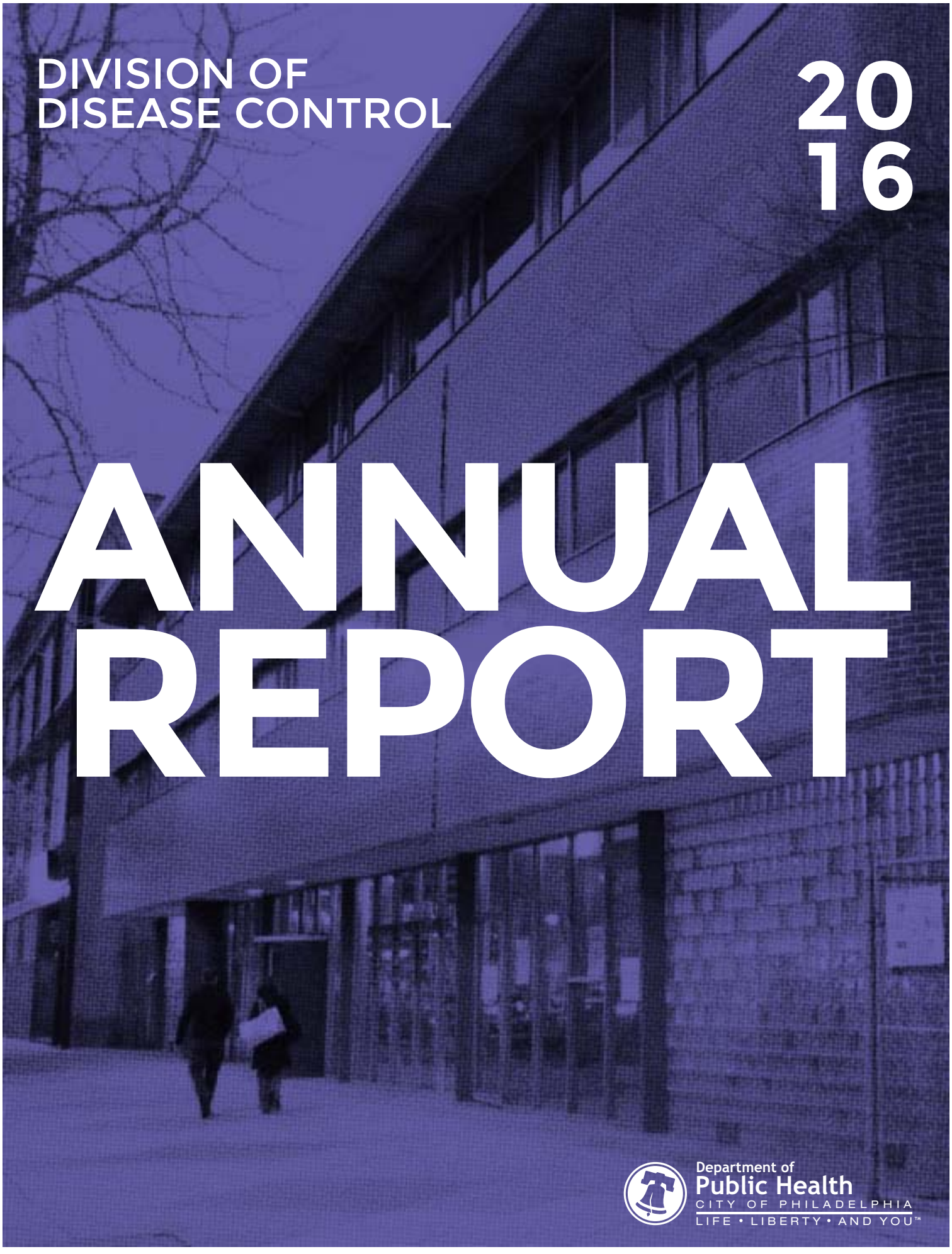

DIVISION OF
DISEASE CONTROL

2016

ANNUAL REPORT

Department of
Public Health
CITY OF PHILADELPHIA
LIFE • LIBERTY • AND YOU™

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1 OVERVIEW

DISEASE REPORTING TRENDS
REGIONAL OVERVIEW

DISEASE REPORTING TRENDS

Reports of Communicable Diseases Per Year: Philadelphia, 2007-2016

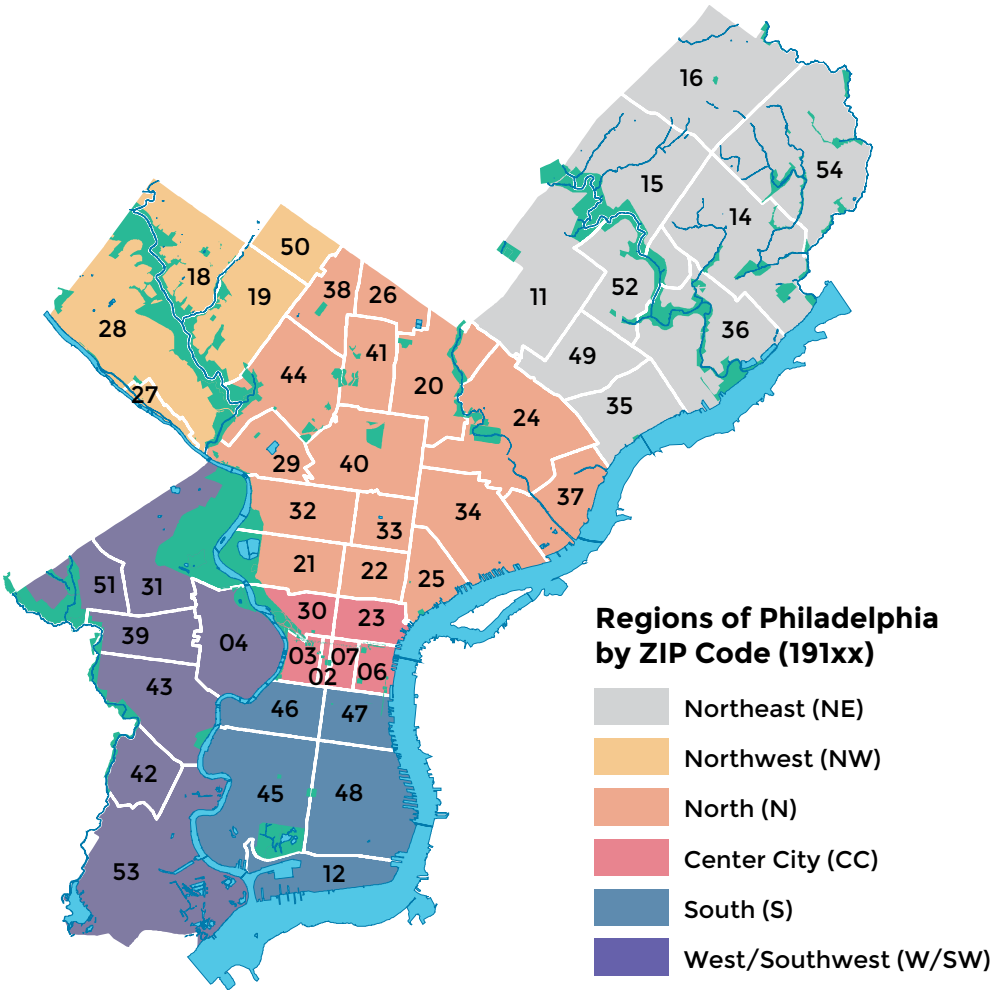
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Amebiasis	19	14	13	4	9	11	13	15	8	2
Animal Bites/Exposures	1499	1641	1768	1624	1513	1598	1586	1644	1718	1722
Anthrax	0	0	0	0	0	0	0	0	0	0
Babesiosis	1	0	0	0	1	0	1	1	3	2
Botulism	1	1	0	1	2	2	2	1	0	3
Brucellosis	1	0	0	0	0	1	1	0	1	0
Campylobacteriosis	80	118	117	121	141	182	103	167	211	203
Chlamydia trachomatis	17029	17012	18104	19428	20471	20803	19570	18935	19169	19959
Cholera	0	0	1	0	0	1	0	0	0	0
Cryptosporidiosis	94	23	38	17	14	18	58	30	26	48
Cyclosporiasis	2	1	3	0	0	1	0	1	3	4
Dengue Fever	8	1	0	3	1	1	11	0	5	3
Diphtheria	0	0	0	0	0	0	0	0	0	0
Escherichia coli, Shiga Toxin-Producing (STEC)	4	8	10	14	9	12	6	10	11	25
Giardiasis	65	99	106	122	43	60	76	65	61	58
Gonorrhea	5246	4950	4823	6533	6761	7293	6303	5961	6260	6957
Guillian-Barre Syndrome	1	3	1	0	0	0	1	1	4	3
Haemophilus influenzae [Type B]	19 [2]	11 [1]	30 [7]	28 [1]	22 [2]	39 [1]	26 [0]	23 [1]	24 [2]	36 [3]
Hepatitis A	9	10	2	13	8	2	6	6	6	9
Hepatitis B, Acute	15	21	9	5	7	4	5	7	8	5
Hepatitis C, Acute (Non-A, Non-B Until 1998)	0	0	0	1	0	20	42	67	79	130
Histoplasmosis	2	0	1	2	0	1	0	0	2	1
Legionellosis	24	26	60	33	64	29	61	42	53	34
Leptospirosis	0	0	0	1	0	1	0	0	0	0
Listeriosis	8	5	5	8	2	6	10	3	2	2
Lyme Disease	172	281	363	238	301	191	189	140	252	236
Malaria	7	19	16	22	19	13	21	30	18	22
Measles	0	0	1	0	0	2	0	0	0	0
Meningitis, Aseptic	86	79	68	84	104	92	124	60	55	48
Meningitis, Bacterial	4	4	6	12	12	5	3	0	2	3
