

Table One. Number of Reported Cases of Communicable Diseases, Oklahoma, 1979 - 2008

Disease	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Anthrax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Botulism (Foodborne)	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Botulism (Infant)	0	0	0	0	0	1	0	1	0	0	0	0	1	1	0	0
Brucellosis	8	10	8	8	6	7	5	0	5	3	4	1	2	1	0	0
Campylobacteriosis	0	15	56	116	*212	216	305	288	252	212	223	247	205	267	199	187
Chlamydia	0	0	0	0	0	0	0	0	0	0	0	0	*5714	5220	4886	3784
Cholera	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
Congenital Rubella Syndrome	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cryptosporidiosis	0	0	0	0	0	81	27	11	14	11	12	6	8	0	1	1
Cyclosporiasis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dengue Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diphtheria	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
<i>Escherichia coli</i> O157:H7 and other Shiga toxin producing <i>E. coli</i>	0	0	0	0	0	0	0	0	0	0	6	4	0	5	8	*13
Ehrlichiosis	0	0	0	0	0	0	0	0	23	14	1	1	3	8	0	0
Giardiasis	3	6	171	249	*269	372	340	265	207	264	229	214	211	188	262	252
Gonorrhea	13754	13844	15909	16021	15230	13088	13005	12572	9657	7411	6846	6464	6546	6432	4855	4935
<i>Haemophilus influenzae</i> , Invasive Disease (Total)	86	101	97	120	*179	240	303	290	244	236	154	134	76	33	45	44
<i>Haemophilus influenzae</i> , Invasive Disease, type b, <5 yrs	0	0	0	2	*13	39	6	3	0	0	0	78	33	3	1	4
Hantavirus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hemolytic Uremic Syndrome, post diarrheal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hepatitis A	280	403	344	821	833	548	491	390	338	580	501	588	273	217	206	395
Hepatitis B	171	226	256	358	354	208	256	240	250	209	221	183	198	174	193	129
Hepatitis C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Influenza Associated Pediatric Mortality	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Legionellosis	0	0	7	13	*12	19	24	24	32	20	26	15	24	12	14	7
Leprosy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Leptospirosis	0	2	0	0	4	0	1	0	0	0	0	1	0	0	0	0
Listeriosis	3	0	1	3	0	1	10	20	17	14	17	16	6	8	12	11
Lyme Disease	0	0	0	0	0	0	0	0	3	9	16	20	23	25	20	111
Malaria	13	15	8	8	9	14	8	12	5	11	8	10	9	5	5	9
Measles	42	776	6	30	1	9	1	41	4	8	73	88	0	12	0	0

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Disease	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Meningococcal Invasive Disease	38	33	47	33	39	30	41	38	40	27	29	21	16	18	36	52
Mumps	0	0	0	0	0	0	0	0	102	295	184	74	15	20	11	*13
Pertussis	37	30	3	10	348	248	209	149	173	72	54	48	48	53	60	19
Plague	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Poliomyelitis	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Psittacosis	1	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0
Q Fever	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
Rabies (Animal)	288	246	219	191	108	104	111	62	35	38	102	132	173	219	65	40
Rabies (Human)	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Rocky Mountain spotted fever	60	77	101	89	221	137	103	110	86	103	60	68	95	111	46	36
Rubella	24	8	4	3	1	0	2	0	6	1	1	1	2	0	1	4
<i>Staphylococcus aureus</i> , Vancomycin intermediate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Staphylococcus aureus</i> , Vancomycin resistant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Streptococcus pneumoniae</i> , Invasive disease, <5 years	30	19	22	38	20	18	29	199	16	11	20	37	28	13	87	73
<i>Streptococcus pyogenes</i> (Group A), Invasive disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Salmonellosis	396	404	424	516	613	445	474	512	474	500	446	441	481	368	320	444
Shigellosis	300	267	470	440	241	220	301	256	166	233	236	510	192	252	472	200
St. Louis Encephalitis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syphilis	422	427	479	593	571	532	538	489	552	479	375	589	596	709	636	399
Tetanus	2	1	2	1	0	2	1	1	1	1	2	0	0	1	1	1
Trichinellosis	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Tuberculosis	352	333	381	335	331	262	264	267	250	277	218	243	206	216	209	261
Tularemia	13	24	44	36	35	24	22	19	27	17	8	10	12	10	16	4
Typhoid Fever	1	9	5	4	3	5	2	3	6	0	1	3	3	0	1	3
<i>Vibrio</i> spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Vibrio parahaemolyticus</i>	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
<i>Vibrio vulnificus</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
West Nile Virus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table One. Number of Reported Cases of Communicable Diseases, Oklahoma, 1979 - 2008

Disease	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Anthrax	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Botulism (Foodborne)	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Botulism (Infant)	0	0	0	0	1	0	1	0	0	0	1	0	0	0
Brucellosis	1	1	0	0	0	1	0	1	0	0	1	2	1	0
Campylobacteriosis	289	281	247	241	320	361	308	362	417	591	544	405	530	486
Chlamydia	5050	7371	7566	9378	8737	9346	10622	10732	10983	10371	12957	13206	12529	14759
Cholera	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Congenital Rubella Syndrome	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Creutzfeldt-Jakob disease	0	0	0	0	0	0	0	0	*0	0	0	1	1	1
Cryptosporidiosis	12	10	12	7	14	*30	16	16	24	22	46	56	216	238
Cyclosporiasis	0	0	0	0	0	0	0	*0	0	0	0	2	0	0
Dengue Fever	0	0	0	1	0	0	0	*0	1	0	2	0	3	2
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Escherichia coli</i> O157:H7 and other Shiga toxin producing <i>E. coli</i>	16	14	13	26	41	19	36	25	30	29	38	43	33	135
Ehrlichiosis	0	0	0	2	12	*12	24	13	36	49	96	47	106	121
Giardiasis	206	159	152	148	152	96	0	85	145	166	200	167	172	172
Gonorrhea	5652	4897	4840	4225	4291	5236	4818	4624	4543	4543	5031	5170	4827	5207
<i>Haemophilus influenzae</i> , Invasive Disease (Total)	33	31	33	35	47	^46	48	53	52	67	74	78	93	90
<i>Haemophilus influenzae</i> , Invasive Disease, type b, <5 yrs	3	0	1	1	0	^0	0	0	0	0	0	0	0	0
Hantavirus	0	1	0	0	0	*0	1	0	0	0	0	0	0	0
Hemolytic Uremic Syndrome, post diarrheal	0	0	0	0	1	*2	4	3	4	2	5	3	8	51
Hepatitis A	1497	2516	1441	667	534	271	116	52	29	19	6	11	13	13
Hepatitis B	176	60	63	169	185	179	115	111	73	80	59	96	152	129
Hepatitis C	1	8	10	23	13	*13	6	21	6	7	14	19	49	21
Influenza Associated Pediatric Mortality	0	0	0	0	0	0	0	0	0	0	0	0	0	*2
Legionellosis	8	16	4	18	6	5	7	5	10	24	10	10	9	11
Leprosy	0	0	0	0	1	*0	1	0	0	0	0	1	0	0
Leptospirosis	0	0	0	0	1	0	0	1	0	0	0	0	1	0
Listeriosis	11	5	9	19	12	*8	2	9	3	4	4	5	2	7
Lyme Disease	57	34	45	12	8	1	0	0	0	3	0	0	1	2
Malaria	1	3	9	4	2	10	5	12	4	10	12	11	10	5
Measles	0	0	1	0	0	0	0	0	0	0	0	0	0	0

