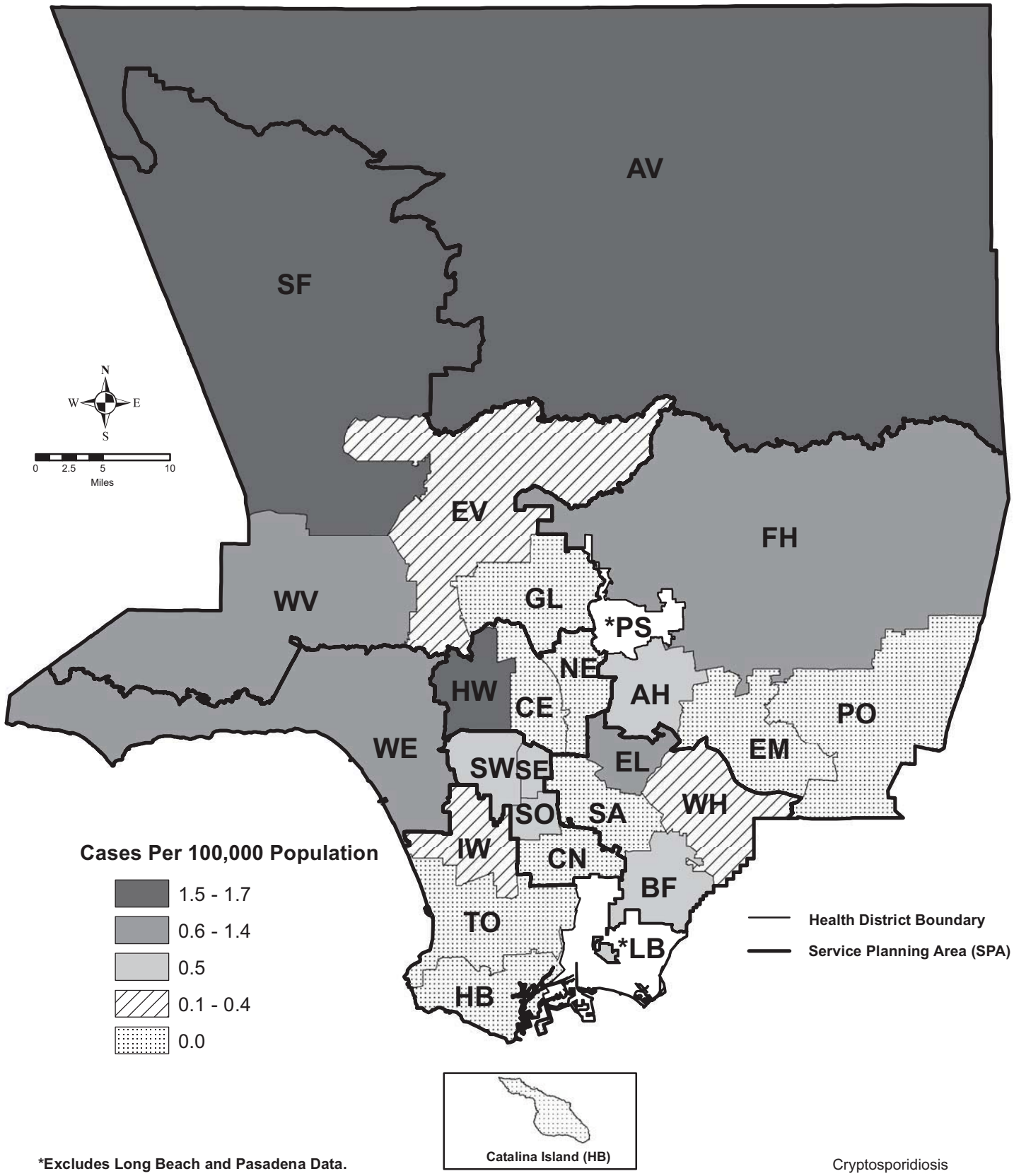


Figure 6. Cryptosporidiosis Incidence by Race/Ethnicity LAC, 2006 - 2011



Map 4. Cryptosporidiosis
Rates by Health District, Los Angeles County, 2011*



*Excludes Long Beach and Pasadena Data.

Reported Cryptosporidiosis Cases and Rates* per 100,000 by Age Group, Race/Ethnicity, and SPA
Los Angeles County, 2006-2010

	2006 (N=48)			2007 (N=50)			2008 (N=41)			2009 (N=51)			2010 (N=61)		
	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000
Age Group															
<1	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0	0.0	0	0	0.0
1-4	1	2.1	0.2	2	4.0	0.3	2	4.9	0.4	4	7.8	0.7	2	3.3	0.3
5-14	4	8.3	0.3	4	8.0	0.3	7	17.1	0.5	4	7.8	0.3	5	8.2	0.4
15-34	7	14.6	0.3	15	30.0	0.5	10	24.4	0.3	16	31.4	0.6	15	24.6	0.5
35-44	22	45.8	1.5	13	26.0	0.9	15	36.6	1.0	13	25.5	0.9	14	23	1.0
45-54	5	10.4	0.4	10	20.0	0.8	4	9.8	0.3	4	7.8	0.3	13	21.3	1.0
55-64	6	12.5	0.7	1	2.0	0.1	1	2.4	0.1	6	11.8	0.6	5	8.2	0.5
65+	3	6.3	0.3	5	10.0	0.5	2	4.9	0.2	4	7.8	0.4	7	11.5	0.7
Unknown	0	0.0		0	0.0		0	0.0		0	0.0		0		
Race/Ethnicity															
Asian	0	0.0	0.0	1	2.0	0.1	1	2.4	0.1	1	2.0	0.1	2	3.3	0.1
Black	8	16.7	0.9	7	14.0	0.8	5	12.2	0.6	8	15.7	0.9	11	18.0	1.3
Hispanic	20	41.7	0.4	8	16.0	0.2	10	24.4	0.2	10	9.6	0.2	13	21.3	0.3
White	16	33.3	0.6	29	58.0	1.0	12	29.3	0.4	16	31.4	0.5	22	36.1	0.8
Other	2	4.2	7.0	2	4.0	9.6	2	4.9	8.1	1	2.0		0	0.0	0.0
Unknown	2	4.2		3	6.0		11	26.8		15	29.4		13	21.3	
SPA															
1	4	8.3	1.2	3	6.0	0.8	2	4.9	0.5	5	9.8	1.4	3	4.9	0.8
2	13	27.1	0.6	19	38.0	0.9	14	34.1	0.6	12	23.5	0.5	16	26.2	0.7
3	3	6.3	0.2	3	6.0	0.2	0	0.0	0.0	5	9.8	0.3	9	14.8	0.5
4	13	27.1	1.0	7	14.0	0.6	12	29.3	0.9	11	21.6	0.9	10	16.4	0.8
5	2	4.2	0.3	7	14.0	1.1	5	12.2	0.8	4	7.8	0.6	5	8.2	0.8
6	3	6.3	0.3	1	2.0	0.1	1	2.4	0.1	5	9.8	0.5	10	16.4	0.9
7	8	16.7	0.6	3	6.0	0.2	3	7.3	0.2	3	5.9	0.2	1	1.6	0.1
8	1	2.1	0.1	7	14.0	0.6	4	9.8	0.4	4	7.8	0.4	4	6.6	0.4
Unknown	1	2.1		0	0.0		0	0.0					0	0.0	

*Rates calculated based on less than 19 cases or events are considered unreliable.

Figure 1. Incidence Rates of Cryptosporidiosis US, CA and LAC, 2000-2010

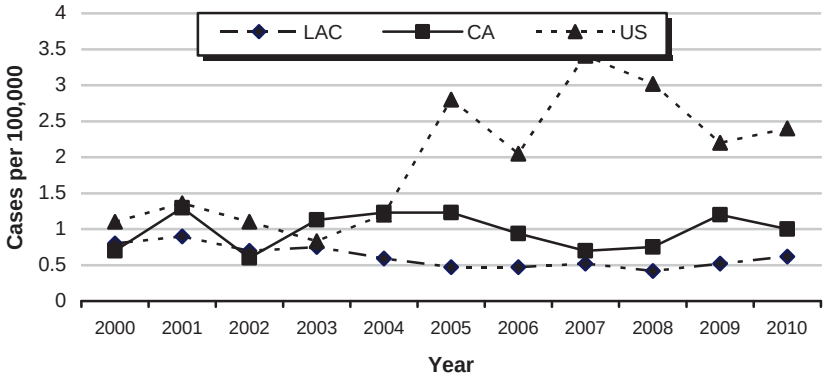


Figure 2. Incidence Rates of Cryptosporidiosis by Age Group, LAC, 2010

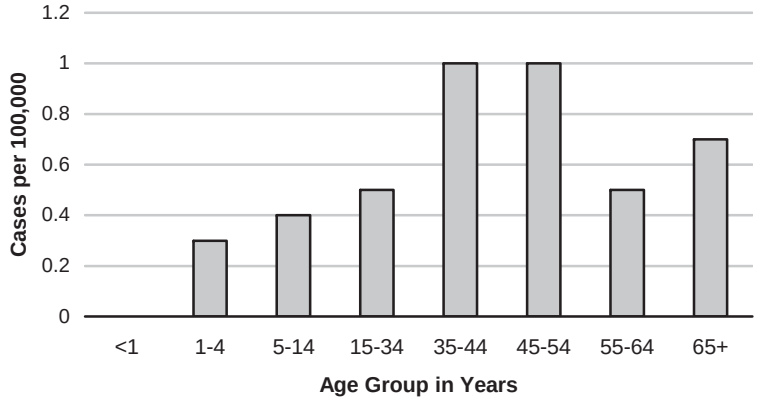
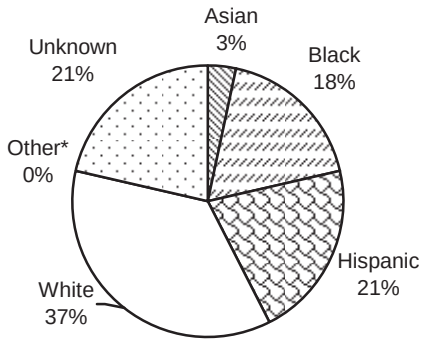


Figure 3. Percent Cases of Cryptosporidiosis by Race/Ethnicity LAC, 2010



* Other includes Native American and any additional racial/ethnic group that cannot be categorized as Asian, black, Hispanic, and white.