Meningococcal Infections	9	5	12	5	4	6	3	2	0	2
Mumps	1	1	0	54	21	4	3	0	1	5
Pertussis	39	54	65	74	49	268	86	127	111	101

DISEASE REPORTING TRENDS (Cont.)

Reports of Communicable Diseases Per Year: Philadelphia, 2007-2016 (Cont.)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Plague	0	0	0	0	0	0	0	0	0	0
Poliomyelitis	0	0	0	0	0	0	0	0	0	0
Rabies (Human)	0	0	0	0	0	0	0	0	0	0
Rickettsial Diseases, Including RMSF	2	3	0	9	4	12	8	10	8	5
Rubella, Including Congenital Rubella Syndrome	0	0	0	0	0	0	0	1	0	0
Salmonellosis, Excluding Typhoid	404	420	396	395	301	305	284	229	237	188
Shigellosis	138	206	1051	141	41	48	66	66	90	311
Strep Pneumoniae, Invasive	162	165	198	154	158	103	149	101	119	136
Streptococcus, Invasive gp. A [TSS]	34 [0]	75 [0]	49 [1]	66 [0]	73 [0]	61 [0]	56 [0]	95 [0]	90 [0]	78 [1]
Syphilis-Primary & Secondary	136	150	218	238	207	269	278	308	314	428
Syphilis-Congenital	9	7	4	1	4	5	1	4	4	5
Syphilis-Total	500	526	704	667	698	798	962	894	916	927
Tetanus	0	0	0	0	0	0	0	0	0	0
Toxic Shock Syndrome, Staphylococcal	0	0	0	0	0	1	0	1	0	0
Tuberculosis	133	162	98	96	101	86	89	78	72	74
Tularemia	0	0	0	0	0	0	0	0	0	0
Typhoid Fever	0	6	2	2	3	2	1	5	3	1
Varicella (Chicken Pox only)	735	349	326	261	262	118	167	118	123	111
Vibrio SPP. Other	0	3	3	0	1	0	0	4	6	7
West Nile Virus	0	8	0	13	1	9	3	5	0	4
Yellow Fever	0	0	0	0	0	0	0	0	5	0

REGIONAL OVERVIEW



Total Population Count by Age and Region: Philadelphia, 2010*

Age	NE	NW	N	CC/S	W/SW	Total
0-4 Yrs	23127	5055	41227	13888	17760	101057
5-17 Yrs	56820	12189	103578	26046	44165	242798
18-34 Yrs	86479	29154	149432	95613	89090	449768
35-60 Yrs	122363	34069	171370	81045	81124	489971
>60 Yrs	67760	20906	69859	43269	40698	242492
Total	356549	101373	535466	259861	272837	1526086

*Data according to the U.S. Census Bureau

REGIONAL OVERVIEW (Cont.)