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Disease	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Meningococcal Invasive Disease	49	46	45	44	40	34	32	25	24	10	18	15	23	17
Mumps	1	4	3	4	5	3	0	3	2	1	2	11	7	1
Pertussis	47	21	60	36	40	60	43	135	106	122	125	64	58	100
Plague	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Psittacosis	0	0	0	4	0	*0	0	0	0	0	0	0	0	0
Q Fever	0	0	0	0	0	0	0	0	0	1	3	0	2	3
Rabies (Animal)	32	38	113	107	94	58	60	126	204	113	79	69	78	42
Rabies (Human)	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Rocky Mountain spotted fever	48	45	30	39	29	37	69	99	138	190	206	135	187	267
Rubella	0	0	0	0	1	0	0	0	0	0	0	0	0	0
<i>Staphylococcus aureus</i> , Vancomycin intermediate	0	0	0	0	0	0	0	0	0	0	0	0	*1	0
<i>Staphylococcus aureus</i> , Vancomycin resistant	0	0	0	0	0	0	0	0	0	0	0	0	*0	0
<i>Streptococcus pneumoniae</i> , Invasive disease, <5 years	48	19	22	26	45	38	58	67	81	52	48	73	77	76
<i>Streptococcus pyogenes</i> (Group A), Invasive disease	0	8	3	1	12	*28	49	56	99	73	132	125	87	138
Salmonellosis	471	520	392	501	468	404	503	524	494	425	448	604	709	901
Shigellosis	266	305	293	712	560	131	148	717	1078	724	936	196	162	234
St. Louis Encephalitis	0	0	0	0	0	0	1	*0	0	0	0	0	0	0
Syphilis	489	398	275	264	347	245	185	183	141	88	73	193	150	203
Tetanus	0	1	2	0	0	0	1	0	0	0	0	1	0	0
Trichinellosis	0	1	0	0	0	*0	0	0	0	0	0	0	0	0
Tuberculosis	237	201	211	198	208	154	194	190	163	178	144	144	149	100
Tularemia	7	4	5	5	7	11	7	10	9	19	20	3	18	7
Typhoid Fever	1	0	3	1	0	1	1	2	1	1	1	0	3	3
<i>Vibrio</i> spp.	3	1	0	9	1	0	0	1	*1	0	3	1	2	5
<i>Vibrio parahaemolyticus</i>	0	0	0	0	0	0	0	0	*0	0	1	0	0	1
<i>Vibrio vulnificus</i>	0	0	0	0	0	1	0	1	*0	1	1	0	0	0
West Nile Virus	0	0	0	0	0	0	0	*17	79	22	33	48	107	9

*First year disease was reportable by law

^*H. influenzae* isolates required to be sent to OSDH PHL for serotyping.

Table Two. Incidence Rate per 100,000 Oklahoma Population of Reported Communicable Diseases, Oklahoma 1979 - 2008*

Disease	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Anthrax	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Botulism (Foodborne)	0.04	0.00	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Botulism (Infant)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.03	0.00
Brucellosis	0.31	0.33	0.26	0.26	0.20	0.23	0.17	0.00	0.17	0.10	0.13	0.03	0.06	0.03	0.00
Campylobacteriosis	0.00	0.50	1.85	3.83	7.01	7.14	10.08	9.52	8.33	7.01	7.37	7.85	6.52	8.49	6.33
Chlamydia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	181.7	165.9	155.3
Cholera	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
Congenital Rubella Syndrome	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Creutzfeldt-Jakob disease	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cryptosporidiosis	0.00	0.00	0.00	0.00	0.00	2.68	0.89	0.36	0.46	0.36	0.40	0.19	0.25	0.00	0.03
Cyclosporiasis	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dengue Fever	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diphtheria	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Escherichia coli</i> O157:H7 and other Shiga toxin producing <i>E. coli</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.13	0.00	0.16	0.25
Ehrlichiosis	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.46	0.03	0.03	0.10	0.25	0.00
Giardiasis	0.12	0.20	5.65	8.23	8.89	12.30	11.24	8.76	6.84	8.73	7.57	6.80	6.71	5.98	8.33
Gonorrhea	537.4	457.6	525.9	529.6	503.4	432.6	429.9	415.6	319.2	245.0	226.3	205.5	208.1	204.5	154.3
<i>Haemophilus influenzae</i> , Invasive Disease (Total)	3.36	3.34	3.21	3.97	5.92	7.93	10.02	9.59	8.07	7.80	5.09	4.26	2.42	1.05	1.43
<i>Haemophilus influenzae</i> , Invasive Disease, type b, <5 yrs	0.00	0.00	0.00	0.86	5.60	16.79	2.58	1.29	0.00	0.00	0.00	34.43	14.57	1.32	0.44
Hantavirus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hemolytic Uremic Syndrome, post diarrheal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hepatitis A	10.94	13.32	11.37	27.14	27.53	18.11	16.23	12.89	11.17	19.17	16.56	18.69	8.68	6.90	6.55
Hepatitis B	6.68	7.47	8.46	11.83	11.70	6.88	8.46	7.93	8.26	6.91	7.31	5.82	6.29	5.53	6.14
Hepatitis C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Influenza Associated Pediatric Mortality	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Legionellosis	0.00	0.00	0.23	0.43	0.40	0.63	0.79	0.79	1.06	0.66	0.86	0.48	0.76	0.38	0.45
Leprosy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
Leptospirosis	0.00	0.07	0.00	0.00	0.13	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
Listeriosis	0.12	0.00	0.03	0.10	0.00	0.03	0.33	0.66	0.56	0.46	0.56	0.51	0.19	0.25	0.38
Lyme Disease	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.30	0.53	0.64	0.73	0.79	0.64
Malaria	0.51	0.50	0.26	0.26	0.30	0.46	0.26	0.40	0.17	0.36	0.26	0.32	0.29	0.16	0.16
Measles	1.64	25.65	0.20	0.99	0.03	0.30	0.03	1.36	0.13	0.26	2.41	2.80	0.00	0.38	0.00

Table Two. Incidence Rate per 100,000 Oklahoma Population of Reported Communicable Diseases, Oklahoma 1979 - 2008*

Disease	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Meningococcal Invasive Disease	1.48	1.09	1.55	1.09	1.29	0.99	1.36	1.26	1.32	0.89	0.96	0.67	0.51	0.57	1.14
Mumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.37	9.75	6.08	2.35	0.48	0.64	0.35
Pertussis	1.45	0.99	0.10	0.33	11.50	8.20	6.91	4.93	5.72	2.38	1.78	1.53	1.53	1.68	1.91
Plague	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Poliomyelitis	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Psittacosis	0.04	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.03
Q Fever	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rabies (Human)	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rocky Mountain spotted fever	2.34	2.55	3.34	2.94	7.31	4.53	3.40	3.64	2.84	3.40	1.98	2.16	3.02	3.53	1.46
Rubella	0.94	0.26	0.13	0.10	0.03	0.00	0.07	0.00	0.20	0.03	0.03	0.03	0.06	0.00	0.03
<i>Staphylococcus aureus</i> , Vancomycin intermediate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Staphylococcus aureus</i> , Vancomycin resistant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Streptococcus pneumoniae</i> , Invasive disease, <5 years	12.91	8.18	9.47	16.36	8.61	7.75	12.48	85.66	6.89	4.74	8.61	16.33	12.36	5.74	38.41
<i>Streptococcus pyogenes</i> (Group A), Invasive disease	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salmonellosis	15.47	13.35	14.02	17.06	20.26	14.71	15.67	16.92	15.67	16.53	14.74	14.02	15.29	11.70	10.17
Shigellosis	11.72	8.83	15.54	14.54	7.97	7.27	9.95	8.46	5.49	7.70	7.80	16.21	6.10	8.01	15.01
St. Louis Encephalitis	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syphilis	16.49	14.11	15.83	19.60	18.87	17.59	17.78	16.16	18.25	15.83	12.40	18.72	18.95	22.54	20.22
Tetanus	0.08	0.03	0.07	0.03	0.00	0.07	0.03	0.03	0.03	0.03	0.07	0.00	0.00	0.03	0.03
Trichinellosis	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Tuberculosis	13.75	11.01	12.59	11.07	10.94	8.66	8.73	8.83	8.26	9.16	7.21	7.73	6.55	6.87	6.64
Tularemia	0.51	0.79	1.45	1.19	1.16	0.79	0.73	0.63	0.89	0.56	0.26	0.32	0.38	0.32	0.51
Typhoid Fever	0.04	0.30	0.17	0.13	0.10	0.17	0.07	0.10	0.20	0.00	0.03	0.10	0.10	0.00	0.03
<i>Vibrio</i> spp.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Vibrio parahaemolyticus</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Vibrio vulnificus</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Nile Virus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table Two. Incidence Rate per 100,000 Oklahoma Population of Reported Communicable Diseases, Oklahoma 1979 - 2008*