Figure 4. Incidence Rates of Cryptosporidiosis by SPA LAC, 2010

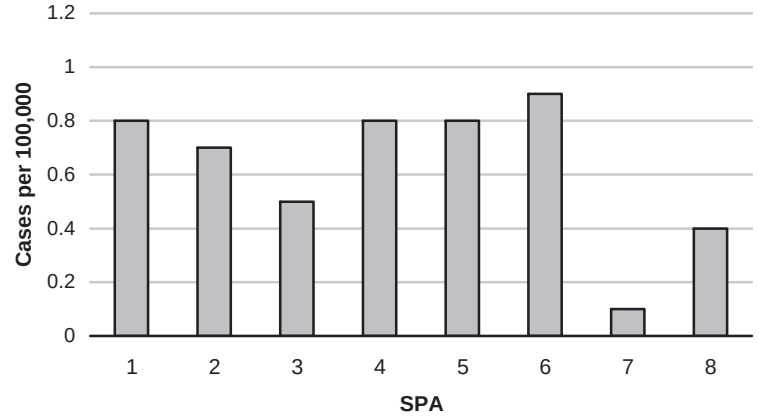


Figure 5. Reported Cryptosporidiosis Cases by Month of Onset LAC, 2010

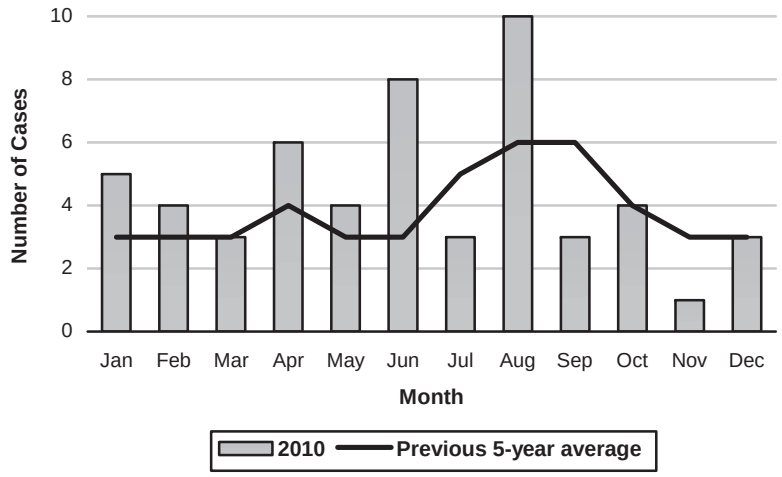
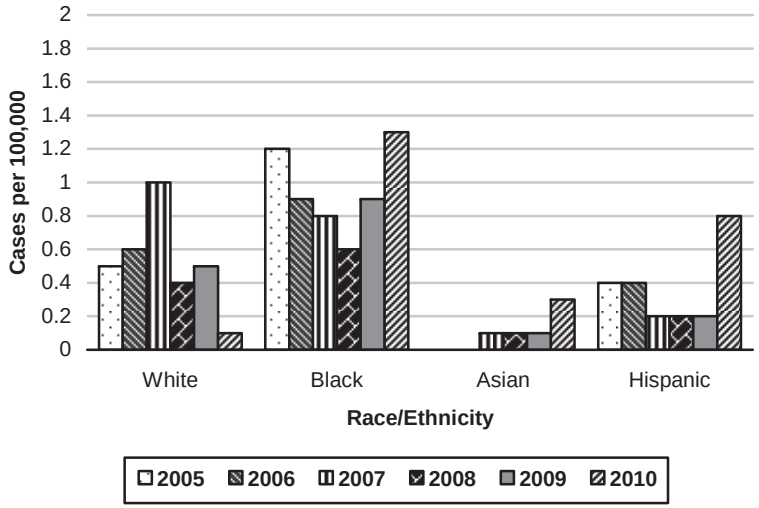


Figure 6. Cryptosporidiosis Incidence by Race/Ethnicity LAC, 2005-2010



CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases[a]	51
Annual Incidence	
LA County	0.52
California[b]	0.75
United States[b]	3.02
Age at Diagnosis	
Mean	37
Median	37
Range	1-94 years

[a]Cases per 100,000 population.
[b]Calculated from Final 2008 Reports of Nationally Notifiable Infectious Disease. MMWR 58(31);856-857;859-869.

DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium spp.* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and ingestion of contaminated recreational or untreated water. The usual incubation period is two to ten days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to two weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Proper hand hygiene before meals and after using the restroom is a major way to prevent infection and transmission of cryptosporidiosis. It is also important for individuals who come in contact with diapered/incontinent children and adults to ensure they are properly washing their hands. Persons with diarrhea should not go swimming in order to prevent transmission to others. Persons should avoid drinking untreated water that may be contaminated. Lastly, it is important to avoid fecal exposure during sexual activity.

2009 TRENDS AND HIGHLIGHTS

- The incidence of cryptosporidiosis cases increased slightly from 0.4 cases per 100,000 in 2008 to 0.5 cases per 100,000 in 2009 (Figure 1).
- The 35 to 44 year old age group had the highest incidence rate of cryptosporidiosis, 0.9 cases per 100,000 (Figure 2). The 15 to 34 year age group had the largest proportion of cases reported (n=16, 31%).
- Blacks had the highest incidence rate among the race/ethnicity groups, 0.9 cases per 100,000. Whites (n=16, 31%) accounted for the greatest proportion of reported cases (Figure 3).
- Service Planning Area (SPA) 1 had the highest incidence rate (1.4 cases per 100,000) of any of the SPAs. SPA 2 and 4 reported the largest proportion of cases (Figure 4).
- The number of cases reported peaked in April and again in September and October. Previous years have shown the number of cases peaks in late summer (Figure 5).
- The male to female ratio for 2009 was 2:1, consistent with previous years.
- The most frequently reported risk factor was contact with animals (n=23, 45%) with mostly dogs at home, followed by HIV positive status (n=14, 27%), especially among MSM (n=9, 64%).

Reported Cryptosporidiosis Cases and Rates* per 100,000 by Age Group, Race/Ethnicity, and SPA
Los Angeles County, 2005-2009

	2005 (N=45)			2006 (N=48)			2007 (N=50)			2008 (N=41)			2009 (N=51)		
	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000
Age Group															
<1	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0	0.0
1-4	1	2.2	0.2	1	2.1	0.2	2	4.0	0.3	2	4.9	0.4	4	7.8	0.7
5-14	1	2.2	0.1	4	8.3	0.3	4	8.0	0.3	7	17.1	0.5	4	7.8	0.3
15-34	10	22.2	0.4	7	14.6	0.3	15	30.0	0.5	10	24.4	0.3	16	31.4	0.6
35-44	20	44.4	1.3	22	45.8	1.5	13	26.0	0.9	15	36.6	1.0	13	25.5	0.9
45-54	7	15.6	0.6	5	10.4	0.4	10	20.0	0.8	4	9.8	0.3	4	7.8	0.3
55-64	4	8.9	0.5	6	12.5	0.7	1	2.0	0.1	1	2.4	0.1	6	11.8	0.6
65+	2	4.4	0.2	3	6.3	0.3	5	10.0	0.5	2	4.9	0.2	4	7.8	0.4
Unknown	0	0.0		0	0.0		0	0.0		0	0.0		0	0.0	
Race/Ethnicity															
Asian	0	0.0	0.0	0	0.0	0.0	1	2.0	0.1	1	2.4	0.1	1	2.0	0.1
Black	10	22.2	1.2	8	16.7	0.9	7	14.0	0.8	5	12.2	0.6	8	15.7	0.9
Hispanic	16	35.6	0.4	20	41.7	0.4	8	16.0	0.2	10	24.4	0.2	10	9.6	0.2
White	15	33.3	0.5	16	33.3	0.6	29	58.0	1.0	12	29.3	0.4	16	31.4	0.5
Other	0	0.0	0.0	2	4.2	7.0	2	4.0	9.6	2	4.9	8.1	1	2.0	
Unknown	4	8.9		2	4.2		3	6.0		11	26.8		15	29.4	
SPA															
1	0	0.0	0.0	4	8.3	1.2	3	6.0	0.8	2	4.9	0.5	5	9.8	1.4
2	10	22.2	0.5	13	27.1	0.6	19	38.0	0.9	14	34.1	0.6	12	23.5	0.5
3	4	8.9	0.2	3	6.3	0.2	3	6.0	0.2	0	0.0	0.0	5	9.8	0.3
4	18	40.0	1.4	13	27.1	1.0	7	14.0	0.6	12	29.3	0.9	11	21.6	0.9
5	3	6.7	0.5	2	4.2	0.3	7	14.0	1.1	5	12.2	0.8	4	7.8	0.6
6	4	8.9	0.4	3	6.3	0.3	1	2.0	0.1	1	2.4	0.1	5	9.8	0.5
7	4	8.9	0.3	8	16.7	0.6	3	6.0	0.2	3	7.3	0.2	3	5.9	0.2
8	2	4.4	0.2	1	2.1	0.1	7	14.0	0.6	4	9.8	0.4	4	7.8	0.4
Unknown	0	0.0		1	2.1		0	0.0		0	0.0				

*Rates calculated based on less than 19 cases or events are considered unreliable.

Figure 1. Incidence Rates of Cryptosporidiosis US, CA and LAC, 1999-2009

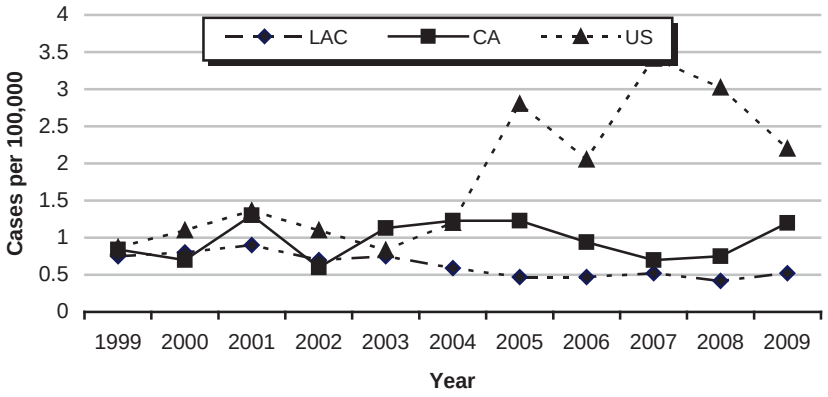


Figure 2. Incidence Rates of Cryptosporidiosis by Age Group, LAC, 2009 (N=51)

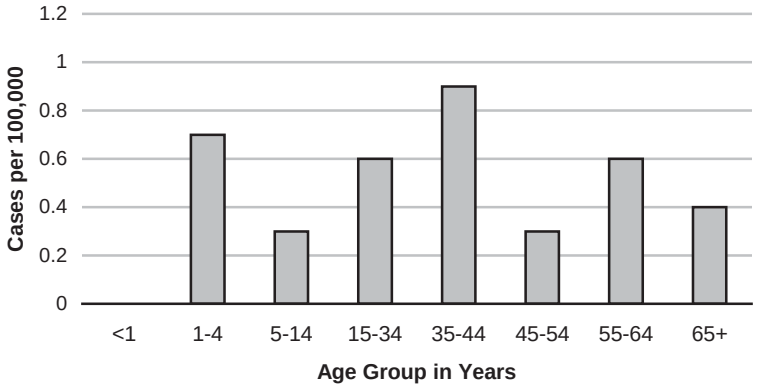
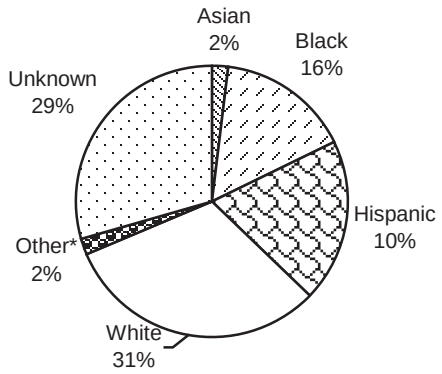


Figure 3. Percent Cases of Cryptosporidiosis by Race/Ethnicity LAC, 2009 (N=51)



* Other includes Native American and any additional racial/ethnic group that cannot be categorized as Asian, black, Hispanic, and white.