Counts of Disease With Sufficient Burden: Philadelphia, 2016

	NE	NW	N	CC/S	W/SW	Missing	Total
	n	n	n	n	n	n	n
Disease							
Campylobacteriosis	39	13	46	56	47	2	203
Chlamydia	1914	735	9843	2414	5049	4	19959
Giardiasis	14	<6	16	17	<10	0	58
Gonorrhea	573	234	3462	1031	1654	3	6957
Hepatitis C, Chronic (RNA +)	535	125	1281	406	434	94	2875
Influenza (Hospitalized)	166	45	390	244	325	0	1170
Lyme Disease	73	56	36	46	25	0	236
Meningitis, Aseptic	9	<6	27	<6	6	0	48
Pertussis	23	<6	23	37	14	1	101
Salmonellosis	33	7	68	39	40	1	188
Shigellosis	<20	<6	155	35	100	0	311
Strep Pneumoniae	19	9	56	23	29	0	136
Streptococcus, Invasive gp A	14	<6	32	14	13	1	78
Syphilis-Early Latent	48	21	213	109	101	2	494
Syphilis-Primary & Secondary	26	15	183	100	104	0	428
Tuberculosis	<20	<6	22	18	17	1	74
Varicella (Chicken Pox)	29	6	52	11	12	1	111

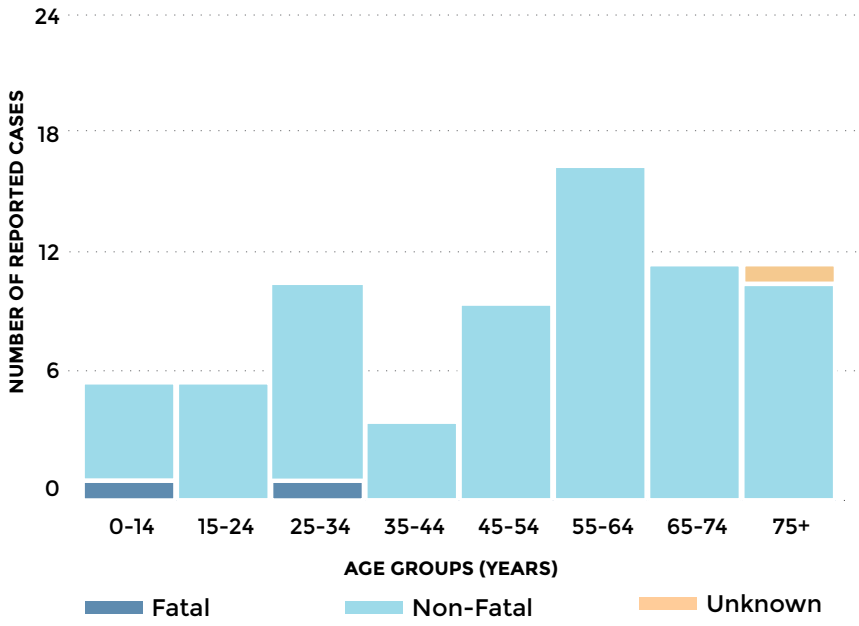
CENTRAL NERVOUS SYSTEM

INFECTIONS AND SEPSIS

GROUP A STREPTOCOCCUS
HAEMOPHILUS INFLUENZAE
LISTERIOSIS
MENINGITIS, ASEPTIC
STREPTOCOCCUS PNEUMONIAE

GROUP A *STREPTOCOCCUS*

Invasive Group A *Streptococcus* by Age Group and Outcome: Philadelphia, 2016



OF NOTE

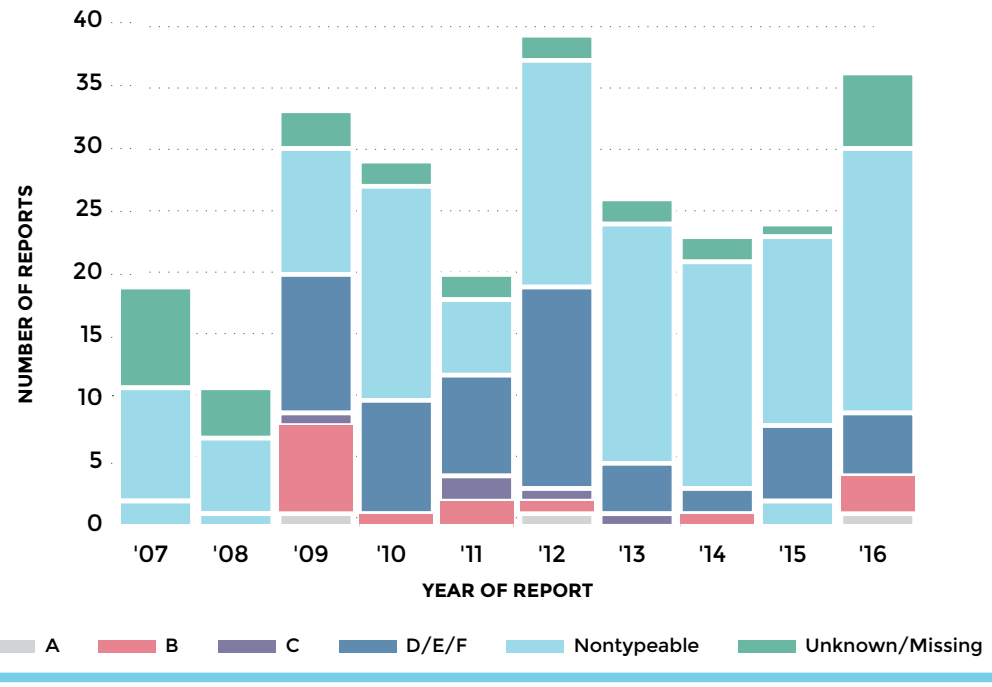
A total of **4 invasive Group A Streptococcal (GAS)** cases were associated with three different long term care facilities (LTCFs) in 2016. **All 4 individuals had bacteremia, including 3 with septic infections; none were fatal.** PDPH worked with these LTCFs to enhance infection control precautions and to mitigate further transmission using contact screening.

Number of *Group A Streptococcus* Reports by Age: Philadelphia, 2016

	0-45 Years		45+ Years		Total	
	n	%	n	%	n	%
Male	17	21.8	24	30.8	41	52.6
Female	11	14.1	26	33.3	37	47.4
Total	28	35.9	50	64.1	78	100