Disease	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Anthrax	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Botulism (Foodborne)	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
Botulism (Infant)	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00
Brucellosis	0.00	0.03	0.03	0.00	0.00	0.00	0.03	0.00	0.03	0.00	0.00	0.03	0.06	0.03	0.00
Campylobacteriosis	5.94	9.19	8.93	7.85	7.66	10.17	10.46	8.93	10.49	12.08	17.13	15.77	11.74	15.36	13.34
Chlamydia	120.3	160.5	234.3	240.5	298.1	277.8	270.8	307.8	311.0	318.3	300.6	375.5	382.7	363.1	405.2
Cholera	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Congenital Rubella Syndrome	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Creutzfeldt-Jakob disease	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.03
Cryptosporidiosis	0.03	0.38	0.32	0.38	0.22	0.45	0.87	0.46	0.46	0.70	0.64	1.33	1.62	6.26	6.53
Cyclosporiasis	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
Dengue Fever	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.06	0.00	0.09	0.05
Diphtheria	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Escherichia coli</i> O157:H7 and other Shiga toxin producing <i>E. coli</i>	0.41	0.51	0.45	0.41	0.83	1.30	0.55	1.04	0.72	0.87	0.84	1.10	1.25	0.96	3.71
Ehrlichiosis	0.00	0.00	0.00	0.00	0.06	0.38	0.35	0.70	0.38	1.04	1.42	2.78	1.36	3.07	3.32
Giardiasis	8.01	6.55	5.05	4.83	4.71	4.83	2.78	0.00	2.46	4.20	4.81	5.80	4.84	4.98	4.72
Gonorrhea	156.9	179.7	155.7	153.9	134.3	136.4	151.7	139.6	134.0	131.7	131.7	145.8	149.8	139.9	143.0
<i>Haemophilus influenzae</i> , Invasive Disease (Total)	1.40	1.05	0.99	1.05	1.11	1.49	1.33	1.39	1.54	1.51	1.94	2.14	2.26	2.70	2.47
<i>Haemophilus influenzae</i> , Invasive Disease, type b, <5 yrs	1.77	1.32	0.00	0.44	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hantavirus	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hemolytic Uremic Syndrome, post diarrheal	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.12	0.09	0.12	0.06	0.14	0.09	0.23	1.40
Hepatitis A	12.56	47.59	79.99	45.81	21.20	16.98	7.85	3.36	1.51	0.84	0.55	0.17	0.32	0.38	0.36
Hepatitis B	4.10	5.60	1.91	2.00	5.37	5.88	5.19	3.33	3.22	2.12	2.32	1.71	2.78	4.40	3.54
Hepatitis C	0.00	0.03	0.25	0.32	0.73	0.41	0.38	0.17	0.61	0.17	0.20	0.41	0.55	1.42	0.58
Influenza Associated Pediatric Mortality	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Legionellosis	0.22	0.25	0.51	0.13	0.57	0.19	0.14	0.20	0.14	0.29	0.70	0.29	0.29	0.26	0.30
Leprosy	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Leptospirosis	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00
Listeriosis	0.35	0.35	0.16	0.29	0.60	0.38	0.23	0.06	0.26	0.09	0.12	0.12	0.14	0.06	0.19
Lyme Disease	3.53	1.81	1.08	1.43	0.38	0.25	0.03	0.00	0.00	0.00	0.09	0.00	0.00	0.03	0.05
Malaria	0.29	0.03	0.10	0.29	0.13	0.06	0.29	0.14	0.35	0.12	0.29	0.35	0.32	0.29	0.14
Measles	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table Two. Incidence Rate per 100,000 Oklahoma Population of Reported Communicable Diseases, Oklahoma 1979 - 2008*

Disease	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Meningococcal Invasive Disease	1.65	1.56	1.46	1.43	1.40	1.27	0.99	0.93	0.72	0.70	0.29	0.52	0.43	0.67	0.47
Mumps	0.41	0.03	0.13	0.10	0.13	0.16	0.09	0.00	0.09	0.06	0.03	0.06	0.32	0.20	0.03
Pertussis	0.60	1.49	0.67	1.91	1.14	1.27	1.74	1.25	3.91	3.07	3.54	3.62	1.85	1.68	2.75
Plague	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Poliomyelitis	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Psittacosis	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Q Fever	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.00	0.06	0.08
Rabies (Human)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Rocky Mountain spotted fever	1.14	1.53	1.43	0.95	1.24	0.92	1.07	2.00	2.87	4.00	5.51	5.97	3.91	5.42	7.33
Rubella	0.13	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Staphylococcus aureus</i> , Vancomycin intermediate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
<i>Staphylococcus aureus</i> , Vancomycin resistant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<i>Streptococcus pneumoniae</i> , Invasive disease, <5 years	32.23	21.19	8.39	9.71	11.48	19.87	16.08	24.54	28.35	34.27	22.00	20.31	30.89	32.58	28.51
<i>Streptococcus pyogenes</i> (Group A), Invasive disease	0.00	0.00	0.25	0.10	0.03	0.38	0.81	1.42	1.62	2.87	2.12	3.83	3.62	2.52	3.79
Salmonellosis	14.12	14.97	16.53	12.46	15.93	14.88	11.71	14.58	15.19	14.32	12.32	12.98	17.50	20.55	24.74
Shigellosis	6.36	8.46	9.70	9.31	22.63	17.80	3.80	4.29	20.78	31.24	20.98	27.13	5.68	4.69	6.42
St. Louis Encephalitis	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Syphilis	12.68	15.55	12.65	8.74	8.39	11.03	7.10	5.36	5.30	4.09	2.55	2.12	5.59	4.35	5.57
Tetanus	0.03	0.00	0.03	0.06	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.00
Trichinellosis	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tuberculosis	8.30	7.53	6.39	6.71	6.29	6.61	4.46	5.62	5.51	4.72	5.16	4.17	4.17	4.32	2.75
Tularemia	0.13	0.22	0.13	0.16	0.16	0.22	0.32	0.20	0.29	0.26	0.55	0.58	0.09	0.52	0.19
Typhoid Fever	0.10	0.03	0.00	0.10	0.03	0.00	0.03	0.03	0.06	0.03	0.03	0.03	0.00	0.09	0.08
<i>Vibrio</i> spp.	0.00	0.10	0.03	0.00	0.29	0.03	0.00	0.00	0.03	0.03	0.00	0.09	0.03	0.06	0.14
<i>Vibrio parahaemolyticus</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03
<i>Vibrio vulnificus</i>	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.00	0.03	0.03	0.00	0.00	0.00
West Nile Virus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	2.29	0.64	0.96	1.39	3.10	0.25

*Oklahoma population numbers are obtained from the U.S. Census Bureau Decennial Census numbers. 2008 population numbers are obtained from the 2008 U.S. Census Bureau Population Estimates.

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Campylobacteriosis		Cryptosporidiosis		<i>E. coli</i> O157:H7 and other STEC		Ehrlichiosis	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Adair County	10	45.85	0	0.00	0	0.00	4	18.34
Alfalfa County	0	0.00	0	0.00	0	0.00	0	0.00
Atoka County	1	6.82	0	0.00	0	0.00	2	13.65
Beaver County	7	133.38	0	0.00	0	0.00	0	0.00
Beckham County	6	28.39	0	0.00	0	0.00	0	0.00
Blaine County	0	0.00	0	0.00	0	0.00	0	0.00
Bryan County	2	4.99	0	0.00	0	0.00	0	0.00
Caddo County	3	10.34	0	0.00	0	0.00	0	0.00
Canadian County	17	16.03	4	3.77	2	1.89	1	0.94
Carter County	3	6.25	5	10.42	0	0.00	0	0.00
Cherokee County	9	19.68	1	2.19	4	8.75	2	4.37
Choctaw County	3	20.15	0	0.00	0	0.00	0	0.00
Cimarron County	0	0.00	0	0.00	0	0.00	0	0.00
Cleveland County	14	5.84	70	29.20	2	0.83	3	1.25
Coal County	1	17.48	0	0.00	0	0.00	0	0.00
Comanche County	2	1.79	14	12.53	2	1.79	0	0.00
Cotton County	1	16.15	0	0.00	0	0.00	0	0.00
Craig County	3	19.83	0	0.00	0	0.00	4	26.43
Creek County	7	10.03	1	1.43	3	4.30	5	7.16
Custer County	4	15.14	1	3.79	1	3.79	0	0.00
Delaware County	6	14.84	0	0.00	7	17.32	6	14.84
Dewey County	0	0.00	0	0.00	0	0.00	0	0.00
Ellis County	0	0.00	0	0.00	0	0.00	0	0.00
Garfield County	14	24.07	1	1.72	2	3.44	0	0.00
Garvin County	2	7.34	1	3.67	0	0.00	0	0.00
Grady County	3	5.87	8	15.67	2	3.92	0	0.00
Grant County	1	22.47	0	0.00	0	0.00	0	0.00
Greer County	0	0.00	0	0.00	0	0.00	0	0.00
Harmon County	1	35.17	0	0.00	0	0.00	0	0.00
Harper County	0	0.00	0	0.00	0	0.00	0	0.00
Haskell County	2	16.46	3	24.69	0	0.00	1	8.23
Hughes County	2	14.68	0	0.00	0	0.00	1	7.34
Jackson County	11	43.59	5	19.81	1	3.96	0	0.00
Jefferson County	0	0.00	0	0.00	0	0.00	0	0.00
Johnston County	3	29.17	0	0.00	0	0.00	0	0.00
Kay County	11	24.11	0	0.00	0	0.00	0	0.00
Kingfisher County	1	6.99	0	0.00	0	0.00	0	0.00
Kiowa County	2	21.28	1	10.64	0	0.00	0	0.00