Figure 4. Incidence Rates of Cryptosporidiosis by SPA LAC, 2009 (N=51)

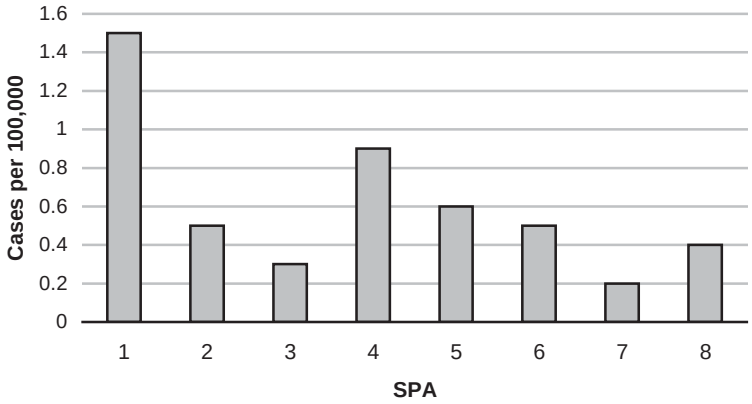


Figure 5. Reported Cryptosporidiosis Cases by Month of Onset LAC, 2009 (N=51)

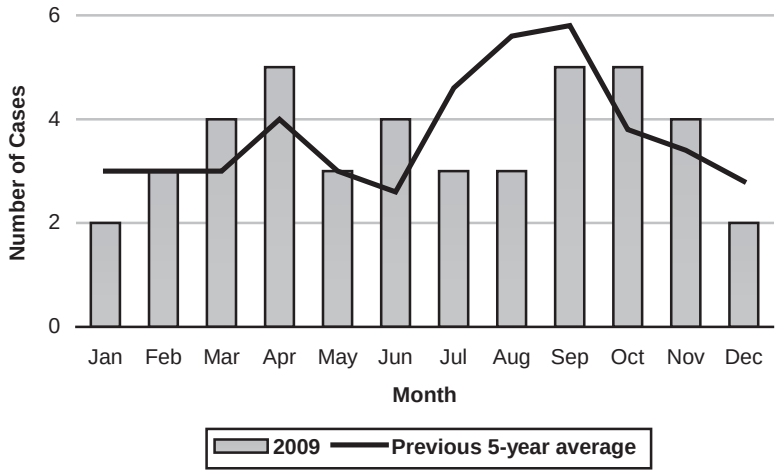
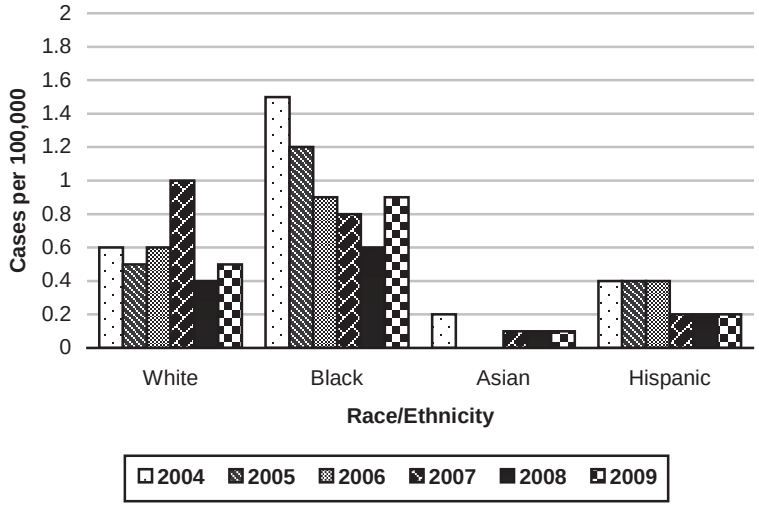


Figure 6. Cryptosporidiosis Incidence by Race/Ethnicity LAC, 2004-2009



CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases[a]	41
Annual Incidence	
LA County	0.42
California[b]	0.75
United States[b]	3.02
Age at Diagnosis	
Mean	32
Median	36
Range	3-78 years

[a]Cases per 100,000 population.
[b]Calculated from Final 2008 Reports of Nationally Notifiable Infectious Disease. MMWR 58(31);856-857;859-869.

DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium spp.* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and ingestion of contaminated recreational or untreated water. The usual incubation period is 2 to 10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Proper hand hygiene before meals and after using the restroom is a major way to prevent infection and transmission of cryptosporidiosis. It is also important for individuals who come in contact with diapered/incontinent children and adults to ensure they are properly washing their hands. Persons with diarrhea should not go swimming in order to prevent transmission to others. Persons should avoid drinking untreated water that may be contaminated. Lastly, it is important to avoid fecal exposure during sexual activity.

2008 TRENDS AND HIGHLIGHTS

- The incidence of cryptosporidiosis cases in Los Angeles County (LAC) decreased slightly in 2008 to 0.4 from 0.5 in 2007 (Figure 1).
- The age group with the highest incidence of cryptosporidiosis in LAC was the 35 to 44 year old age group, which had an incidence rate of 1 case per 100,000 (Figure 2). This age group has consistently had the highest incidence rate in previous reporting periods. The group with the second highest incidence rate was the 5 to 14 year age group, differing from previous years where the second highest incidence is reported in the 45 to 54 age group.
- Whites (12, 29%) accounted for a larger proportion of cases in 2008 than Hispanic cases (10, 24%). A great percentage (26%) of cases had unknown race/ethnicity data (Figure 3). The incidence rate for all race/ethnicity groups decreased in 2008 compared to 2007.
- Service Planning Area (SPA) 4 had the highest incidence rate, with 0.9 cases per 100,000; SPA 5 had the second highest incidence rate with 0.8 cases per 100,000. This differs from 2007 in which SPA 5 and SPA 2 had the highest incidence rates (Figure 4).
- In 2008, July was the month with the highest number of cases reported, although the previous five year average peak was in August (Figure 5).
- The male (28) to female (11) ratio for 2008 was 2.5:1; this is smaller than the 3.2:1 ratio in 2007.
- Complete risk factor data were available for 38 cases. The most frequently reported risk factor was contact with animals (13, 34%) the majority of which was contact with dogs at home. Other reported risk factors were HIV positive status (12, 32%), and travel (11, 29%).

Reported Cryptosporidiosis Cases and Rates* per 100,000 by Age Group, Race/Ethnicity, and SPA
Los Angeles County, 2004-2008

	2004 (N=56)			2005 (N=45)			2006 (N=48)			2007 (N=50)			2008 (N=41)		
	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000	No.	(%)	Rate/ 100,000
Age Group															
<1	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
1-4	4	7.1	0.7	1	2.2	0.2	1	2.1	0.2	2	4.0	0.3	2	4.9	0.4
5-14	6	10.7	0.4	1	2.2	0.1	4	8.3	0.3	4	8.0	0.3	7	17.1	0.5
15-34	12	21.4	0.4	10	22.2	0.4	7	14.6	0.3	15	30.0	0.5	10	24.4	0.3
35-44	18	32.1	1.2	20	44.4	1.3	22	45.8	1.5	13	26.0	0.9	15	36.6	1.0
45-54	10	17.9	0.8	7	15.6	0.6	5	10.4	0.4	10	20.0	0.8	4	9.8	0.3
55-64	6	10.7	0.8	4	8.9	0.5	6	12.5	0.7	1	2.0	0.1	1	2.4	0.1
65+	0	0.0	0.0	2	4.4	0.2	3	6.3	0.3	5	10.0	0.5	2	4.9	0.2
Unknown	0	0.0		0	0.0		0	0.0		0	0.0		0	0.0	
Race/Ethnicity															
Asian	2	3.6	0.2	0	0.0	0.0	0	0.0	0.0	1	2.0	0.1	1	2.4	0.1
Black	13	23.2	1.5	10	22.2	1.2	8	16.7	0.9	7	14.0	0.8	5	12.2	0.6
Hispanic	20	35.7	0.4	16	35.6	0.4	20	41.7	0.4	8	16.0	0.2	10	24.4	0.2
White	17	30.4	0.6	15	33.3	0.5	16	33.3	0.6	29	58.0	1.0	12	29.3	0.4
Other	0	0.0	0.0	0	0.0	0.0	2	4.2	7.0	2	4.0	9.6	2	4.9	8.1
Unknown	4	7.1		4	8.9		2	4.2		3	6.0		11	26.8	
SPA															
1	5	8.9	1.5	0	0.0	0.0	4	8.3	1.2	3	6.0	0.8	2	4.9	0.5
2	9	16.1	0.4	10	22.2	0.5	13	27.1	0.6	19	38.0	0.9	14	34.1	0.6
3	5	8.9	0.3	4	8.9	0.2	3	6.3	0.2	3	6.0	0.2	0	0.0	0.0
4	20	35.7	1.6	18	40.0	1.4	13	27.1	1.0	7	14.0	0.6	12	29.3	0.9
5	4	7.1	0.6	3	6.7	0.5	2	4.2	0.3	7	14.0	1.1	5	12.2	0.8
6	5	8.9	0.5	4	8.9	0.4	3	6.3	0.3	1	2.0	0.1	1	2.4	0.1
7	4	7.1	0.3	4	8.9	0.3	8	16.7	0.6	3	6.0	0.2	3	7.3	0.2
8	4	7.1	0.4	2	4.4	0.2	1	2.1	0.1	7	14.0	0.6	4	9.8	0.4
Unknown	0	0.0		0	0.0		1	2.1		0	0.0		0	0.0	

*Rates calculated based on less than 19 cases or events are considered unreliable.

Figure 1. Incidence Rates of Cryptosporidiosis US, CA and LAC, 1999-2008

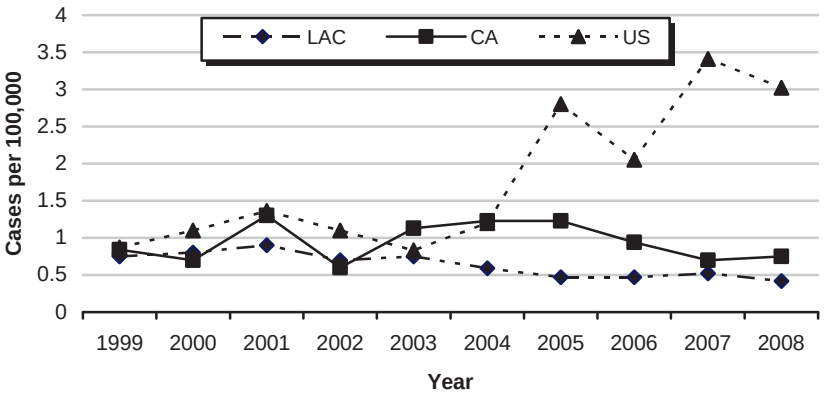


Figure 2. Incidence Rates of Cryptosporidiosis by Age Group, LAC, 2008

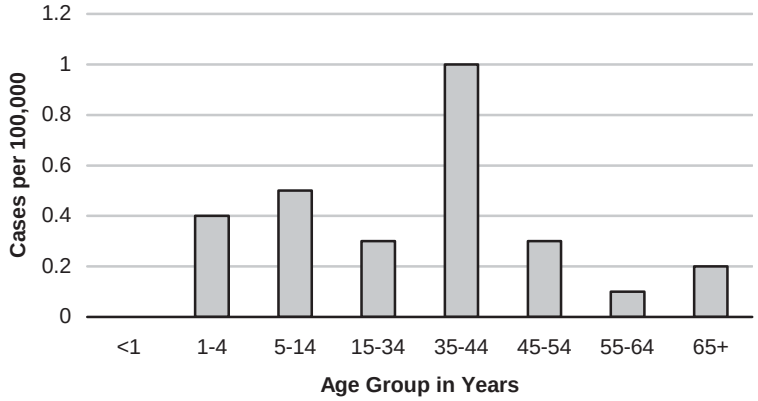
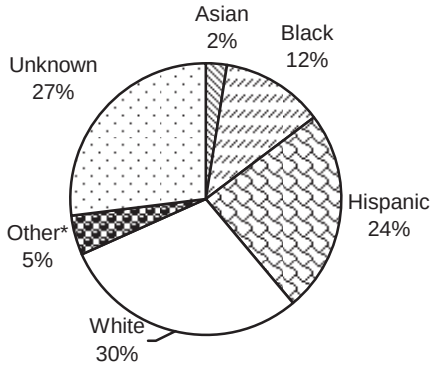


Figure 3. Percent Cases of Cryptosporidiosis by Race/Ethnicity LAC, 2008



* Other includes Native American and any additional racial/ethnic group that cannot be categorized as Asian, black, Hispanic, and white.