HAEMOPHILUS INFLUENZAE

Number of Invasive *Haemophilus influenza* by Serotype: Philadelphia, 2007-2016

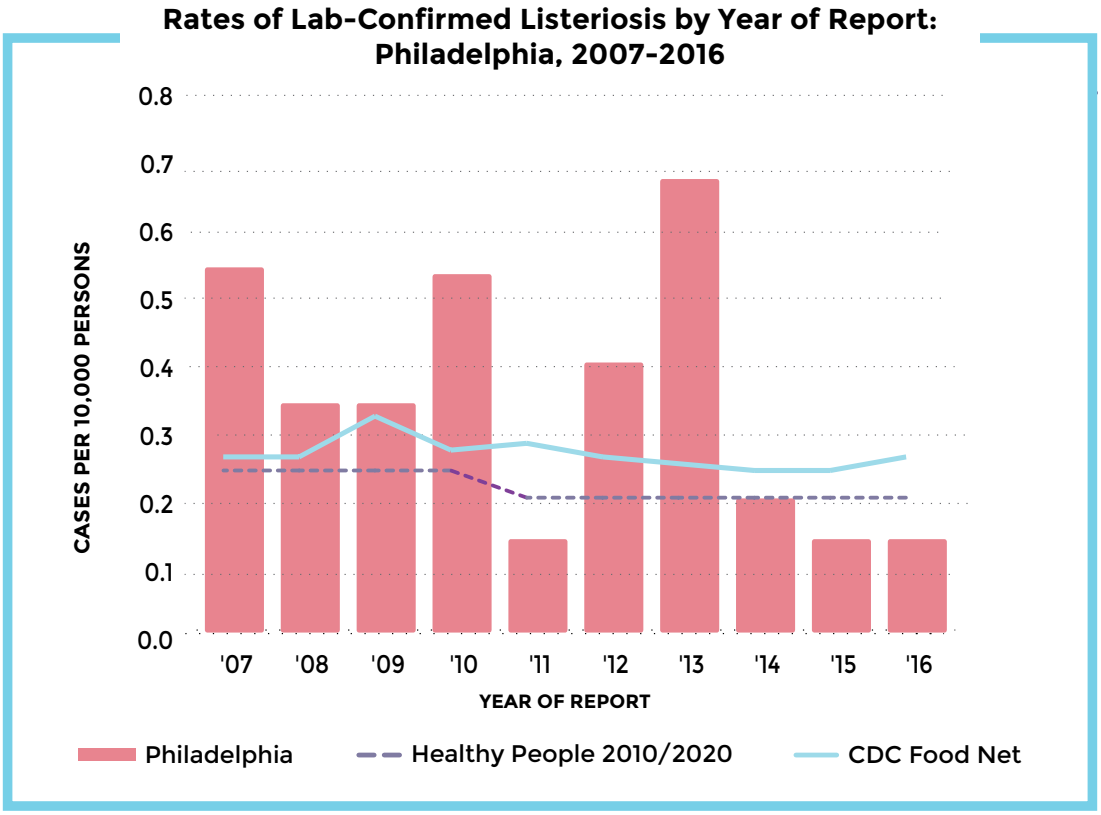


Number of Invasive *Haemophilus influenza* by Age: Philadelphia, 2016

	0-49 Years		50-69 Years		70+ Years		Total	
	n	%	n	%	n	%	n	%
Total	10	27.8	13	36.1	13	36.1	36	100

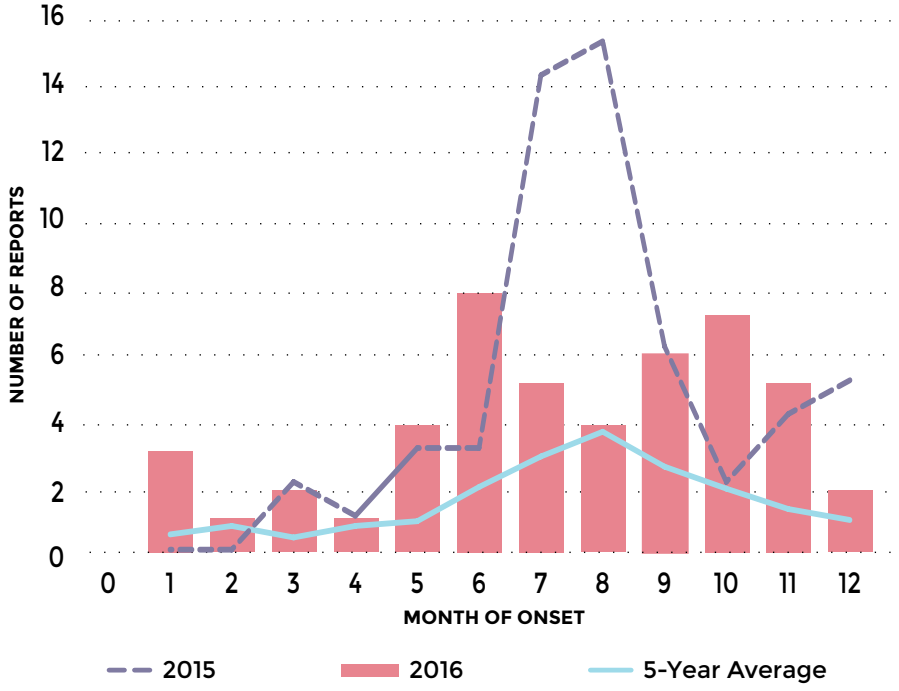
LISTERIOSIS

(Listeria monocytogenes)



MENINGITIS, ASEPTIC

Number Of Aseptic Meningitis Reports By Month Of Onset: Philadelphia, 2015, 2016, And 5-Year Moving Average

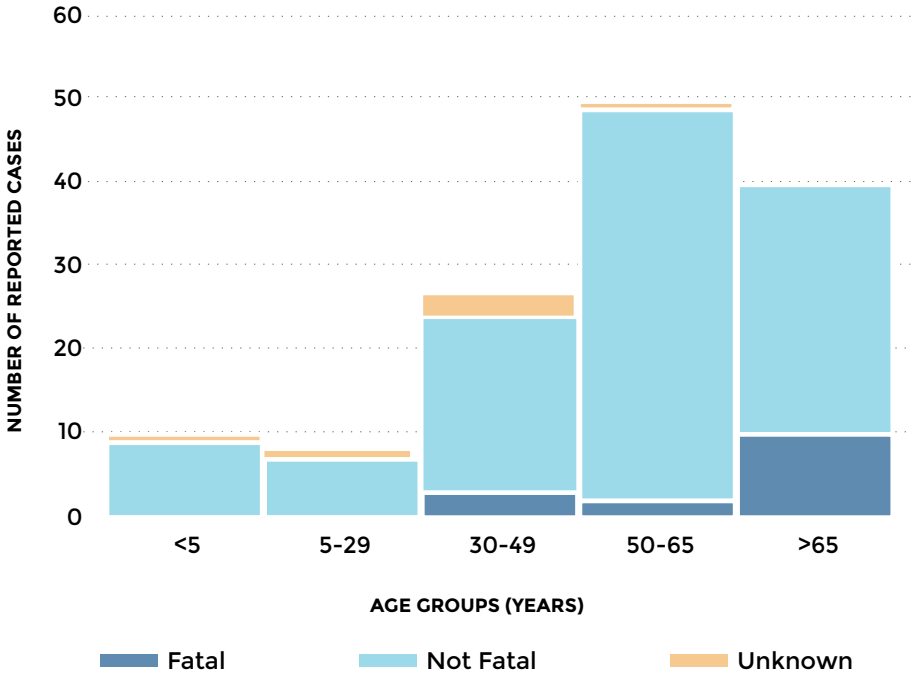


Number of Aseptic Meningitis Reports by Age and Gender: Philadelphia, 2016

	0-4 Years		5-30 Years		31+ Years		Total	
	n	%	n	%	n	%	n	%
Male	8	16.7	6	12.5	12	16.7	22	45.8
Female	8	16.7	6	12.5	8	25.0	26	54.2
Total	16	33.3	12	25.0	20	41.7	48	100