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Campylobacteriosis		Cryptosporidiosis		<i>E. coli</i> O157:H7 and other STEC		Ehrlichiosis	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Latimer County	2	18.94	0	0.00	0	0.00	3	28.41
Le Flore County	3	6.02	0	0.00	0	0.00	5	10.04
Lincoln County	7	21.77	0	0.00	2	6.22	0	0.00
Logan County	2	5.25	9	23.62	0	0.00	0	0.00
Love County	0	0.00	2	21.85	0	0.00	0	0.00
McCain County	3	42.18	25	351.52	2	28.12	1	14.06
McCurtain County	5	33.51	0	0.00	1	6.70	2	13.41
McIntosh County	0	0.00	0	0.00	0	0.00	0	0.00
Major County	0	0.00	0	0.00	0	0.00	0	0.00
Marshall County	0	0.00	0	0.00	0	0.00	1	2.98
Mayes County	14	71.07	0	0.00	21	106.61	5	25.38
Murray County	1	7.82	2	15.64	1	7.82	0	0.00
Muskogee County	14	19.64	3	4.21	1	1.40	5	7.01
Noble County	3	26.86	0	0.00	0	0.00	0	0.00
Nowata County	0	0.00	0	0.00	1	9.32	1	9.32
Okfuskee County	3	26.85	0	0.00	0	0.00	2	17.90
Oklahoma County	128	18.11	44	6.23	2	0.28	11	1.56
Okmulgee County	7	17.85	1	2.55	3	7.65	2	5.10
Osage County	1	2.20	2	4.40	2	4.40	1	2.20
Ottawa County	6	18.84	0	0.00	0	0.00	3	9.42
Pawnee County	2	12.26	2	12.26	0	0.00	0	0.00
Payne County	9	11.50	0	0.00	4	5.11	3	3.83
Pittsburg County	10	22.17	0	0.00	2	4.43	11	24.38
Pontotoc County	3	8.11	1	2.70	0	0.00	1	2.70
Pottawatomie County	12	17.24	2	2.87	3	4.31	1	1.44
Pushmataha County	0	0.00	1	8.54	0	0.00	2	17.08
Roger Mills County	0	0.00	0	0.00	0	0.00	0	0.00
Rogers County	11	13.05	0	0.00	11	13.05	4	4.74
Seminole County	8	33.06	0	0.00	1	4.13	0	0.00
Sequoyah County	4	9.75	1	2.44	0	0.00	3	7.31
Stephens County	10	22.99	7	16.09	0	0.00	0	0.00
Texas County	7	34.51	0	0.00	0	0.00	0	0.00
Tillman County	0	0.00	0	0.00	1	12.66	0	0.00
Tulsa County	43	7.26	21	3.55	42	7.09	18	3.04
Wagoner County	8	11.60	0	0.00	6	8.70	2	2.90
Washington County	2	3.96	0	0.00	2	3.96	5	9.91
Washita County	2	17.08	0	0.00	0	0.00	0	0.00
Woods County	2	23.75	0	0.00	0	0.00	0	0.00
Woodward County	2	10.08	0	0.00	1	5.04	0	0.00
State of Oklahoma	486	13.34	238	6.53	135	3.70	121	3.32

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Giardiasis		<i>Haemophilus influenzae</i> , invasive		Hepatitis A		Hepatitis B	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Adair County	0	0.00	0	0.00	0	0.00	1	4.58
Alfalfa County	0	0.00	0	0.00	0	0.00	0	0.00
Atoka County	1	6.82	0	0.00	0	0.00	4	27.29
Beaver County	1	19.05	0	0.00	0	0.00	0	0.00
Beckham County	3	14.19	0	0.00	0	0.00	2	9.46
Blaine County	0	0.00	0	0.00	0	0.00	1	7.90
Bryan County	1	2.49	0	0.00	0	0.00	1	2.49
Caddo County	1	3.45	3	10.34	0	0.00	0	0.00
Canadian County	5	4.71	1	0.94	0	0.00	1	0.94
Carter County	2	4.17	0	0.00	0	0.00	1	2.08
Cherokee County	0	0.00	0	0.00	0	0.00	1	2.19
Choctaw County	1	6.72	0	0.00	0	0.00	2	13.43
Cimarron County	2	78.25	0	0.00	0	0.00	0	0.00
Cleveland County	13	5.42	4	1.67	3	1.25	3	1.25
Coal County	0	0.00	0	0.00	0	0.00	1	17.48
Comanche County	2	1.79	5	4.47	1	0.89	3	2.68
Cotton County	0	0.00	0	0.00	0	0.00	0	0.00
Craig County	0	0.00	0	0.00	0	0.00	2	13.22
Creek County	3	4.30	5	7.16	0	0.00	4	5.73
Custer County	1	3.79	0	0.00	0	0.00	0	0.00
Delaware County	1	2.47	2	4.95	0	0.00	0	0.00
Dewey County	0	0.00	0	0.00	0	0.00	0	0.00
Ellis County	0	0.00	0	0.00	0	0.00	0	0.00
Garfield County	3	5.16	1	1.72	0	0.00	3	5.16
Garvin County	1	3.67	1	3.67	0	0.00	2	7.34
Grady County	2	3.92	1	1.96	0	0.00	1	1.96
Grant County	0	0.00	0	0.00	0	0.00	0	0.00
Greer County	0	0.00	0	0.00	0	0.00	0	0.00
Harmon County	0	0.00	0	0.00	0	0.00	0	0.00
Harper County	0	0.00	0	0.00	0	0.00	1	30.40
Haskell County	1	8.23	0	0.00	0	0.00	1	8.23
Hughes County	1	7.34	1	7.34	0	0.00	0	0.00
Jackson County	3	11.89	0	0.00	0	0.00	0	0.00
Jefferson County	0	0.00	0	0.00	0	0.00	0	0.00
Johnston County	0	0.00	1	9.72	0	0.00	2	19.44
Kay County	0	0.00	1	2.19	0	0.00	0	0.00
Kingfisher County	0	0.00	3	20.98	0	0.00	0	0.00
Kiowa County	0	0.00	0	0.00	0	0.00	0	0.00

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Giardiasis		<i>Haemophilus influenzae</i> , invasive		Hepatitis A		Hepatitis B	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Latimer County	0	0.00	0	0.00	0	0.00	0	0.00
Le Flore County	0	0.00	0	0.00	0	0.00	2	4.02
Lincoln County	0	0.00	5	15.55	0	0.00	1	3.11
Logan County	0	0.00	2	5.25	0	0.00	2	5.25
Love County	1	10.92	0	0.00	0	0.00	0	0.00
McClain County	4	56.24	1	14.06	0	0.00	0	0.00
McCurtain County	0	0.00	0	0.00	0	0.00	0	0.00
McIntosh County	3	7.52	3	7.52	0	0.00	2	5.01
Major County	0	0.00	0	0.00	0	0.00	0	0.00
Marshall County	0	0.00	0	0.00	0	0.00	1	2.98
Mayes County	0	0.00	2	10.15	0	0.00	1	5.08
Murray County	1	7.82	1	7.82	0	0.00	1	7.82
Muskogee County	1	1.40	0	0.00	0	0.00	3	4.21
Noble County	2	17.91	1	8.95	0	0.00	1	8.95
Nowata County	1	9.32	0	0.00	0	0.00	1	9.32
Okfuskee County	1	8.95	1	8.95	0	0.00	3	26.85
Oklahoma County	38	5.38	17	2.41	8	1.13	28	3.96
Okmulgee County	3	7.65	0	0.00	0	0.00	4	10.20
Osage County	0	0.00	0	0.00	0	0.00	1	2.20
Ottawa County	5	15.70	1	3.14	0	0.00	2	6.28
Pawnee County	3	18.40	1	6.13	0	0.00	0	0.00
Payne County	6	7.66	1	1.28	0	0.00	1	1.28
Pittsburg County	2	4.43	3	6.65	0	0.00	2	4.43
Pontotoc County	2	5.41	1	2.70	0	0.00	0	0.00
Pottawatomie County	2	2.87	2	2.87	0	0.00	8	11.49
Pushmataha County	3	25.62	2	17.08	0	0.00	0	0.00
Roger Mills County	0	0.00	0	0.00	0	0.00	0	0.00
Rogers County	7	8.30	3	3.56	0	0.00	2	2.37
Seminole County	2	8.26	0	0.00	0	0.00	4	16.53
Sequoyah County	1	2.44	0	0.00	0	0.00	1	2.44
Stephens County	2	4.60	0	0.00	0	0.00	0	0.00
Texas County	0	0.00	0	0.00	0	0.00	0	0.00
Tillman County	0	0.00	0	0.00	0	0.00	0	0.00
Tulsa County	25	4.22	10	1.69	1	0.17	17	2.87
Wagoner County	5	7.25	1	1.45	0	0.00	2	2.90
Washington County	1	1.98	3	5.95	0	0.00	0	0.00
Washita County	1	8.54	0	0.00	0	0.00	0	0.00
Woods County	0	0.00	0	0.00	0	0.00	0	0.00
Woodward County	2	10.08	0	0.00	0	0.00	2	10.08
State of Oklahoma	172	4.72	90	2.47	13	0.36	129	3.54