Figure 4. Incidence Rates of Cryptosporidiosis by SPA LAC, 2008

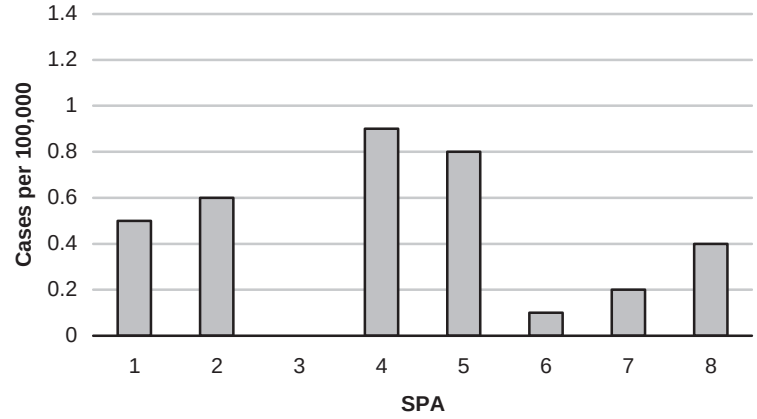


Figure 5. Reported Cryptosporidiosis Cases by Month of Onset LAC, 2008

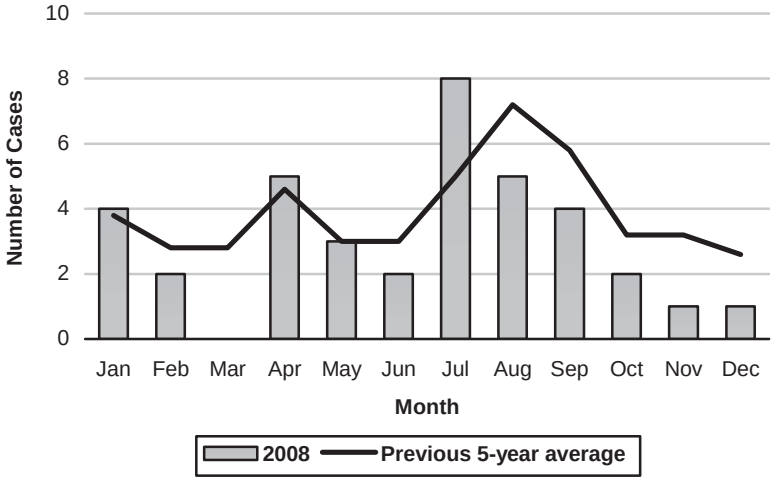
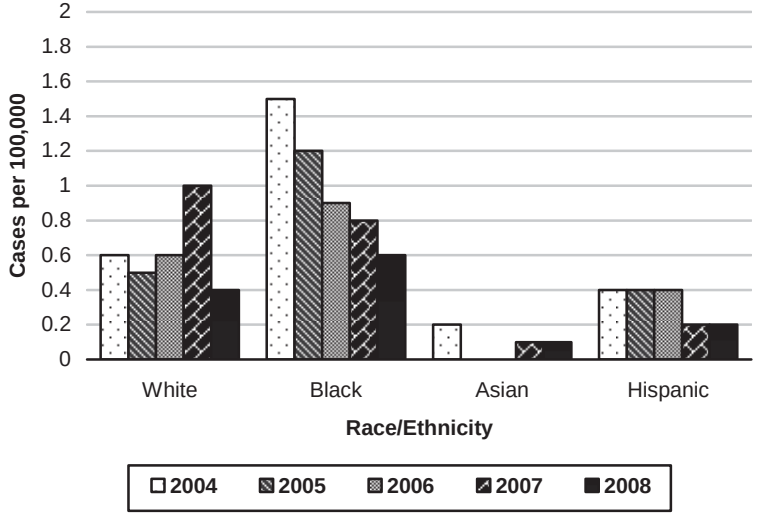


Figure 6. Cryptosporidiosis Incidence by Race/Ethnicity LAC, 2004-2008



CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	50
Annual Incidence[a]	
LA County	0.52
California	0.70[b]
United States	3.41[b]
Age at Diagnosis	
Mean	37
Median	40
Range	1-82

[a] Cases per 100,000 population.

[b] Calculated from Final 2007 Reports of Nationally Notifiable Infectious Diseases issues of MMWR (57: 901, 903-913).

Figure 1
Cryptosporidiosis
Incidence Rates by Year of Onset
LAC, 1997–2007

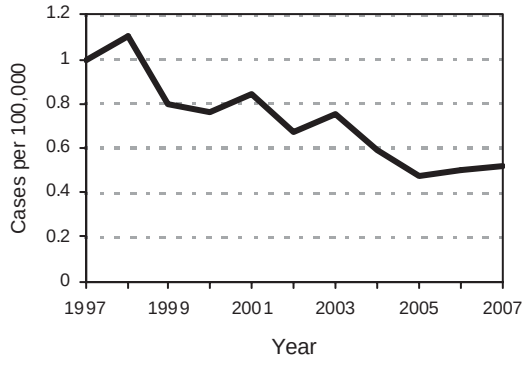
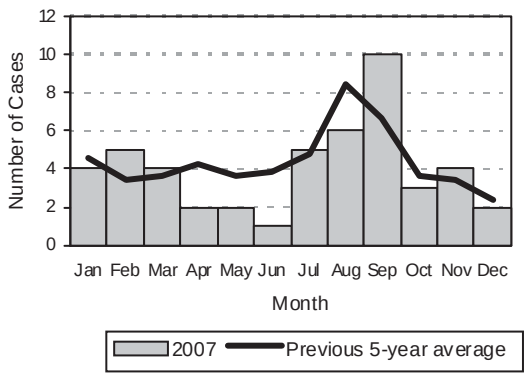


Figure 2
Cryptosporidiosis
Cases by Month of Onset
LAC, 2007 (N=50)



DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium spp.* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and ingestion of contaminated recreational or untreated water. The usual incubation period is 2–10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

DISEASE ABSTRACT

- The incidence rate for cryptosporidiosis increased only slightly from 0.50 per 100,000 in 2006 to 0.52 per 100,000 in 2007. The incidence of this disease has remained relatively stable since 2004. The last outbreak of this disease occurred in 1988.

- HIV infection and AIDS are the most common identified risk factors for cryptosporidiosis. Cryptosporidiosis has been an AIDS-defining disease since 1983. The number of reported cases has decreased since the advent of highly active antiretroviral therapy.

STRATIFIED DATA

Trends: The rate of cryptosporidiosis (0.52 cases per 100,000) increased slightly in 2007 (Figure 1).

Seasonality: In 2007, there was a peak of cases reported in September, although the previous 5-year average peak was in August (Figure 2).

Age: The 35-44 age group had the highest incidence rate followed by the 45-54 age group (Figure 3).

Sex: The male-to-female ratio was 3.2:1 (12 females). This marks a noticeable decrease in the number of female cases from 2006 (n=18).

Race/Ethnicity: Whites had the highest incidence rate (Figure 4), followed by blacks. Race was unknown for 3 cases (6%). There was one case among Asians in 2007.

Location: Location information was available for all 50 cases. SPA 5 (West) had the highest incidence rate, 1.1 per 100,000, followed by SPA 2 (San Fernando), which had 0.9 per 100,000.

Risk Factors: Complete risk factor data was not available for all cases; 4 cases (9%) were either unable to be located or refused to be interviewed (Figure 5). Contact with animals was a reported risk factor in 46% of the cases. HIV infection/AIDS (33%) and outdoor activity (31%) were the other most common risk factors. Many cases had more than one risk factor.

Figure 3
Cryptosporidiosis
Incidence Rates by Age Group
LAC, 2007

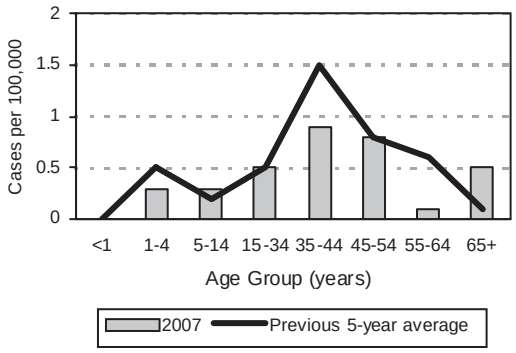
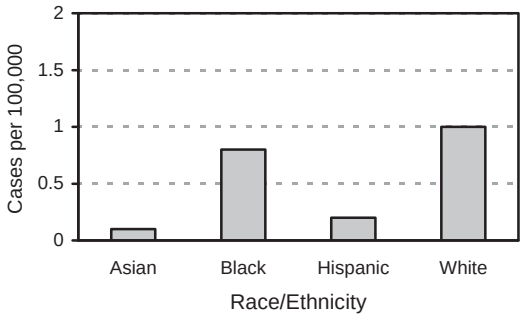


Figure 4
Cryptosporidiosis
Incidence Rate by Race/Ethnicity
LAC, 2007



COMMENTS

Risk factors were self-reported and were not proven to be the actual source of infection. 86% (n=12) of HIV-positive cryptosporidiosis cases were among males, 50% of whom were white (n=6), compared to 2006 where 50% of HIV-positive cases were Hispanic (n=11). However, these changes are not statistically significant due to the small number of cases.

Cryptosporidiosis can become a chronic infection among immunocompromised patients and cases are often reported multiple times; however, within this report, cases are counted only once.

Nationally, there has been a substantial increase in the number of reported non-outbreak-related cryptosporidiosis cases with an increase of 66% in 2007 compared with 2006. In addition, there has been an increase in reported cryptosporidiosis outbreaks in the US (CDC, 2008). In LAC, however, a similar trend has not been observed. There has not been an outbreak of cryptosporidiosis in LAC since 1988, which involved contaminated swimming pool water (Sorvillo, et al., 1992).

PREVENTION

Proper hand hygiene before meals and after using the restroom is a major way to prevent infection and transmission of cryptosporidiosis. It is also important for individuals who come in contact with

diapered/incontinent children and adults to ensure they are properly washing their hands. Persons with diarrhea should not go swimming in order to prevent transmission to others. Persons should avoid drinking untreated water that may be contaminated. Lastly, it is important to avoid fecal exposure during sexual activity.

REFERENCES

Centers for Disease Control and Prevention (CDC). Crypto alert for aquatics staff: increasing reports of crypto cases and outbreaks. Retrieved from the CDC Web site: http://www.cdc.gov/healthyswimming/pdf/Crypto_Alert_for_Aquatic_Staff.pdf

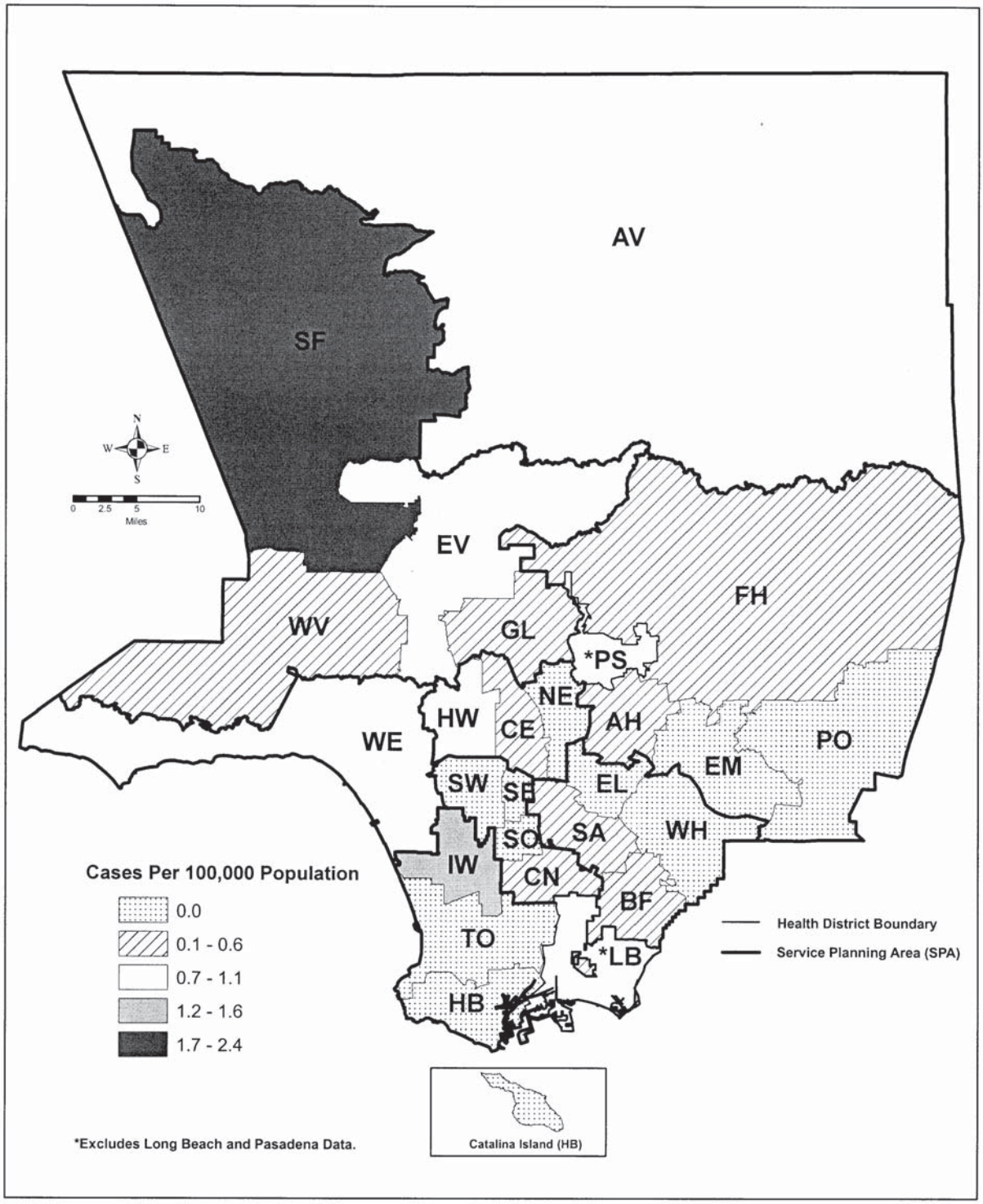
Sorvillo, F.J., Fujioka, K., Nahlen, B., Tormey, M.P., Kebabjian, R. & Mascola, L. (1992). Swimming-associated cryptosporidiosis. *American Journal of Public Health*, 82(5), 742-744.