STREPTOCOCCUS *PNEUMONIAE*

Invasive *Streptococcus pneumoniae* by Age Group and Outcome: Philadelphia, 2016



Number of Invasive *Streptococcus pneumoniae* by Age and Gender: Philadelphia, 2016

	0-20 Years		21-50 Years		51-64 Years		65+ Years		Total*	
	n	%	n	%	n	%	n	%	n	%
Male	<6	--	<20	--	25	18.5	20	14.8	66	48.9
Female	9	6.7	18	13.3	19	14.1	23	17.0	69	51.1
Total	<15	--	<38	--	44	32.6	43	31.9	135	100

*unknown=1

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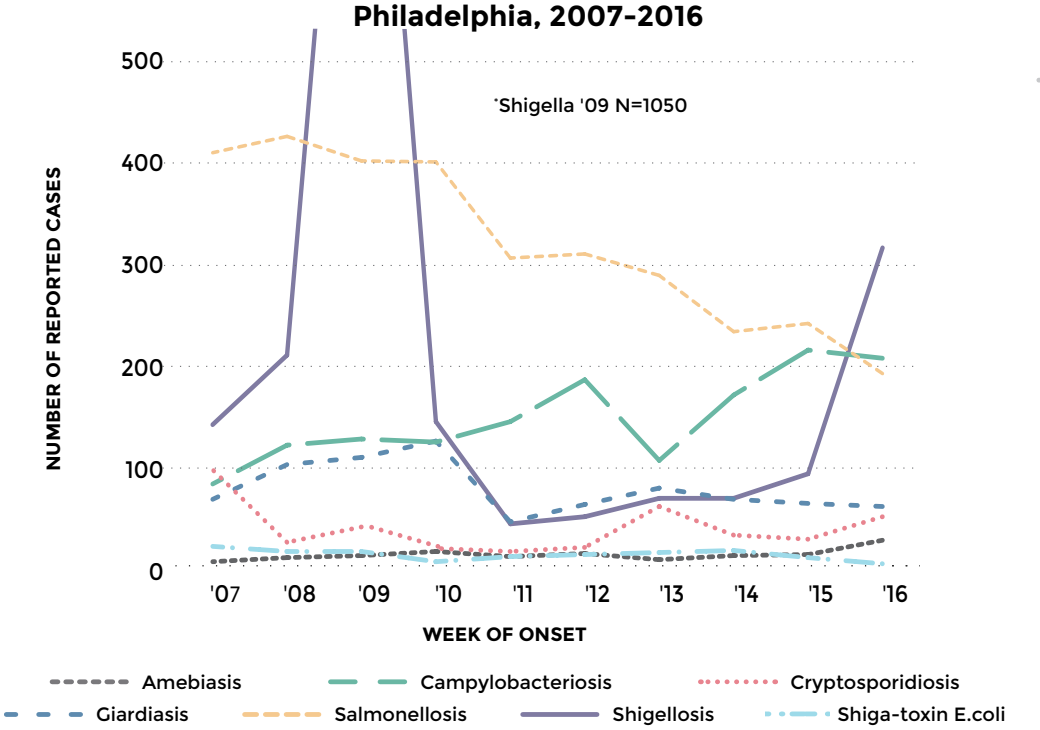
GASTRO-INTESTINAL INFECTIONS

OVERVIEW

Reported Cases of Gastrointestinal Diseases: Philadelphia, 2007-2016



OF NOTE

Food Poisoning

In 2016, **individuals with shigellosis were disproportionately 1-4 years old and 30% were a part of a cluster involving 2 or more symptomatic individuals**. PDPH released public health announcements and health alerts to notify healthcare providers and the public of the outbreak to assist the tailoring of prevention strategies.

Norovirus Outbreaks

For the 2016-2017 norovirus season, **11 outbreaks** occurring in **long term care facilities were identified and followed by PDPH**.

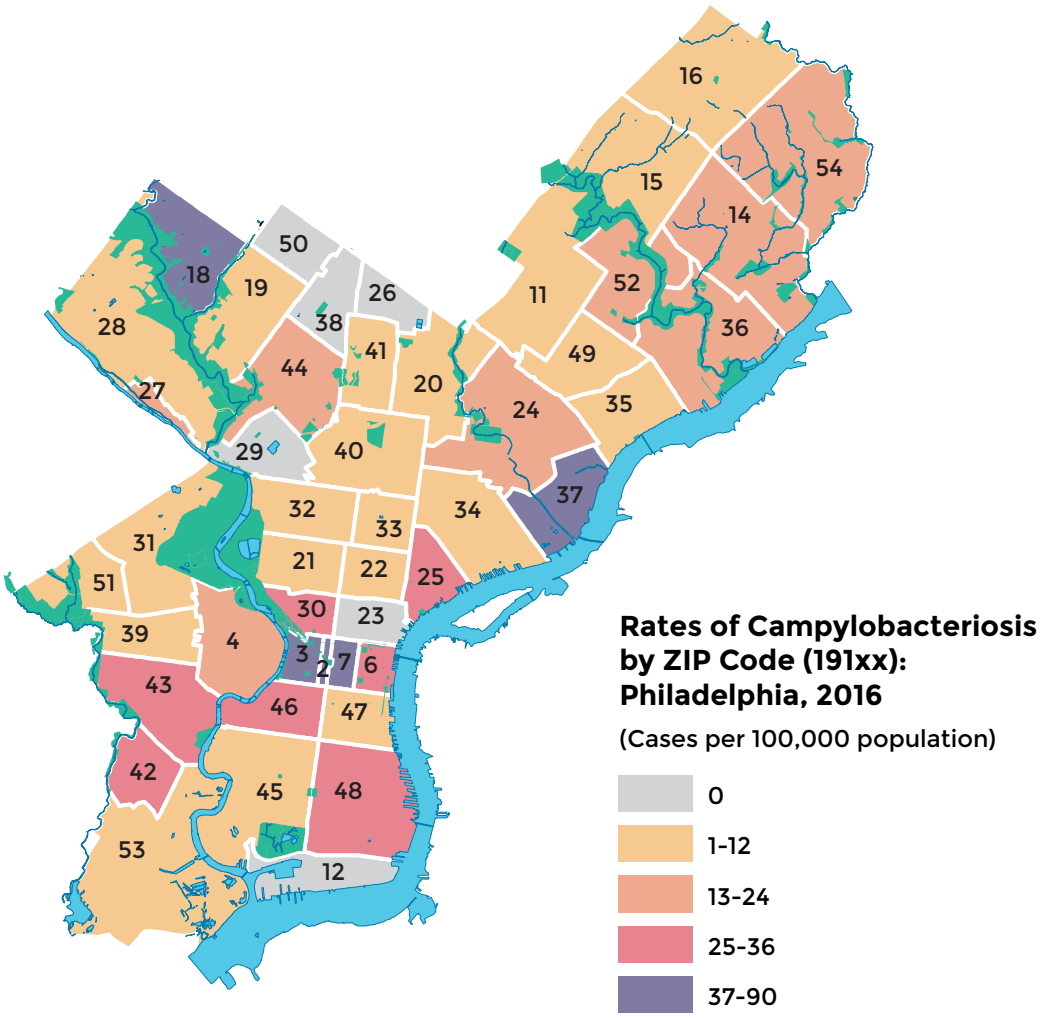
OVERVIEW (Cont.)