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Hepatitis C		Meningococcal invasive disease		Pertussis		Rocky Mountain Spotted Fever	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Adair County	0	0.00	0	0.00	1	4.58	11	50.43
Alfalfa County	0	0.00	0	0.00	0	0.00	0	0.00
Atoka County	0	0.00	0	0.00	0	0.00	3	20.47
Beaver County	0	0.00	0	0.00	0	0.00	0	0.00
Beckham County	0	0.00	0	0.00	0	0.00	0	0.00
Blaine County	0	0.00	0	0.00	0	0.00	0	0.00
Bryan County	0	0.00	0	0.00	1	2.49	2	4.99
Caddo County	0	0.00	0	0.00	0	0.00	1	3.45
Canadian County	0	0.00	0	0.00	3	2.83	2	1.89
Carter County	0	0.00	0	0.00	0	0.00	4	8.34
Cherokee County	0	0.00	0	0.00	0	0.00	0	0.00
Choctaw County	0	0.00	0	0.00	0	0.00	1	6.72
Cimarron County	0	0.00	2	78.25	0	0.00	0	0.00
Cleveland County	1	0.42	1	0.42	1	0.42	9	3.75
Coal County	0	0.00	0	0.00	0	0.00	0	0.00
Comanche County	1	0.89	0	0.00	1	0.89	1	0.89
Cotton County	0	0.00	0	0.00	0	0.00	0	0.00
Craig County	0	0.00	0	0.00	0	0.00	3	19.83
Creek County	0	0.00	0	0.00	1	1.43	2	2.86
Custer County	0	0.00	0	0.00	1	3.79	0	0.00
Delaware County	1	2.47	0	0.00	2	4.95	7	17.32
Dewey County	0	0.00	0	0.00	0	0.00	0	0.00
Ellis County	0	0.00	0	0.00	0	0.00	0	0.00
Garfield County	0	0.00	1	1.72	0	0.00	1	1.72
Garvin County	0	0.00	2	7.34	0	0.00	2	7.34
Grady County	1	1.96	0	0.00	2	3.92	4	7.83
Grant County	0	0.00	0	0.00	0	0.00	0	0.00
Greer County	2	35.01	0	0.00	0	0.00	0	0.00
Harmon County	0	0.00	0	0.00	0	0.00	1	35.17
Harper County	0	0.00	0	0.00	0	0.00	0	0.00
Haskell County	1	8.23	0	0.00	0	0.00	8	65.83
Hughes County	0	0.00	0	0.00	0	0.00	3	22.02
Jackson County	0	0.00	0	0.00	2	7.93	0	0.00
Jefferson County	0	0.00	0	0.00	0	0.00	1	16.08
Johnston County	0	0.00	0	0.00	0	0.00	0	0.00
Kay County	1	2.19	0	0.00	0	0.00	0	0.00
Kingfisher County	0	0.00	0	0.00	2	13.99	1	6.99
Kiowa County	0	0.00	0	0.00	0	0.00	0	0.00

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Hepatitis C		Meningococcal invasive disease		Pertussis		Rocky Mountain Spotted Fever	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Latimer County	0	0.00	0	0.00	0	0.00	7	66.28
Le Flore County	1	2.01	0	0.00	0	0.00	33	66.26
Lincoln County	0	0.00	0	0.00	4	12.44	9	27.99
Logan County	1	2.62	1	2.62	0	0.00	2	5.25
Love County	0	0.00	0	0.00	0	0.00	0	0.00
McClain County	0	0.00	0	0.00	0	0.00	4	56.24
McCurtain County	0	0.00	0	0.00	2	13.41	6	40.22
McIntosh County	1	2.51	0	0.00	0	0.00	4	10.02
Major County	0	0.00	0	0.00	1	3.09	0	0.00
Marshall County	0	0.00	0	0.00	0	0.00	2	5.96
Mayes County	1	5.08	0	0.00	0	0.00	0	0.00
Murray County	0	0.00	0	0.00	0	0.00	1	7.82
Muskogee County	0	0.00	0	0.00	5	7.01	8	11.22
Noble County	0	0.00	0	0.00	0	0.00	2	17.91
Nowata County	0	0.00	0	0.00	0	0.00	0	0.00
Okfuskee County	0	0.00	0	0.00	0	0.00	1	8.95
Oklahoma County	4	0.57	6	0.85	25	3.54	15	2.12
Okmulgee County	0	0.00	0	0.00	0	0.00	5	12.75
Osage County	0	0.00	0	0.00	1	2.20	0	0.00
Ottawa County	1	3.14	0	0.00	2	6.28	7	21.98
Pawnee County	0	0.00	0	0.00	2	12.26	2	12.26
Payne County	0	0.00	0	0.00	1	1.28	3	3.83
Pittsburg County	0	0.00	0	0.00	2	4.43	17	37.68
Pontotoc County	0	0.00	0	0.00	0	0.00	11	29.73
Pottawatomie County	0	0.00	0	0.00	1	1.44	5	7.18
Pushmataha County	0	0.00	0	0.00	0	0.00	13	111.02
Roger Mills County	0	0.00	0	0.00	0	0.00	0	0.00
Rogers County	0	0.00	0	0.00	2	2.37	4	4.74
Seminole County	0	0.00	0	0.00	1	4.13	5	20.66
Sequoyah County	0	0.00	0	0.00	1	2.44	5	12.19
Stephens County	0	0.00	0	0.00	2	4.60	2	4.60
Texas County	0	0.00	0	0.00	0	0.00	1	4.93
Tillman County	0	0.00	0	0.00	0	0.00	0	0.00
Tulsa County	4	0.68	3	0.51	26	4.39	21	3.55
Wagoner County	0	0.00	0	0.00	2	2.90	3	4.35
Washington County	0	0.00	0	0.00	1	1.98	0	0.00
Washita County	0	0.00	0	0.00	0	0.00	0	0.00
Woods County	0	0.00	0	0.00	0	0.00	0	0.00
Woodward County	0	0.00	1	5.04	2	10.08	2	10.08
State of Oklahoma	21	0.58	17	0.47	100	2.74	267	7.33