ADDITIONAL RESOURCES

General disease information is available from the CDC at:
http://www.cdc.gov/ncidod/dpd/parasites/cryptosporidiosis/default.htm

General information and reporting information about this and other waterborne diseases in LAC is available at: http://www.lapublichealth.org/acd/Water.htm

Map 4. Cryptosporidiosis
Rates by Health District, Los Angeles County, 2007*



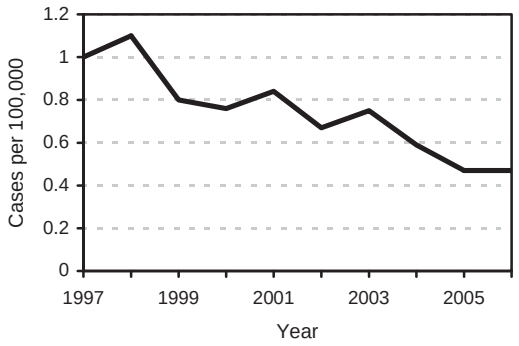
CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	48
Annual Incidence[a]	
LA County	0.47
California	0.94[b]
United States	2.05[b]
Age at Diagnosis	
Mean	40
Median	39
Range	3-89

[a] Cases per 100,000 population.

[b] Calculated from 2007 Summary of notifiable diseases issue of MMWR (56:853-863).

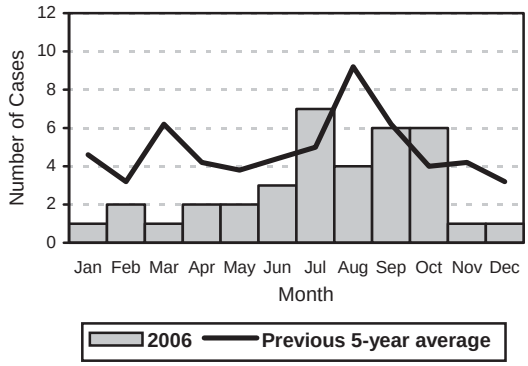
Figure 1
Cryptosporidiosis
Incidence Rates by Year of Onset
LAC, 1997–2006



DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium parvum* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and by swallowing contaminated recreational or untreated water. The usual incubation period is 2–10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Figure 2
Cryptosporidiosis
Cases by Month of Onset
LAC, 2006 (N=48)



DISEASE ABSTRACT

- The incidence rate for this disease decreased from 0.59 per 100,000 in 2004 to 0.47 per 100,000 in 2006. The incidence of this disease has remained the same for 2005 and 2006 and is the lowest incidence rate in the past ten years. The last outbreak of this disease occurred during 1988.

- HIV infection and AIDS are the most common identified risk factors for cryptosporidiosis. Cryptosporidiosis has been an AIDS-defining disease since 1983. The number of reported cases has decreased since the advent of highly active antiretroviral therapy.

STRATIFIED DATA

Trends: The rate of cryptosporidiosis (0.47 cases per 100,000) remained the same in 2006 (Figure 1).

Seasonality: In 2006, there was a peak in July, although the previous 5-year average peak was in August (Figure 2).

Age: The 35-44 age group had the highest incidence rate followed by the 55-64 and 45-64 age groups (Figure 3).

Sex: The male-to-female ratio was 5:3 (18 females). This marks a noticeable increase in the number of female cases from 2005 (n=7).

Race/Ethnicity: Blacks had the highest incidence rate (Figure 4), followed by whites and Latinos. Race was unknown for 2 cases (4.2%). The rate for blacks decreased from 1.2 per 100,000 in 2005 to 0.9 per 100,000 in 2006. There were no cases among Asians in 2006.

Location: Location information was available for all 48 cases. Hollywood-Wilshire (HW) Health District had the highest incidence rate, 1.3 per 100,000 (n=7), followed closely by Antelope Valley (AV) Health District, which had 1.2 per 100,000 (n=4).

Risk Factors: Complete risk factor data was not available for all cases; 10 cases (21%) were either unable to be located or refused to be interviewed (Figure 5). HIV infection and AIDS accounted for 46% of the cases. Animal contact (38%) and recent international travel (25%) were the other most common risk factors following HIV status. Many cases had more than one risk factor.

Figure 3
Cryptosporidiosis
Incidence Rates by Age Group
LAC, 2006

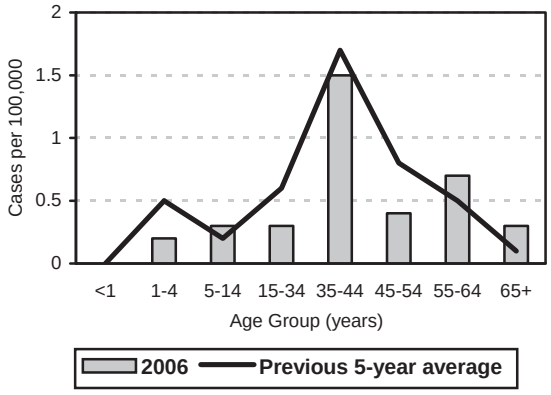


Figure 4
Cryptosporidiosis
Incidence Rate by Race/Ethnicity
LAC, 2006

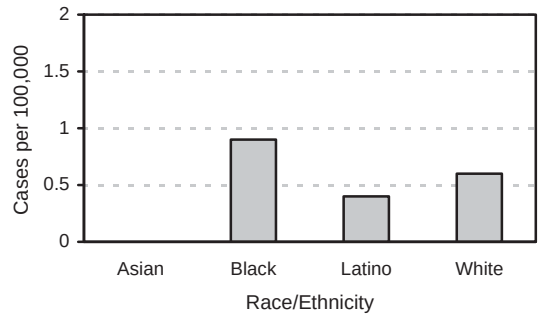
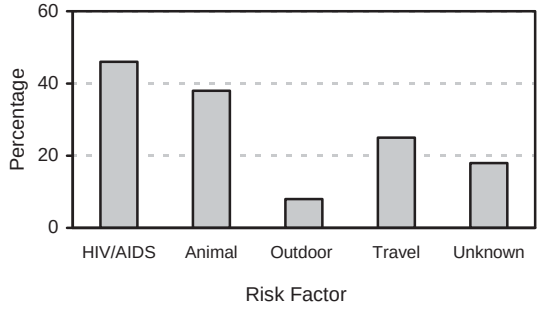


Figure 5
Cryptosporidiosis
by Reported Risk Factor
LAC, 2006



COMMENTS

Risk factors were self-reported and were not proven to be the actual source of infection. A large percentage (n=22, 46%) of the cryptosporidiosis cases were among HIV positive males. In 2006, the majority of male HIV cases were Latino (n=11, 50%). In 2005 and 2004 the majority of cases were black (44% and 45% respectively). However, these changes are not statistically significant due to the small number of cases.

Cryptosporidiosis can become a chronic infection among immunocompromised patients and cases are often reported multiple times; however, within this report, cases are counted only once. There has not been an outbreak of cryptosporidiosis in LAC since 1988, which involved contaminated swimming pool water [1].

RESOURCES

1. Sorvillo FJ, Fujioka K, Nahlen B, Tormey MP, Kebabjian R, Mascola L. Swimming-associated cryptosporidiosis. Am J Public Health 1992; 82(5):742-744.

ADDITIONAL RESOURCES

General disease information is available from the CDC at:
www.cdc.gov/ncidod/dpd/parasites/cryptosporidiosis/default.htm

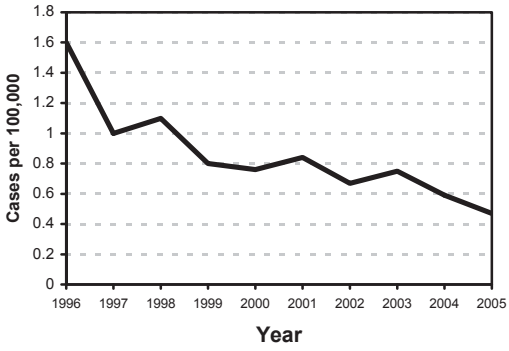
General information and reporting information about this and other foodborne diseases in LAC is available at: www.lapublichealth.org/acd/food.htm

CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	45
Annual Incidence[a]	
LA County	0.47
United States	1.23
Age at Diagnosis	
Mean	40
Median	40
Range	4–68
Case Fatality	
LA County	0%
United States	N/A

[a] Cases per 100,000 population.

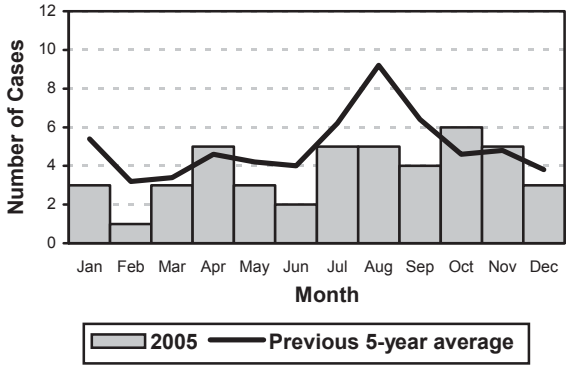
Figure 1
Cryptosporidiosis
Incidence Rates by Year of Onset
LAC, 1996–2005



DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium parvum* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and by swallowing contaminated recreational or untreated water. The usual incubation period is 2–10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Figure 2
Cryptosporidiosis
Cases by Month of Onset
LAC, 2005 (N=45)



DISEASE ABSTRACT

- The incidence rate for this disease decreased from 0.59 per 100,000 in 2004 to 0.47 per 100,000 in 2005. This is the lowest incidence rate in the past ten years. The last outbreak of this disease occurred during 1998.
- HIV infection and AIDS are the most common identified risk factors for cryptosporidiosis. Cryptosporidiosis has been an AIDS-defining disease since 1983. The number of reported cases has decreased since the advent of highly active antiretroviral therapy.

STRATIFIED DATA

Trends: The rate of cryptosporidiosis (0.47 cases per 100,000) decreased in 2005 (Figure 1).

Seasonality: In 2005, there was a peak in October, although the previous 5-year average peak was in August (Figure 2).

Age: The 35-44 age group had the highest incidence rate followed by the 45-54 and 55-64 age groups (Figure 3).

Sex: The male-to-female ratio was 5.4:1 (7 females). This is due to the high rate of cryptosporidiosis in MSM.

Race/Ethnicity: Blacks had the highest incidence rate (Figure 4), followed by Whites and Latinos. Race was unknown for 3 cases (7%). The rate for Blacks decreased from 1.5 per 100,000 in 2005 to 1.2 per 100,000 in 2005. There were no cases among Asians in 2005.

Location: Location information was available for all 56 cases. Central Health District had the highest incidence rate, 1.4 per 100,000 (n=18), followed closely by San Fernando Health District, which had 0.5 per 100,000 (n=10).

Risk Factors: Complete risk factor data was not available for all cases; 8 cases (18%) were either unable to be located or refused to be interviewed (Figure 5). HIV infection and AIDS accounted for 51% of the cases, 2 cases were female. Animal contact (18%) and recent international travel (20%) were the other most common risk factors following HIV status. Many cases had more than one risk factor.