Antibiotic Resistance of Selected Enteric Pathogens: Philadelphia, 2016

Pathogen	Antibiotics Tested	Total Tested	Resistant		Intermediate	
			n	%	n	%
Campylobacter	Ciprofloxacin	35	12	34	0	0
	Erythromycin	34	4	12	0	0
Salmonella	Ampicillin	149	16	10	0	0
	Ceftriaxone	69	0	0	0	0
	Ciprofloxacin	120	2	2	0	0
	Trimethoprim-Sulfamethoxazole	147	2	1	0	0
Shigella	Ampicillin	255	234	92	1	0.4
	Ceftriaxone	161	1	0.6	0	0
	Ciprofloxacin	219	1	0.5	1	0.5
	Trimethoprim-Sulfamethoxazole	250	96	38	0	0

CAMPYLOBACTERIOSIS

(*Campylobacter spp.*)



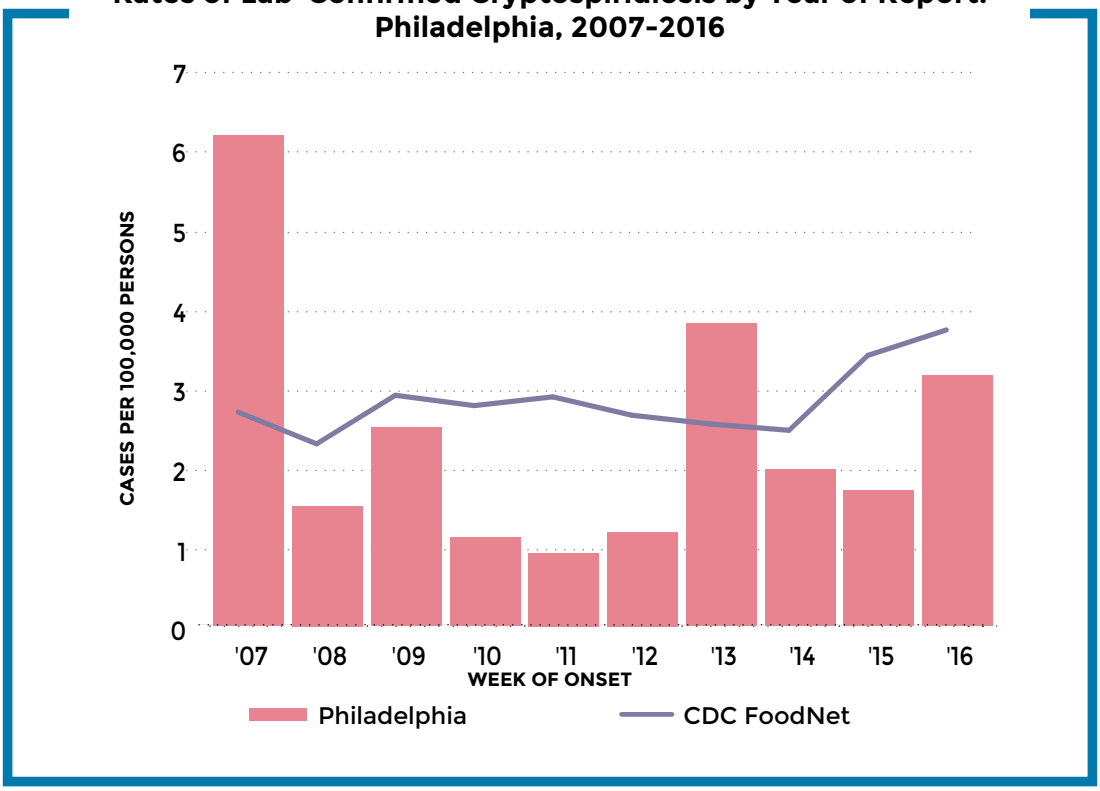
Number of Campylobacteriosis Reports by Age and Gender: Philadelphia, 2016

	0-17 Years		18-34 Years		35-60 Years		>60 Years		Total	
	n	%	n	%	n	%	n	%	n	%
Male	11	5.4	35	17.2	35	17.2	19	9.4	100	49.3
Female	14	6.9	32	15.8	28	13.8	29	14.3	103	50.7
Total	25	12.3	67	33.0	63	31.0	48	23.6	203	100

CRYPTOSPORIDIOSIS

(*Cryptosporidium spp.*)

Rates of Lab-Confirmed Cryptospiridiosis by Year of Report: Philadelphia, 2007-2016