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Salmonellosis		Shigellosis		Streptococcus, group A invasive		<i>S. pneumoniae</i> , invasive, < 5 yrs.	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Adair County	10	45.85	0	0.00	0	0.00	0	0.00
Alfalfa County	0	0.00	0	0.00	0	0.00	0	0.00
Atoka County	0	0.00	0	0.00	0	0.00	0	0.00
Beaver County	2	38.11	0	0.00	0	0.00	0	0.00
Beckham County	14	66.24	0	0.00	0	0.00	1	4.73
Blaine County	0	0.00	0	0.00	1	7.90	0	0.00
Bryan County	5	12.47	0	0.00	0	0.00	1	2.49
Caddo County	8	27.56	0	0.00	0	0.00	0	0.00
Canadian County	43	40.54	0	0.00	2	1.89	3	2.83
Carter County	15	31.26	6	12.51	1	2.08	0	0.00
Cherokee County	3	6.56	10	21.87	0	0.00	2	4.37
Choctaw County	0	0.00	2	13.43	0	0.00	0	0.00
Cimarron County	1	39.12	0	0.00	0	0.00	0	0.00
Cleveland County	55	22.94	4	1.67	8	3.34	5	2.09
Coal County	1	17.48	0	0.00	0	0.00	0	0.00
Comanche County	20	17.89	0	0.00	3	2.68	2	1.79
Cotton County	1	16.15	0	0.00	0	0.00	0	0.00
Craig County	4	26.43	0	0.00	1	6.61	0	0.00
Creek County	15	21.48	14	20.05	5	7.16	1	1.43
Custer County	12	45.43	5	18.93	0	0.00	1	3.79
Delaware County	10	24.74	0	0.00	1	2.47	0	0.00
Dewey County	0	0.00	0	0.00	0	0.00	0	0.00
Ellis County	0	0.00	0	0.00	0	0.00	0	0.00
Garfield County	12	20.63	1	1.72	2	3.44	1	1.72
Garvin County	9	33.03	0	0.00	2	7.34	1	3.67
Grady County	14	27.42	2	3.92	0	0.00	2	3.92
Grant County	1	22.47	0	0.00	0	0.00	0	0.00
Greer County	1	17.50	0	0.00	0	0.00	0	0.00
Harmon County	3	105.52	0	0.00	0	0.00	0	0.00
Harper County	5	151.98	0	0.00	0	0.00	0	0.00
Haskell County	5	41.15	0	0.00	0	0.00	0	0.00
Hughes County	2	14.68	0	0.00	2	14.68	0	0.00
Jackson County	13	51.51	0	0.00	1	3.96	0	0.00
Jefferson County	1	16.08	0	0.00	0	0.00	0	0.00
Johnston County	0	0.00	0	0.00	0	0.00	0	0.00
Kay County	10	21.91	1	2.19	1	2.19	0	0.00
Kingfisher County	10	69.93	2	13.99	0	0.00	0	0.00
Kiowa County	4	42.56	0	0.00	0	0.00	0	0.00

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Salmonellosis		Shigellosis		Streptococcus, group A invasive		<i>S. pneumoniae</i> , invasive, < 5 yrs.	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Latimer County	1	9.47	0	0.00	1	9.47	0	0.00
Le Flore County	23	46.18	0	0.00	0	0.00	0	0.00
Lincoln County	23	71.53	1	3.11	0	0.00	1	3.11
Logan County	19	49.87	1	2.62	0	0.00	0	0.00
Love County	2	21.85	2	21.85	0	0.00	0	0.00
McClain County	11	154.67	0	0.00	2	28.12	1	14.06
McCurtain County	7	46.92	0	0.00	1	6.70	0	0.00
McIntosh County	2	5.01	1	2.51	0	0.00	0	0.00
Major County	4	12.36	0	0.00	1	3.09	1	3.09
Marshall County	3	8.95	0	0.00	1	2.98	1	2.98
Mayes County	7	35.54	0	0.00	1	5.08	0	0.00
Murray County	1	7.82	0	0.00	2	15.64	0	0.00
Muskogee County	15	21.04	5	7.01	2	2.81	1	1.40
Noble County	3	26.86	0	0.00	0	0.00	0	0.00
Nowata County	1	9.32	0	0.00	0	0.00	0	0.00
Okfuskee County	4	35.80	0	0.00	0	0.00	0	0.00
Oklahoma County	167	23.63	63	8.92	49	6.93	17	2.41
Okmulgee County	1	2.55	1	2.55	0	0.00	1	2.55
Osage County	12	26.38	1	2.20	1	2.20	1	2.20
Ottawa County	5	15.70	0	0.00	2	6.28	3	9.42
Pawnee County	3	18.40	0	0.00	0	0.00	1	6.13
Payne County	18	22.99	11	14.05	4	5.11	1	1.28
Pittsburg County	6	13.30	1	2.22	0	0.00	0	0.00
Pontotoc County	12	32.43	3	8.11	2	5.41	2	5.41
Pottawatomie County	19	27.29	0	0.00	1	1.44	1	1.44
Pushmataha County	3	25.62	0	0.00	0	0.00	0	0.00
Roger Mills County	1	29.38	0	0.00	0	0.00	0	0.00
Rogers County	29	34.40	3	3.56	1	1.19	1	1.19
Seminole County	8	33.06	0	0.00	0	0.00	0	0.00
Sequoyah County	5	12.19	19	46.30	0	0.00	0	0.00
Stephens County	20	45.98	0	0.00	2	4.60	0	0.00
Texas County	11	54.23	2	9.86	0	0.00	0	0.00
Tillman County	0	0.00	1	12.66	0	0.00	0	0.00
Tulsa County	116	19.60	64	10.81	29	4.90	19	3.21
Wagoner County	19	27.55	8	11.60	2	2.90	2	2.90
Washington County	5	9.91	0	0.00	2	3.96	1	1.98
Washita County	2	17.08	0	0.00	2	17.08	1	8.54
Woods County	2	23.75	0	0.00	0	0.00	0	0.00
Woodward County	2	10.08	0	0.00	0	0.00	0	0.00
State of Oklahoma	901	24.72	234	6.42	138	3.79	76	2.09

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Tuberculosis		Tularemia		West Nile Virus	
	Number	Rate	Number	Rate	Number	Rate
Adair County	0	0.00	1	4.58	0	0.00
Alfalfa County	0	0.00	0	0.00	0	0.00
Atoka County	0	0.00	0	0.00	0	0.00
Beaver County	0	0.00	0	0.00	0	0.00
Beckham County	0	0.00	0	0.00	0	0.00
Blaine County	0	0.00	0	0.00	0	0.00
Bryan County	2	4.99	0	0.00	0	0.00
Caddo County	1	3.45	0	0.00	1	3.45
Canadian County	2	1.89	0	0.00	0	0.00
Carter County	0	0.00	0	0.00	1	2.08
Cherokee County	0	0.00	0	0.00	0	0.00
Choctaw County	0	0.00	0	0.00	0	0.00
Cimarron County	0	0.00	0	0.00	0	0.00
Cleveland County	4	1.67	0	0.00	0	0.00
Coal County	0	0.00	0	0.00	0	0.00
Comanche County	6	5.37	0	0.00	1	0.89
Cotton County	0	0.00	0	0.00	0	0.00
Craig County	1	6.61	0	0.00	0	0.00
Creek County	2	2.86	0	0.00	0	0.00
Custer County	0	0.00	0	0.00	0	0.00
Delaware County	1	2.47	0	0.00	0	0.00
Dewey County	2	45.57	0	0.00	0	0.00
Ellis County	0	0.00	0	0.00	0	0.00
Garfield County	8	13.75	0	0.00	0	0.00
Garvin County	1	3.67	0	0.00	0	0.00
Grady County	0	0.00	0	0.00	0	0.00
Grant County	0	0.00	0	0.00	0	0.00
Greer County	0	0.00	0	0.00	0	0.00
Harmon County	0	0.00	0	0.00	0	0.00
Harper County	0	0.00	0	0.00	0	0.00
Haskell County	1	8.23	0	0.00	0	0.00
Hughes County	0	0.00	0	0.00	0	0.00
Jackson County	0	0.00	0	0.00	0	0.00
Jefferson County	1	16.08	0	0.00	0	0.00
Johnston County	0	0.00	0	0.00	0	0.00
Kay County	0	0.00	0	0.00	0	0.00
Kingfisher County	0	0.00	0	0.00	0	0.00
Kiowa County	0	0.00	0	0.00	0	0.00

Table Three. Reportable Diseases by County, Oklahoma, 2008[^]