Figure 3
Cryptosporidiosis
Incidence Rates by Age Group
LAC, 2005

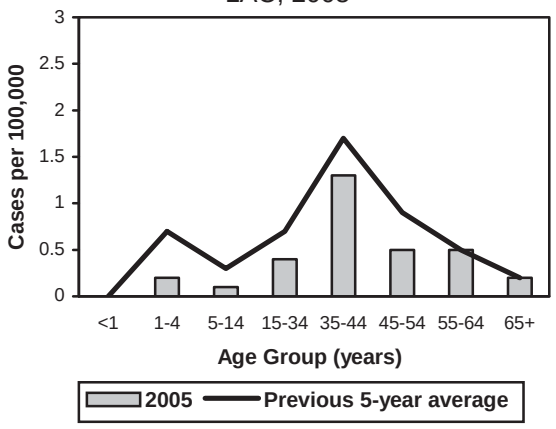
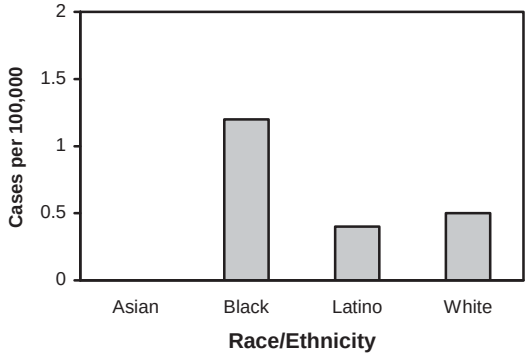


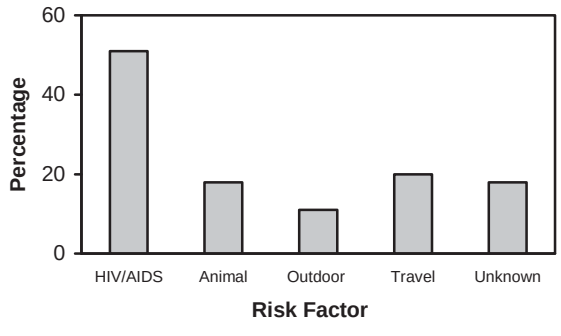
Figure 4
Cryptosporidiosis
Incidence Rate by Race/Ethnicity
LAC, 2005



COMMENTS

Risk factors were self reported and were not proven to be the actual source of infection. A large percentage (49%) of the cryptosporidiosis cases were among HIV positive males. In 2005 the majority of HIV male cases were Black (44%), slightly less than 2004 (45%). Eight cases (18%) had unknown HIV status. Cryptosporidiosis can become a chronic infection among immunocompromised patients and cases are often reported multiple times; however, within this report, cases are counted only once. There has not been an outbreak of cryptosporidiosis in LAC since 1988, which involved contaminated swimming pool water [1].

Figure 5
Cryptosporidiosis
by Reported Risk Factor
LAC, 2005



RESOURCES

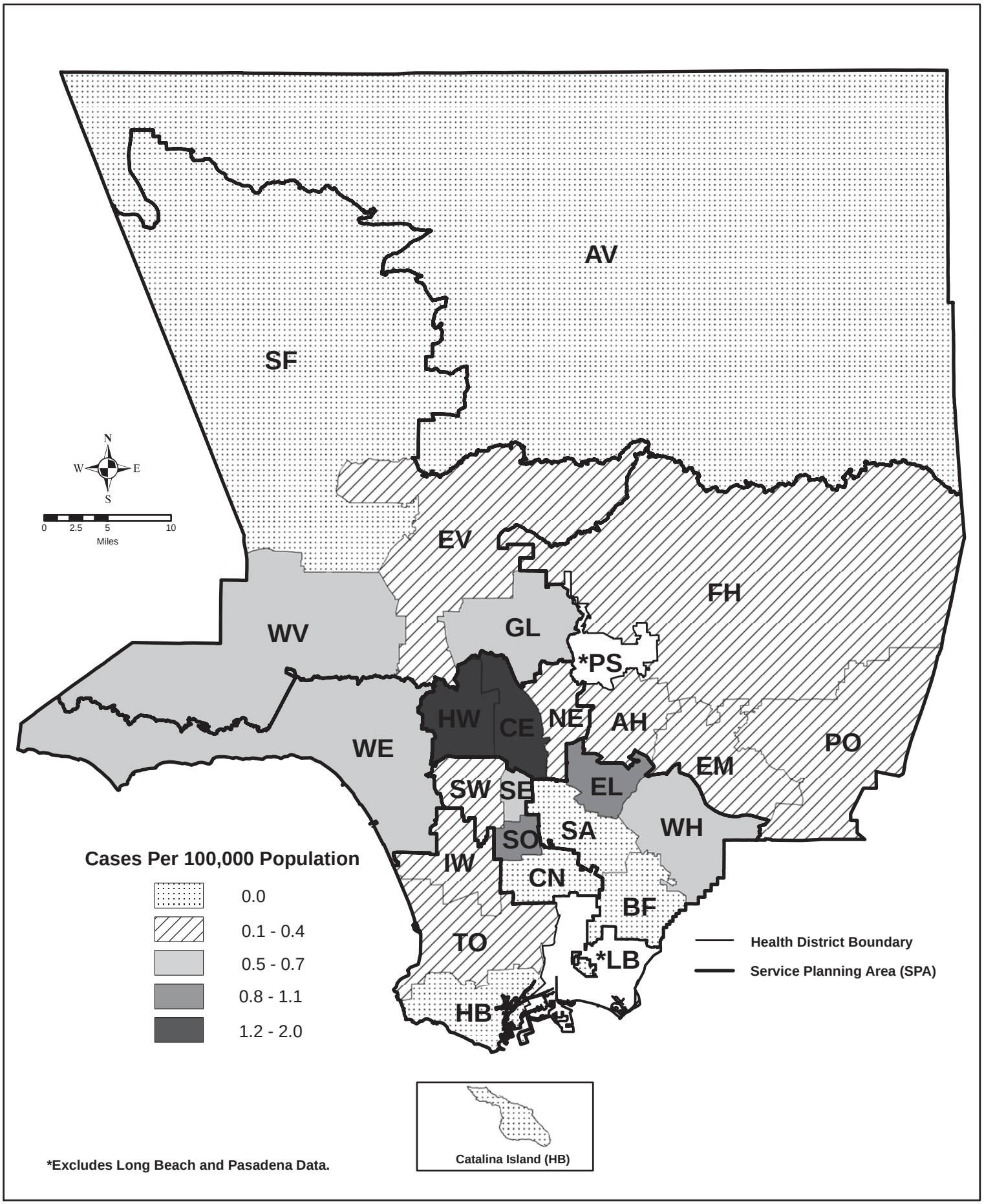
1. Sorvillo FJ, Fujioka K, Nahlen B, Tormey MP, Kebabjian R, Mascola L. Swimming-associated cryptosporidiosis. Am J Public Health 1992; 82(5): 742-4.

ADDITIONAL RESOURCES

General disease information is available from the CDC at:
www.cdc.gov/ncidod/dpd/parasites/cryptosporidiosis/default.htm

General information and reporting information about this and other foodborne diseases in LAC is available at: www.lapublichealth.org/acd/food.htm

Map 4. Cryptosporidiosis
Rates by Health District, Los Angeles County, 2005*



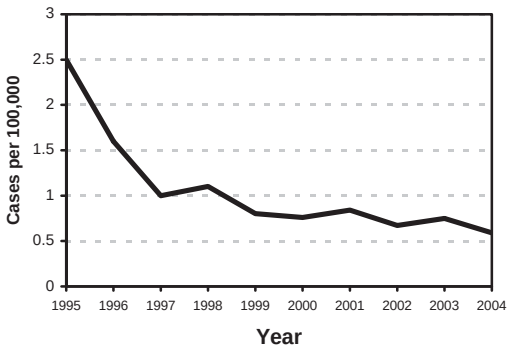
*Excludes Long Beach and Pasadena Data.

CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	56
Annual Incidence[a]	
LA County	0.59
United States	1.23
Age at Diagnosis	
Mean	34
Median	37
Range	2–64
Case Fatality	
LA County	1.8%
United States	N/A

[a] Cases per 100,000 population.

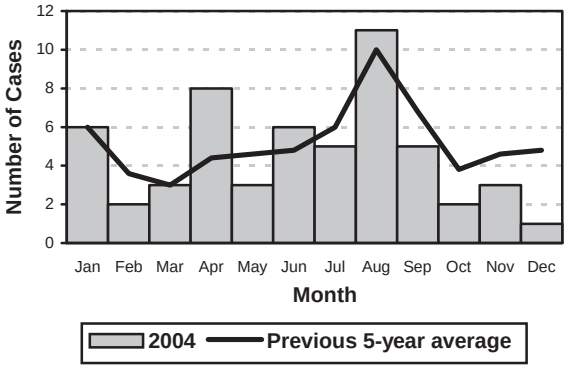
Figure 1
Cryptosporidiosis
Incidence Rates by Year of Onset
LAC, 1995–2004



DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium parvum* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and by swallowing contaminated recreational or untreated water. The usual incubation period is 2–10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Figure 2
Cryptosporidiosis
Cases by Month of Onset
LAC, 2004 (n=55)



DISEASE ABSTRACT

- The incidence rate for this disease decreased from 0.75 per 100,000 in 2003 to 0.59 per 100,000 in 2004. This is the lowest incidence rate in the past ten years. The last outbreak of this disease occurred during 1998.
- HIV infection and AIDS are the most common identified risk factors for cryptosporidiosis. Cryptosporidiosis has been an AIDS-defining disease since 1983. The number of reported cases has decreased since the advent of highly active antiretroviral therapy.

STRATIFIED DATA

Trends: The rate of cryptosporidiosis (0.59 cases per 100,000) decreased slightly in 2004 (Figure 1).

Seasonality: In 2004, there was a peak in August coinciding with the previous 5-year average peak (Figure 2).

Age: The 35-44 age group had the highest incidence rate followed by the 45-54 age group (Figure 3).

Sex: The male-to-female ratio was 3:1 (14 females). This may be due to the high rate of cryptosporidiosis in MSM.

Race/Ethnicity: Blacks had the highest incidence rate (Figure 4), followed by Whites and Latinos. Race was unknown for 4 cases (7%). The rate for Blacks increased from 1.0 per 100,000 in 2003 to 1.5 per 100,000 in 2004.

Location: Location information was available for all 56 cases. Central Health District had the highest incidence rate, 2.2 per 100,000 (n=8), followed closely by Hollywood-Wilshire Health District which had 2.1 per 100,000 (n=11).

Risk Factors: Complete risk factor data was not available for all cases; 9 cases (16%) were either unable to be located or refused to be interviewed (Figure 5). HIV infection and AIDS accounted for 50% of the cases, 1 case was female. Animal contact (34%), outdoor activities (25%, including swimming, camping and hiking) and recent international travel (20%) were the other most common risk factors following HIV status. Many cases had more than one risk factor.

COMMENTS

Risk factors were self reported and were not proven to be the actual source of infection. A large percentage (48%) of the cryptosporidiosis cases were among HIV positive males. In 2004 the majority of HIV male cases were Hispanic (45%), slightly less than 2003 (54%). Seven cases (13%) had unknown HIV status. Cryptosporidiosis can become a chronic infection among immunocompromised patients and cases are often reported multiple times; however, within this report, cases are counted only once. There has not been an outbreak of cryptosporidiosis in LAC since 1988, which involved contaminated swimming pool water [1].