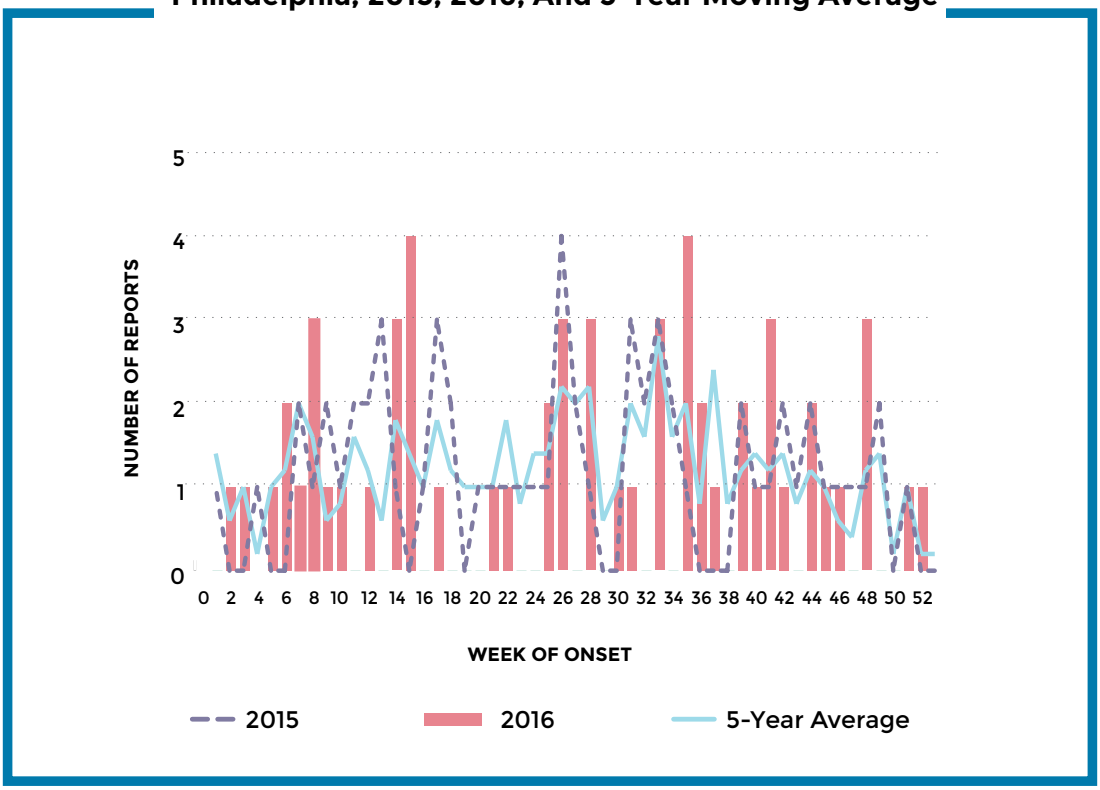


Number of Cryptosporidiosis Reports by Age and Gender: Philadelphia, 2016

	0-17 Years		18-34 Years		35+ Years		Total	
	n	%	n	%	n	%	n	%
Male	11	22.9	8	16.7	10	20.8	29	60.4
Female	6	24.7	7	14.6	6	12.5	19	39.6
Total	17	35.4	15	31.3	16	33.3	48	100

GIARDIASIS
(*Giardia lamblia*)

Number of Giardiasis Reports by Week of Onset: Philadelphia, 2015, 2016, And 5-Year Moving Average

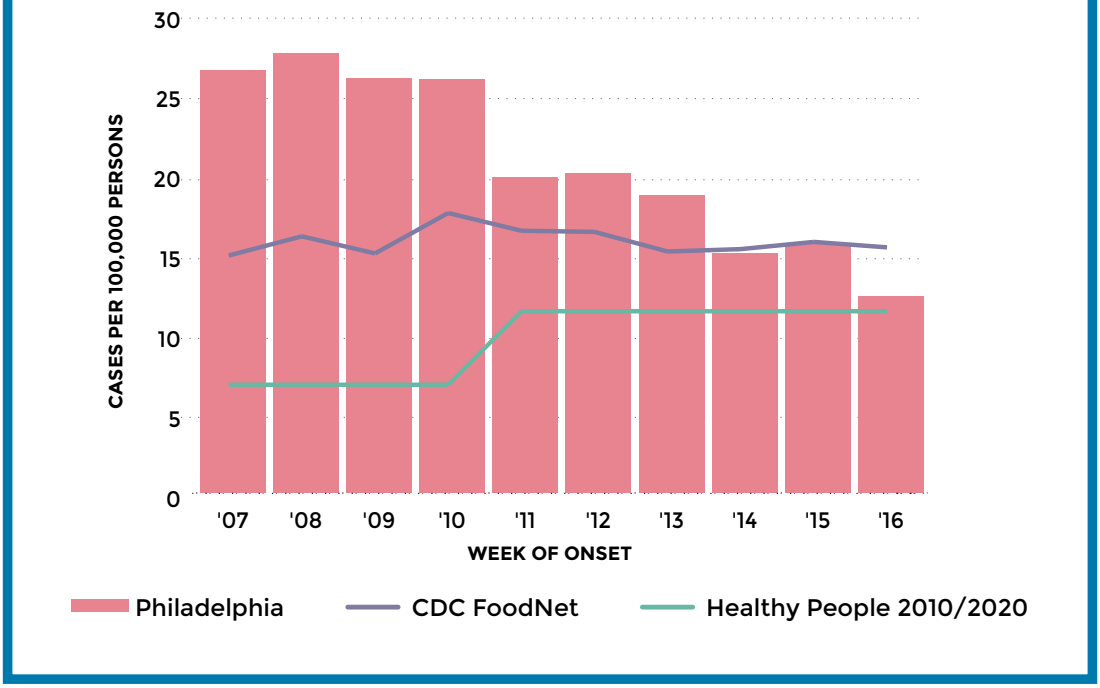


Number of Giardiasis Reports by Age and Gender: Philadelphia, 2016

	0-29 Years		30+ Years		Total	
	n	%	n	%	n	%
Male	19	32.8	22	37.9	41	70.7
Female	8	13.8	9	15.5	17	29.3
Total	27	46.6	31	53.4	58	100

SALMONELLOSIS
(*Salmonella spp.*)