County	Tuberculosis		Tularemia		West Nile Virus	
	Number	Rate	Number	Rate	Number	Rate
Latimer County	0	0.00	0	0.00	0	0.00
Le Flore County	1	2.01	0	0.00	1	2.01
Lincoln County	0	0.00	0	0.00	0	0.00
Logan County	0	0.00	0	0.00	1	2.62
Love County	0	0.00	0	0.00	0	0.00
McClain County	1	14.06	0	0.00	0	0.00
McCurtain County	2	13.41	0	0.00	0	0.00
McIntosh County	1	2.51	0	0.00	0	0.00
Major County	0	0.00	0	0.00	0	0.00
Marshall County	0	0.00	0	0.00	0	0.00
Mayes County	1	5.08	0	0.00	0	0.00
Murray County	0	0.00	0	0.00	0	0.00
Muskogee County	2	2.81	0	0.00	0	0.00
Noble County	0	0.00	0	0.00	0	0.00
Nowata County	0	0.00	0	0.00	0	0.00
Okfuskee County	1	8.95	0	0.00	0	0.00
Oklahoma County	28	3.96	3	0.42	0	0.00
Okmulgee County	0	0.00	0	0.00	0	0.00
Osage County	0	0.00	0	0.00	0	0.00
Ottawa County	0	0.00	0	0.00	0	0.00
Pawnee County	0	0.00	0	0.00	0	0.00
Payne County	1	1.28	0	0.00	0	0.00
Pittsburg County	4	8.87	0	0.00	1	2.22
Pontotoc County	0	0.00	0	0.00	0	0.00
Pottawatomie County	0	0.00	0	0.00	0	0.00
Pushmataha County	0	0.00	0	0.00	1	8.54
Roger Mills County	0	0.00	0	0.00	0	0.00
Rogers County	1	1.19	0	0.00	0	0.00
Seminole County	1	4.13	0	0.00	0	0.00
Sequoyah County	1	2.44	0	0.00	0	0.00
Stephens County	0	0.00	0	0.00	0	0.00
Texas County	1	4.93	0	0.00	0	0.00
Tillman County	1	12.66	0	0.00	0	0.00
Tulsa County	19	3.21	3	0.51	1	0.17
Wagoner County	0	0.00	0	0.00	0	0.00
Washington County	2	3.96	0	0.00	0	0.00
Washita County	0	0.00	0	0.00	0	0.00
Woods County	0	0.00	0	0.00	0	0.00
Woodward County	0	0.00	0	0.00	1	5.04
State of Oklahoma	100	2.74	7	0.19	9	0.25

[^]2008 rates illustrate county specific incidence rates per 100,000 population. Rates calculated by dividing the number of reported cases by the 2008 Census Bureau county population estimate and multiplying by 100,000

Table Three. Reportable Diseases by County, Oklahoma, 2008^

County	Chlamydia		Gonorrhea		Syphilis (Total Early)	
	Number	Rate	Number	Rate	Number	Rate
Adair County	76	348.45	4	18.34	*	*
Alfalfa County	*	*	*	*	*	*
Atoka County	32	218.36	4	27.29	*	*
Beaver County	4	76.22	*	*	*	*
Beckham County	67	316.99	19	89.89	*	*
Blaine County	35	276.48	13	102.69	*	*
Bryan County	153	381.46	22	54.85	*	*
Caddo County	102	351.43	31	106.81	*	*
Canadian County	234	220.59	43	40.54	*	*
Carter County	192	400.18	53	110.46	*	*
Cherokee County	172	376.10	38	83.09	*	*
Choctaw County	91	611.15	24	161.18	*	*
Cimarron County	*	*	*	*	*	*
Cleveland County	639	266.52	169	70.49	3	1.25
Coal County	13	227.23	*	*	*	*
Comanche County	771	689.80	249	222.77	*	*
Cotton County	18	290.74	5	80.76	*	*
Craig County	30	198.26	5	33.04	*	*
Creek County	177	253.50	35	50.13	*	*
Custer County	59	223.38	4	15.14	*	*
Delaware County	107	264.69	6	14.84	*	*
Dewey County	*	*	*	*	*	*
Ellis County	3	75.55	*	*	*	*
Garfield County	213	366.19	48	82.52	*	*
Garvin County	77	282.60	25	91.75	*	*
Grady County	123	240.86	32	62.66	*	*
Grant County	3	67.42	*	*	*	*
Greer County	28	490.11	3	52.51	*	*
Harmon County	4	140.70	*	*	*	*
Harper County	6	182.37	*	*	*	*
Haskell County	31	255.10	5	41.15	*	*
Hughes County	35	256.88	9	66.06	*	*
Jackson County	134	530.99	24	95.10	*	*
Jefferson County	20	321.60	*	*	*	*
Johnston County	23	223.60	*	*	*	*
Kay County	83	181.89	16	35.06	*	*
Kingfisher County	18	125.87	5	34.97	*	*
Kiowa County	18	191.51	*	*	*	*

Table Three. Reportable Diseases by County, Oklahoma, 2008[^]

County	Chlamydia		Gonorrhea		Syphilis (Total Early)	
	Number	Rate	12	Rate	Number	Rate
Latimer County	34	321.94	14	132.56	*	*
Le Flore County	147	295.17	38	76.30	*	*
Lincoln County	69	214.60	*	*	*	*
Logan County	164	430.42	*	*	*	*
Love County	20	218.46	3	32.77	*	*
McClain County	58	815.52	11	154.67	*	*
McCurtain County	159	1065.76	81	542.93	*	*
McIntosh County	84	210.46	15	37.58	*	*
Major County	9	27.81	*	*	*	*
Marshall County	33	98.41	3	8.95	*	*
Mayes County	85	431.52	7	35.54	*	*
Murray County	18	140.80	*	*	*	*
Muskogee County	467	655.18	143	200.62	*	*
Noble County	15	134.30	*	*	*	*
Nowata County	11	102.53	*	*	*	*
Okfuskee County	20	179.02	5	44.75	*	*
Oklahoma County	4361	617.17	2108	298.32	123	17.41
Okmulgee County	138	351.87	35	89.24	*	*
Osage County	78	171.47	24	52.76	*	*
Ottawa County	126	395.62	7	21.98	*	*
Pawnee County	30	183.97	3	18.40	*	*
Payne County	284	362.80	38	48.54	*	*
Pittsburg County	125	277.07	27	59.85	*	*
Pontotoc County	137	370.28	7	18.92	*	*
Pottawatomie County	260	373.48	52	74.70	*	*
Pushmataha County	20	170.79	4	34.16	*	*
Roger Mills County	5	146.89	3	88.13	*	*
Rogers County	155	183.87	16	18.98	*	*
Seminole County	116	479.34	37	152.89	*	*
Sequoyah County	110	268.07	8	19.50	*	*
Stephens County	106	243.69	27	62.07	*	*
Texas County	18	88.74	*	*	*	*
Tillman County	29	367.14	3	37.98	*	*
Tulsa County	3208	541.91	1475	249.16	30	5.07
Wagoner County	118	171.11	64	92.81	*	*
Washington County	90	178.39	25	49.55	*	*
Washita County	15	128.11	3	25.62	*	*
Woods County	12	142.48	*	*	*	*
Woodward County	30	151.22	3	15.12	*	*
State of Oklahoma	14759	404.98	5207	142.88	203	5.57

*Confidentiality concerns restrict releasing data for counties in Oklahoma that have less than 3 cases

Oklahoma Public Health Laboratory Annual Report

Mission

The Oklahoma State Public Health Laboratory shall implement and provide essential public health laboratory services to State and County Health Departments, Agency Programs, and Private Health Providers consistent with the public health goals of the Oklahoma State Board of Health.

Primary Duties

- Analytical services for the State Department of Health, local government and Tribal units, health care practitioners, and private citizens;
- Specialized public health laboratory procedures and reference testing;
- Training, technical assistance and consultation for private clinical laboratories of Oklahoma;
- Guidance and training for detection and identification of a terrorist event;
- Applied research and University instruction related to the public health protection mission of the Laboratory;
- Pharmacy services to State County Health Departments.

Narrative:

The Oklahoma State Department of Health, Public Health Laboratory (PHL) Service has been in continuous operation since 1907, when the Oklahoma Legislature authorized funds for a state PHL. This laboratory has had a vital role in the detection of infectious disease outbreaks, patient diagnostic testing, and the tracking of disease trends in Oklahoma. In recent years, the laboratory has been very actively involved in developing rapid molecular methods for identifying possible agents of bioterrorism. These methods have also been applied to the rapid diagnosis of infectious diseases and tests for inherited newborn metabolic diseases.

The current laboratory facility was built in 1972 and increasing governmental requirements for containment of hot pathogens, safety of personnel and the public, laboratory of sophistication have slowed to some degree the progress of the PHL. The pursuit of molecular methods for more rapid and sensitive diagnostics along with the newly available automated equipment necessary to handle high volume testing has caused problems for the PHL in terms of space and containment of very infective agents. The Public Health Laboratory Service though continues to evolve into a state-of-the-art laboratory for Oklahoma. As the State PHL, this laboratory must remain at the cutting edge of diagnostic testing in order to provide the testing, reference, and training services for the citizens of Oklahoma. This remains the most important goal for the PHL in 2008. This goal supports the Agency mission of protecting, promoting and enhancing the health of the citizens of Oklahoma.

In 2008, this service performed 586,558 analytical tests. The number though does not include the critical activities of pre-analytical (accessioning) and post-analytical (result reporting) sections for each submitted specimen. The table below shows the testing volume for each laboratory section.