Figure 3
Cryptosporidiosis
Incidence Rates by Age Group
LAC, 2004

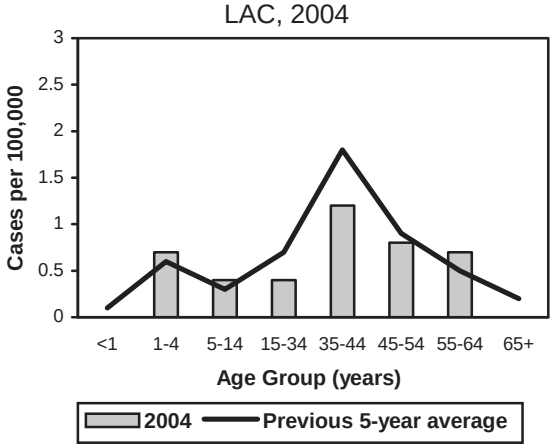


Figure 4
Cryptosporidiosis
Incidence Rate by Race/Ethnicity
LAC, 2004

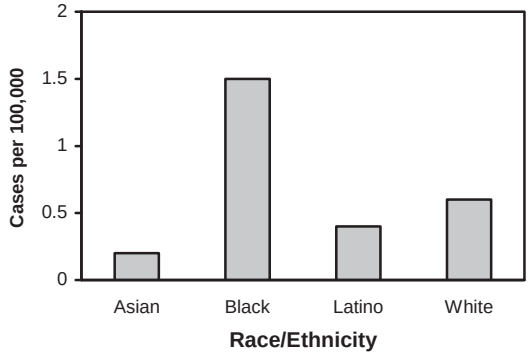
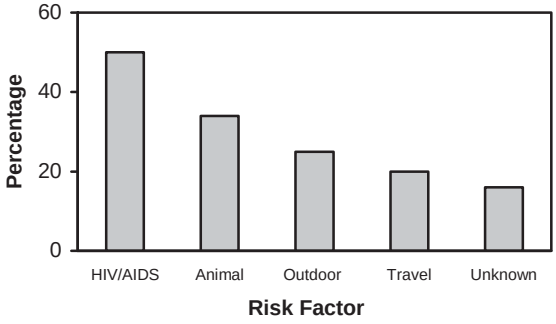


Figure 5
Cryptosporidiosis
by Reported Risk Factor
LAC, 2004



RESOURCES

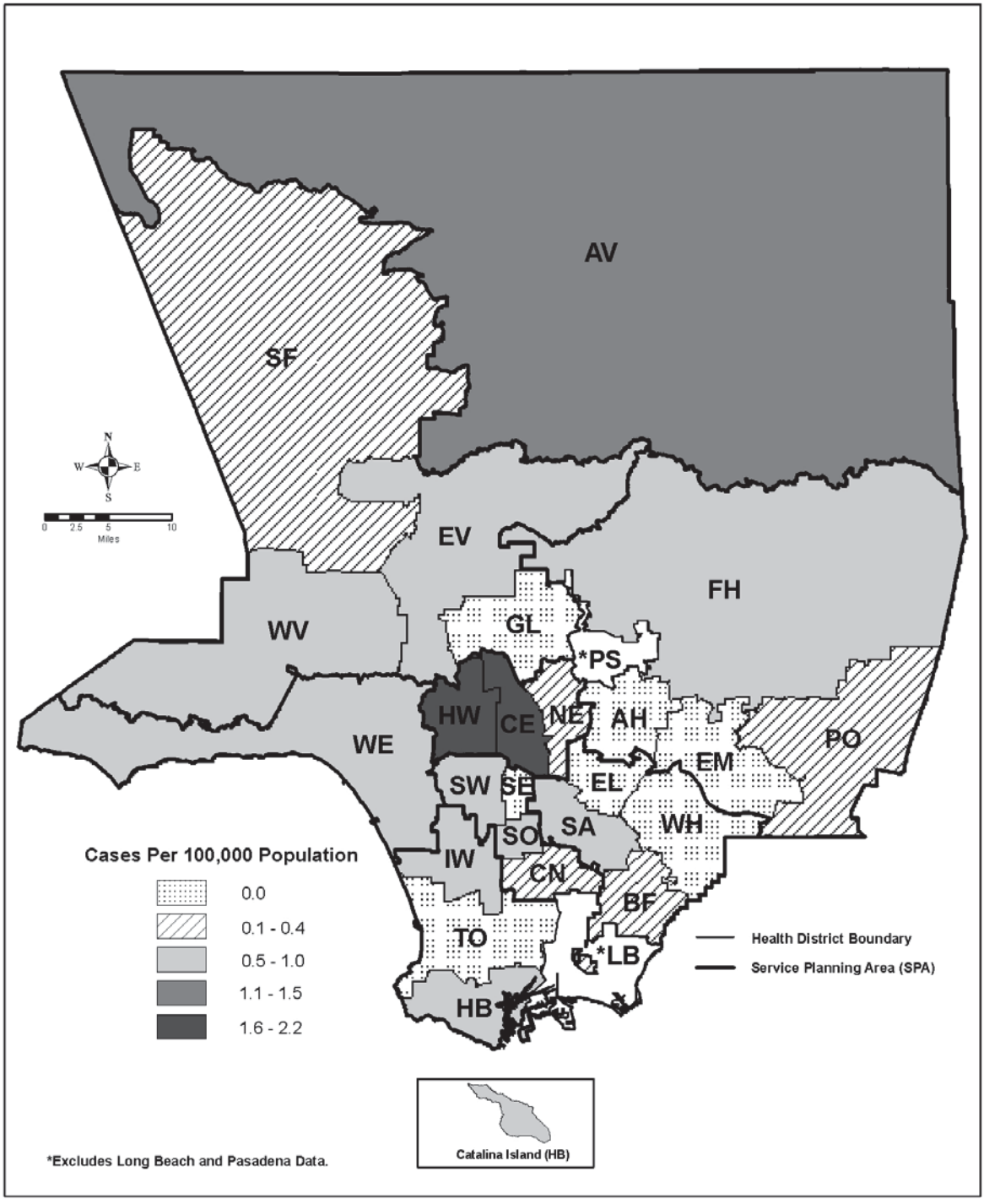
1. Sorvillo FJ, Fujioka K, Nahlen B, Tormey MP, Kebabjian R, Mascola L. Swimming-associated cryptosporidiosis. Am J Public Health 1992; 82(5): 742-4.

ADDITIONAL RESOURCES

General disease information is available from the CDC at:
www.cdc.gov/ncidod/dpd/parasites/cryptosporidiosis/default.htm

General information and reporting information about this and other foodborne diseases in LAC is available at: www.lapublichealth.org/acd/food.htm

Map 4. Cryptosporidiosis
Rates by Health District, Los Angeles County, 2004*

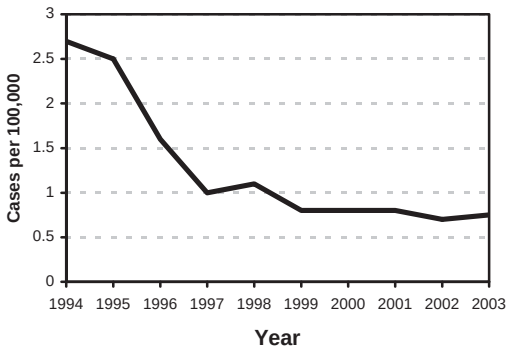


CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	71
Annual Incidence[a]	
LA County	0.75
United States	1.13
Age at Diagnosis	
Mean	36.9
Median	38
Range	1–62
Case Fatality	
LA County	0.03%
United States	N/A

[a] Cases per 100,000 population.

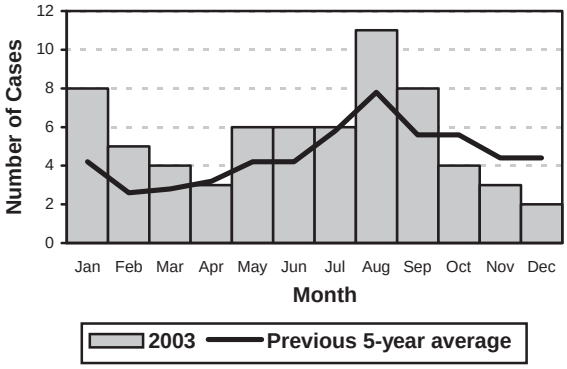
Figure 1
Cryptosporidiosis
Incidence Rates by Year of Onset
LAC, 1994–2003



DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when cysts of the parasite *Cryptosporidium parvum* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and by swallowing contaminated recreational or untreated water. The usual incubation period is 2–10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Figure 2
Cryptosporidiosis
Cases by Month of Onset
LAC, 2003 (n=66)



DISEASE ABSTRACT

- The incidence rate for this disease increased slightly from 0.70 per 100,000 in 2002 to 0.75 per 100,000 in 2003. This is the first year that the incidence rate has increased since 1998. The last outbreak of this disease occurred during 1998.
- HIV infection and AIDS are the most common identified risk factors for cryptosporidiosis. Cryptosporidiosis has been an AIDS-defining disease since 1983. The number of reported cases has decreased since the advent of highly active antiretroviral therapy.

STRATIFIED DATA

Trends: The rate of cryptosporidiosis (0.75 cases per 100,000) increased slightly in 2003 (Figure 1).

Seasonality: In 2003, there was a peak in August coinciding with the previous 5-year average peak (Figure 2).

Age: The 35-44 age group had the highest incidence rate followed by the 45-54 age group (Figure 3).

Sex: The male-to-female rate ratio was 4.5:1. This is due to the high rate of cryptosporidiosis in MSM.
Race/Ethnicity: Blacks had the highest incidence rate (Figure 4), followed by Latinos and then Whites. Two cases were reported as "Other" (2.8%) and race was unknown for 4 cases (5.6%). The rate for Whites decreased from 1.3 per 100,000 (n=36) in 2002 to 0.6 per 100,000 (n=21) in 2003.

Location: Location information was available for all 62 cases. Hollywood-Wilshire Health District had the highest incidence rate 4.2 per 100,000 (n=22) followed by Central Health District 2.3 per 100,000 (n=8).

Risk Factors: Complete risk factor data was not available for all cases; 8 cases (11%) were either unable to be located or refused to be interviewed (Figure 5). HIV infection and AIDS accounted for 66% of the cases, 3 of these cases were female. Animal contact (37%), outdoor activities (17%, including swimming, camping and hiking) and recent international travel (16%) were the other most common risk factors following HIV status. Many cases had more than one risk factor.

Figure 3
Cryptosporidiosis
Incidence Rates by Age Group
LAC, 2003

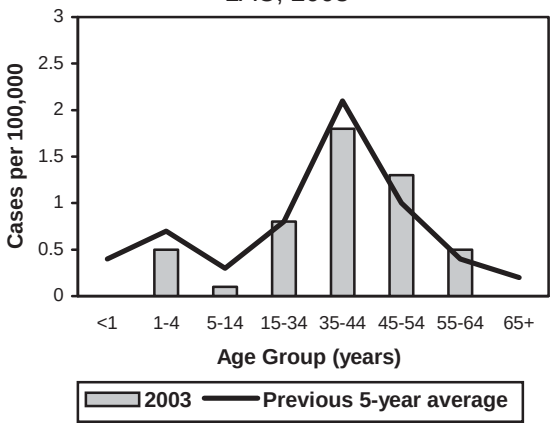


Figure 4
Cryptosporidiosis
Incidence Rate by Race/Ethnicity
LAC, 2003

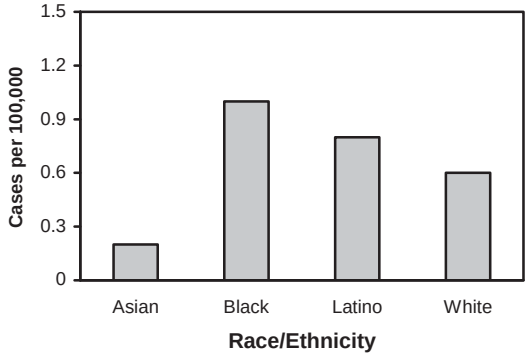
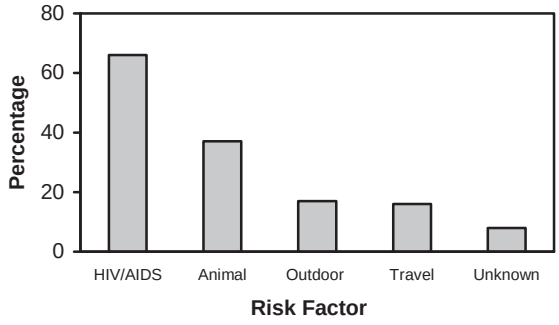


Figure 5
Cryptosporidiosis
by Reported Risk Factor
LAC, 2003



COMMENTS

Risk factors were self reported and were not proven to be the actual source of infection. A large percentage (62%) of the cryptosporidiosis cases were among HIV positive males. The actual percentage could be higher since 9 cases, (13%, all male) had unknown HIV status. In 2003 the majority of HIV male cases were Hispanic (54%), compared to 2002 where the majority of HIV male cases were white (66%). Cryptosporidiosis can become a chronic infection among immunocompromised patients and cases are often reported multiple times; however, within this report, cases are counted only once. There has not been an outbreak of cryptosporidiosis in LAC since 1988, which involved

contaminated swimming pool water [1].