<u>Laboratory</u>	<u>Test Number</u>	<u>Percent Tests</u>
Newborn Screening	416,156	71%
Virology	70,145	11%
Immunology	67,895	12%
Molecular	15,326	3%
TB/Mycology	5,560	1%
Bacteriology/Parasitology	11,476	2%

Newborn Screening Laboratory

The newborn screening section has added mass spectrometry instrumentation that gives the laboratory the technical capacity to perform several new tests to detect additional metabolic disorders. This section has made significant progress in 2008 towards addition and validation of newborn metabolic screening tests. Plans have been made to increase the screening test panel from the current 8 disorders to over 40 metabolic disorders. The expansion contract for software, reagents & equipment was awarded in October 2007. On site expansion meetings began in December 2007. Delivery dates for equipment and software were finalized. All new test validation was completed in May 2009.

Immunology/ Serology Laboratory

The Immunology section supports the OSDH HIV/STD Service, as well as, many other Oklahoma healthcare providers by performing human immunodeficiency virus (HIV) testing. In 2008, the Immunology section began using a newer enzyme linked immunoassay (EIA) for HIV antibody screening and for the Western Blot confirmation. Testing for West Nile virus, measles, hepatitis B and C, syphilis, and tick-borne diseases are also available through this section.

Virology/ CT-GC Laboratory

The virology section participates yearly as a World Health Organization (WHO) Collaborating Laboratory for isolation and identification of influenza viruses. The laboratory assists the WHO by providing the viral strain characterization of all Oklahoma influenza isolates in order to help in the determination of each year's vaccine strain selection for an effective vaccine. The virology laboratory collaborated with the Molecular laboratory in the implementation of the Oklahoma Pandemic Influenza Management Plan. The rabies laboratory continues to play a key role in the prevention and control of rabies in Oklahoma. It is the only laboratory in Oklahoma able to routinely test for animal rabies. In 2008, 4.0% of the animal specimens received were positive for the rabies virus. The leading rabies positive species were skunks. The section also participated in the Infertility Prevention Project by testing for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*, using an amplified DNA assay. Urine samples from the juvenile detention centers, a high-risk population, were also tested using this assay.

Tuberculosis/ Mycology Laboratory

The Mycobacteriology section analyzes samples from a variety of sources for the isolation and identification of *Mycobacterium tuberculosis* complex. In 2008, the Mycobacteriology laboratory processed over 5,000 patient specimens. Slightly over 18% of the specimens processed had *Mycobacterium* spp. isolated and 7.0% of the specimens were positive for *Mycobacterium tuberculosis*. The laboratory continues to use a high-pressure liquid chromatography (HPLC) system to identify organisms through the analysis of mycolic acid patterns. The use of the HPLC has decreased the time from growth detection to identification to one day. No new assays are coming on board in the immediate future; however, the laboratory continues to monitor technological trends and availability of new assays in mycobacteriology diagnostics. This laboratory also performs reference mycology testing. This section identifies yeasts and molds for clinical laboratories across the state. Presently, only fungal isolates, not patient specimens, can be accepted for identification due to fiscal constraints. The PHL readily accepts any dimorphic or suspected dimorphic submission. The laboratory provides confirmation capability for the select agent, *Coccidioides immitis*, and all other systemic fungi.

Bacteriology/ Parasitology Laboratory

The Microbiology section has begun working with the molecular diagnostic section to improve our bacterial identification reference service through the application of molecular methods to perform DNA sequencing to help in the identification of extremely unusual bacterial isolates. The microbiology section received 32 isolates referred because they could not be ruled out as possible bioterrorism agents by Oklahoma sentinel clinical laboratories. Of these 32 referred isolates, 3 were identified as *Francisella tularensis*. The microbiology section tested 11 letters with suspicious powders that were received by Chase Banks located throughout the state for bioterrorism agents.

Additionally, the United States Postal Inspection Service requested that our laboratory test 2 letters related to this incident that were from other states.

This section also saw a 15% increase in *Salmonella species* isolates received in 2008. This increase resulted in the detection of 31 local clusters and 40 matches to national outbreaks. 2008 also saw a 5% increase in specimens positive for *Bordetella pertussis*. In the fall of 2008, the microbiology section performed analysis on human and environmental samples associated with the Northeastern Oklahoma GI Outbreak. The causative agent *Escherichia coli* O111 was isolated and identified within 72 hours of receiving the first specimens. As a result of this outbreak, the microbiology section assisted numerous hospitals statewide in developing the capacity to detect the presence of shiga-toxin in stool specimens. The microbiology and parasitology section successfully completed all external proficiency tests with perfect scores including for BT agents.

Molecular Diagnostics Laboratory

In 2008, molecular personnel received additional Pulse Field Gel Electrophoresis (PFGE) certifications from CDC PulseNet program for *Listeria monocytogenes* and *Campylobacter* spp. processing and analysis. Certification allows the direct access to CDC's National PulseNet database in Atlanta that allows the rapid detection of local, national, and international foodborne outbreaks. With the addition of these 2 new certifications, Oklahoma PHL now has real-time access to 5 databases of enteric pathogens. In addition to *Listeria* and *Campylobacter*, molecular personnel have been certified for *Salmonella*, *Shigella* and *E. coli* analysis since 1999.

In 2008, the molecular section continued new collaborations with the CDC for new methodologies. In an effort to supplement traditional *Salmonella* serotyping that uses antisera, the CDC began trial testing of molecular serotyping methods. The PHL was selected along with 4 other state PHLs to participate in the external evaluation of molecular methods for identification of serotype in *Salmonella* using Luminex platform. This methodology incorporates microsphere technology to detect *Salmonella* antigens specific for certain serotypes. We have also evaluated multi-locus variable number tandem repeat assays (MLVA) to complement PFGE for *E. coli* O157:H7 and *Salmonella enteritidis* serotype Enteritidis.

The molecular laboratory also continued a *Streptococcus pneumoniae* serotyping project in conjunction with the CDC and OSDH Acute Disease Service. This project uses a multiplex polymerase chain reaction (PCR) to detect 32 of the most frequently encountered invasive *S. pneumoniae* serotypes found in U.S. population-based surveillance of children less than 5 years of age.

Laboratory Training Section

The Public Health Laboratory's training outreach to hospitals continues to grow. In 2008, the PHL focused on 2 key areas of training:

Shipping and Packaging Training The proper packaging of laboratory specimens is now regulated by federal departments and professional associations. Properly packaged laboratory specimens provide safety for the sending laboratory, the public during transportation and the receiver. The PHL conducted 15 trainings in 2008 for 173 laboratorians from 67 hospitals, county health departments, and physician office laboratories.

Environmental Collection Training The PHL is the testing laboratory in Oklahoma when it is suspected that an environmental substance is contaminated with a biological.

Recent Accomplishments

The number of submitters who receive their results electronically continues to grow. The Public Health Laboratory (PHL) uses an automated faxing process and a network system, PHOCIS, to report results to the majority of its submitters.

Testing capabilities have also increased at the PHL. Over the last year, both the Newborn Screening and Molecular sections have added tests.

- Amino acid, fatty acid and organic acid tests have been added (40 tests) to provide greater coverage of newborn genetic disorder screening.
- Identifying cystic fibrosis mutations through molecular methods significantly improved result turn-around-times and allowed earlier treatment start dates.
- Oklahoma's PHL continues to be a leader in pulse field gel electrophoresis for food borne illnesses. Turn-around-times for results consistently met and exceeded national standards for *salmonella*, *shigella*, *E. coli* and *listeria*. PFGE is also a vital diagnostic service the OSDH offers to hospitals for characterization of hospital-acquired infections such as MRSA and pseudomonas.
- Lastly, the molecular section continues to adopt the preliminary and confirmatory testing advances mandated by the Laboratory Response Network (LRN) for suspect bioterrorism specimens.

Preparedness activities were enhanced through:

- Joint trainings,
- Participation in exercises,
- CAP surveys,
- PHL initiated drills, and
- Real events

Deficiencies were identified; solutions were developed and implemented to provide a more efficient response to future all-hazard events

Our partners in the above preparedness activities included:

- Federal Bureau of Investigation (FBI),
- United States Postal Service inspectors,
- National Guard Civil Support Team (CST),
- Emergency Preparedness Response Service of OSDH,
- Homeland Security,
- State and local law enforcement and
- Hazmat teams

The PHL has initiated the development of a laboratory continuity of operations plan (COOP) that ensures notification of staff in order to continue services during times of disasters and outbreaks.