RESOURCES

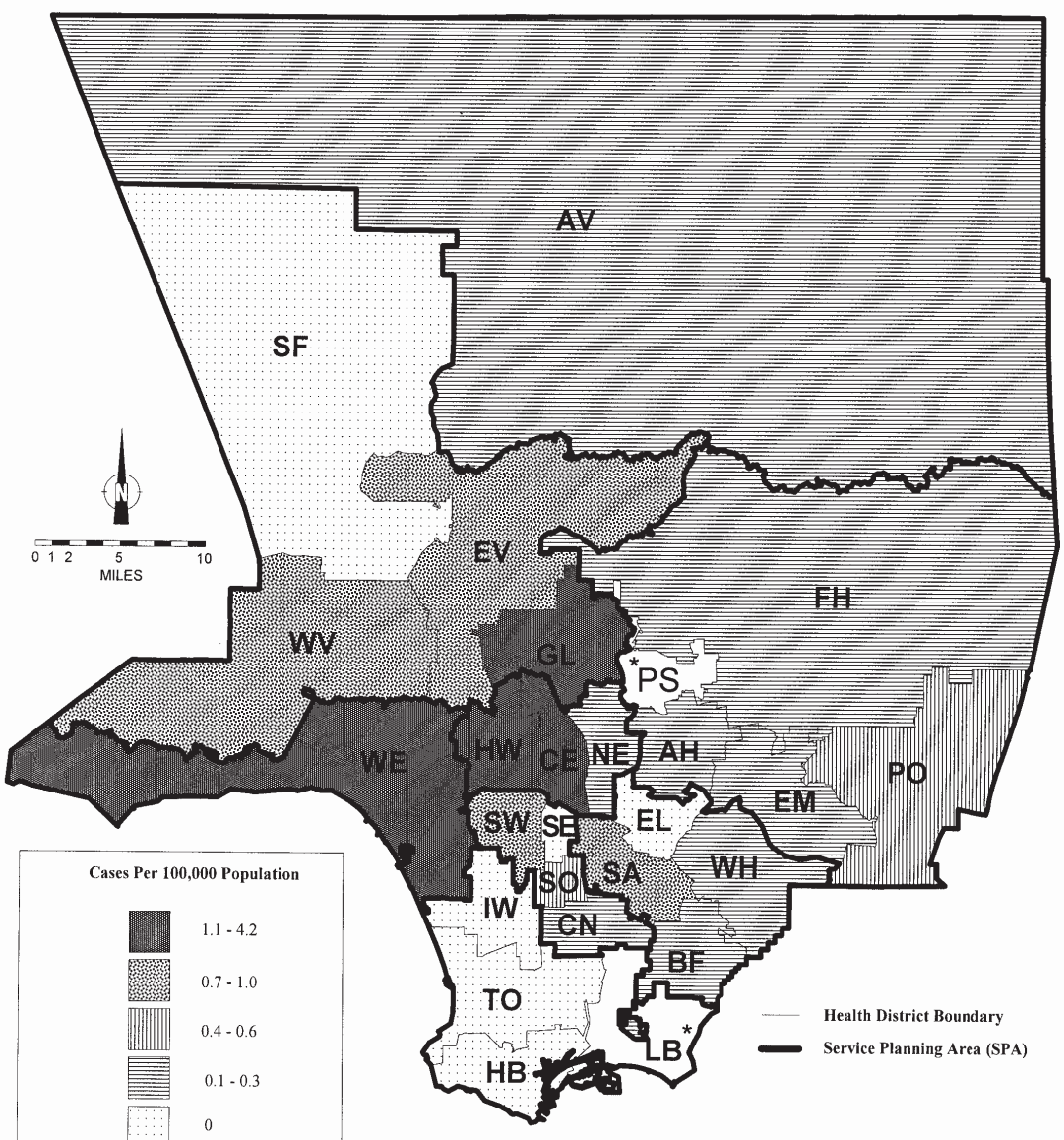
1. Sorvillo FJ, Fujioka K, Nahlen B, Tormey MP, Kebabjian R, Mascola L. Swimming-associated cryptosporidiosis. Am J Public Health 1992; 82(5): 742-4.

ADDITIONAL RESOURCES

General disease information is available from the CDC at:
www.cdc.gov/ncidod/dpd/parasites/cryptosporidiosis/default.htm

General information and reporting information about this and other foodborne diseases in LAC is available at: www.lapublichealth.org/acd/food.htm

MAP 4. Cryptosporidiosis
Rates by Health District, Los Angeles County, 2003*



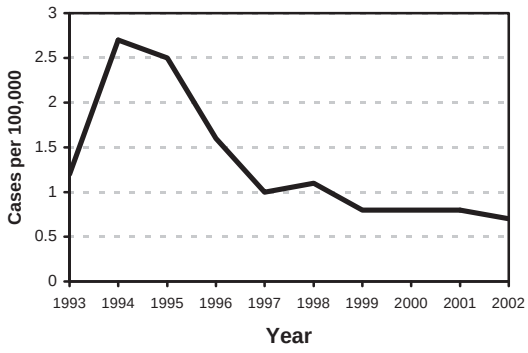
*Excludes Long Beach and Pasadena Data.

CRYPTOSPORIDIOSIS

CRUDE DATA	
Number of Cases	62
Annual Incidence[a]	
LA County	0.7
California[b]	0.6
United States[b]	1.1
Age at Diagnosis	
Mean	36
Median	38
Range	1–68 years
Case Fatality	
LA County	0.0%
United States	N/A

[a] Cases per 100,000 population.

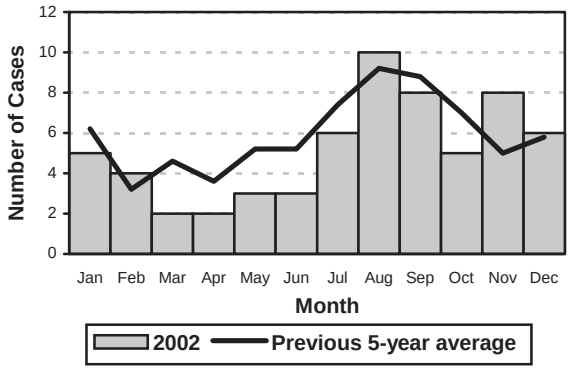
Figure 1
Cryptosporidiosis
Incidence Rates by Year of Onset
LAC, 1993–2002



DESCRIPTION

Cryptosporidiosis is fecal-orally transmitted when by cysts of the parasite *Cryptosporidium parvum* are ingested. Common causes include unprotected sexual contact, particularly among men who have sex with men (MSM), and by swallowing contaminated recreational or untreated water. The usual incubation period is 2–10 days with typical symptoms of watery diarrhea, abdominal cramps, and low-grade fever; however, asymptomatic infection is also common. Symptoms last up to 2 weeks in healthy individuals. Those who have a weakened immune system may experience prolonged illness. Immunocompromised individuals (e.g., HIV/AIDS patients, cancer patients, transplant patients), young children and pregnant women are at risk for more severe illness.

Figure 2
Cryptosporidiosis
Cases by Month of Onset
LAC, 2002



DISEASE ABSTRACT

- The incidence rate for this disease has been decreasing since it peaked during 1994. The last outbreak of this disease occurred during 1998.
- HIV infection and AIDS are the most common identified risk factors for cryptosporidiosis. Cryptosporidiosis has been an AIDS-defining disease since 1983. The number of reported cases has decreased since the advent of highly active antiretroviral therapy.

STRATIFIED DATA

Trends: The rate of cryptosporidiosis (0.7 cases per 100,000) decreased slightly in 2002 (Figure 1), after a plateau from 1999 to 2000.

Seasonality: In 2002, there was a peak in August coinciding with the previous 5-year average peak (Figure 2).

Age: The 35–44 age group had the highest incidence rate (Figure 3).

Sex: The male-to-female rate ratio was 3.7:1. This is due to the high rate of cryptosporidiosis in MSM.
Race/Ethnicity: Whites had the most cases (36) and the highest rate (Figures 4). Blacks had the next highest rate, followed by Latinos. There were no cases reported among Asians. This variable was unknown for 4 cases (6%).

Location: Location information was available for all 62 cases. Many cases (21%, n=13) lived in the Hollywood-Wilshire Health District, or in the West District (13%, n=8).

Risk Factors: Complete risk factor data was not available for all cases; more than one-fourth of all cases (26%, n=12) were either unable to be located or refused to be interviewed (Figure 5). HIV infection and AIDS accounted for 50% of the cases, only one of these cases was female. Animal contact (34%) and outdoor activities (21%) including swimming, camping and hiking, were the two highest risk factors besides HIV status. Nearly one out of every five cases (19%) had a history of international travel and 16% were immigrants (recent or otherwise). Reports of plumbing problems were indicated in 8% of cases. Many cases had more than one risk factor.

COMMENTS

It should be noted that the risk factors were self reported and were not proven to be the actual source of infection. A large percentage (48%) of the cryptosporidiosis cases were among HIV positive men. The actual percentage is probably higher since 12 cases had unknown HIV status. Accordingly, this group, specifically white males (who comprised 66% of the HIV positive group), would be a prime audience for preventive education. Cryptosporidiosis can become a chronic infection among immunocompromised patients and cases are often reported multiple times; however, within this report, cases are counted only once. There has not been

Figure 3
Cryptosporidiosis
Incidence Rates by Age Group
LAC, 2002

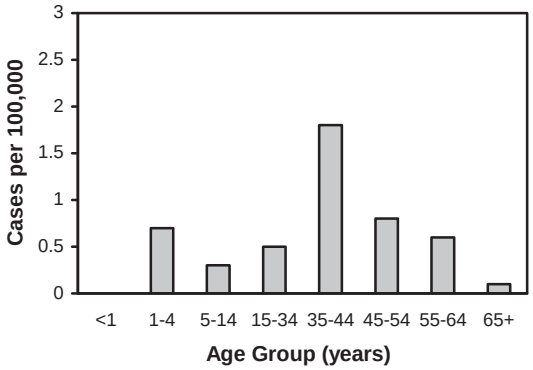


Figure 4
Cryptosporidiosis
Incidence Rate by Race/Ethnicity
LAC, 2002

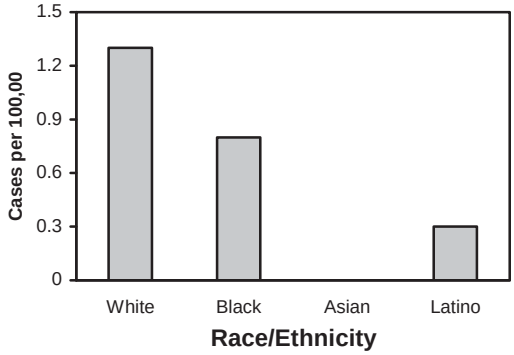
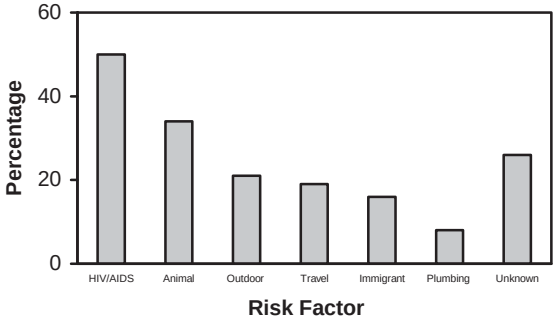


Figure 5
Cryptosporidiosis
by Reported Risk Factor
LAC, 2002



an outbreak of cryptosporidiosis in LAC since 1988, which involved contaminated swimming pool water [1].

RESOURCES

1. Sorvillo FJ, Fujioka K, Nahlen B, Tormey MP, Kebabjian R, Mascola L. Swimming-associated cryptosporidiosis. Am J Public Health 1992; 82(5):742–4.

ADDITIONAL RESOURCES

General disease information is available from the CDC at:
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MAP 4. Cryptosporidiosis
Rates by Health District, Los Angeles County, 2002*