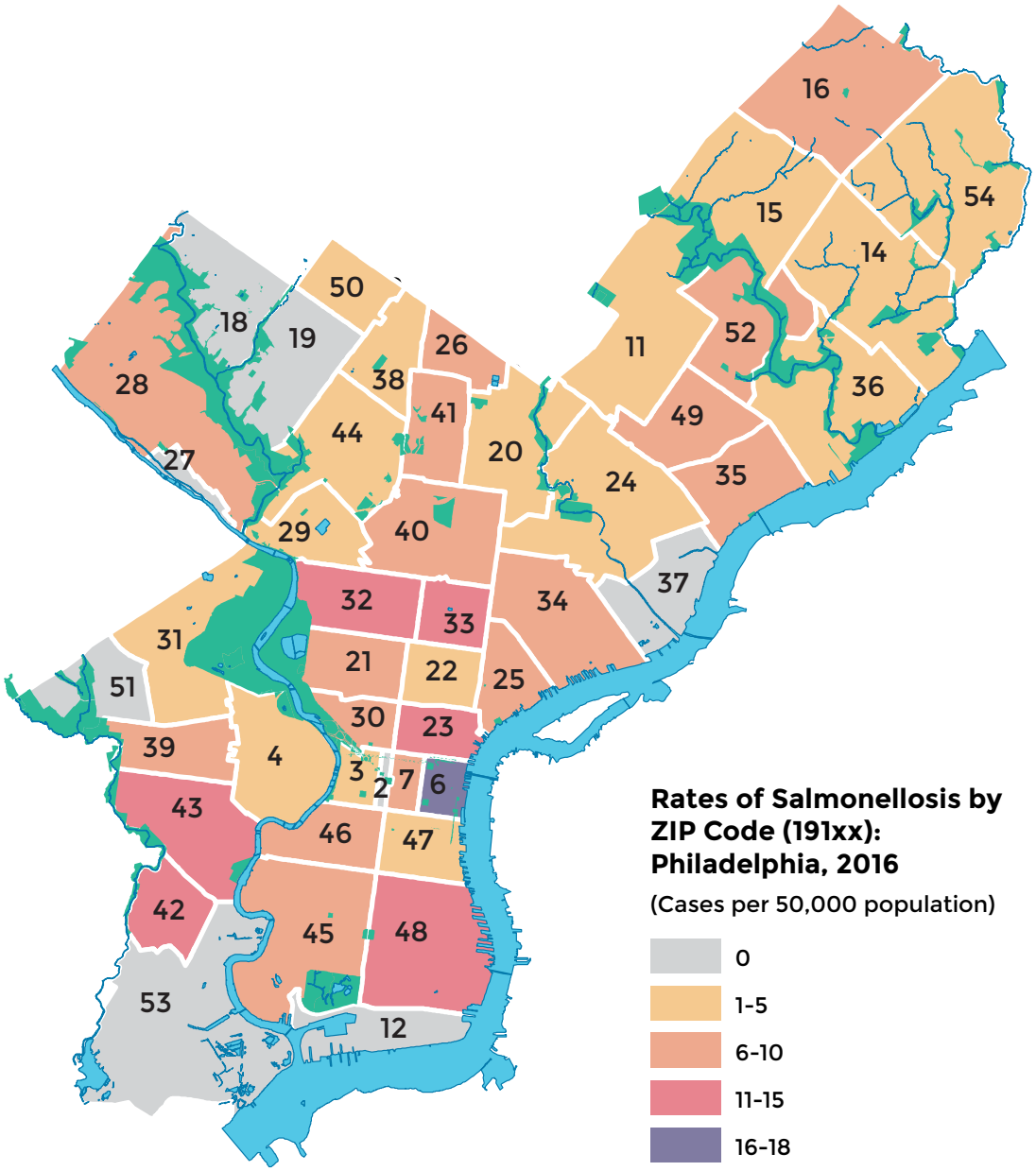
Rates of Lab-Confirmed *Salmonella* by Year of Report: Philadelphia, 2007-2016



Number of Salmonellosis Reports by Age and Gender: Philadelphia, 2016

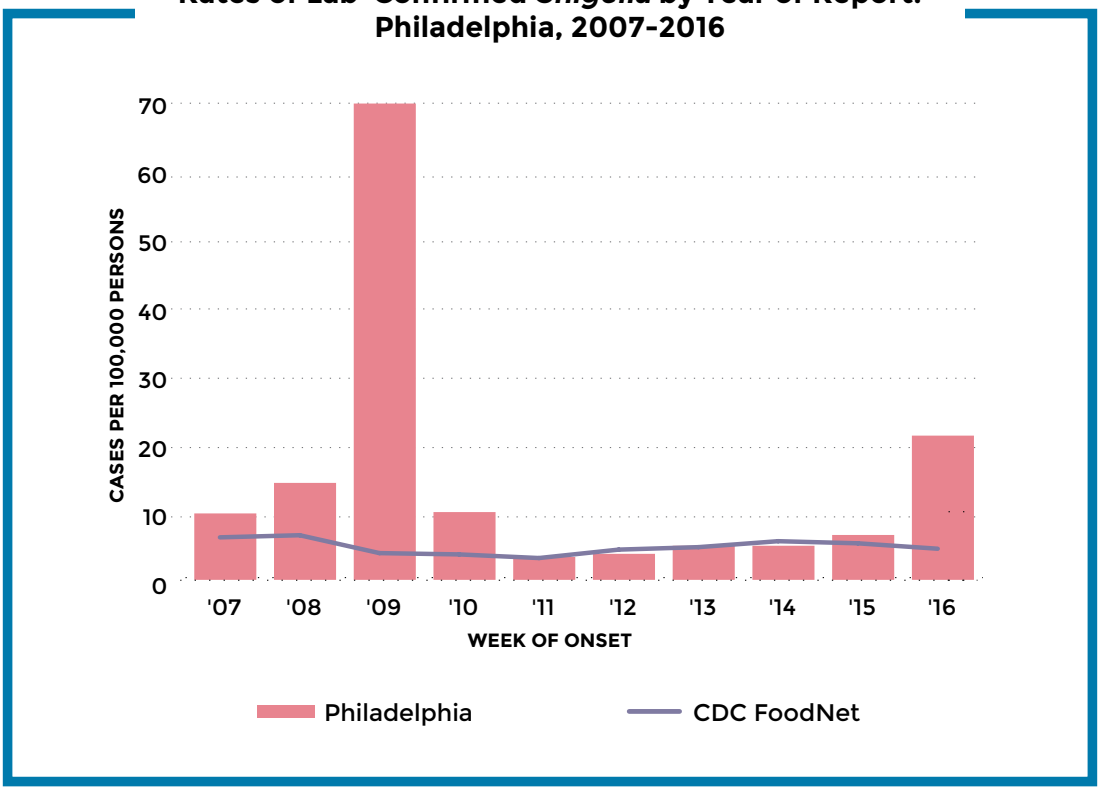
	0-4 Years		5-17 Years		18-34 Years		35-60 Years		61+ Years		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Male	30	16.0	15	8.0	14	7.4	24	12.8	14	7.4	97	51.6
Female	17	9.0	15	8.0	21	11.2	27	14.4	11	5.9	91	48.4
Total	47	25.0	30	16	35	18.6	51	27.1	25	13.3	188	100

SALMONELLOSIS (Cont.)



SHIGELLOSIS
(*Shigella spp.*)

Rates of Lab-Confirmed *Shigella* by Year of Report: Philadelphia, 2007-2016



Number of Shigellosis Reports by Age and Gender: Philadelphia, 2016

	0-4 Years		5-17 Years		18-34 Years		35+ Years		Total	
	n	%	n	%	n	%	n	%	n	%
Male	61	19.6	49	15.8	22	7.1	37	11.4	169	54.3
Female	46	14.8	51	16.4	24	7.7	21	6.5	142	45.7
Total	107	34.4	100	32.2	46	14.8	58	17.9	311	100

4

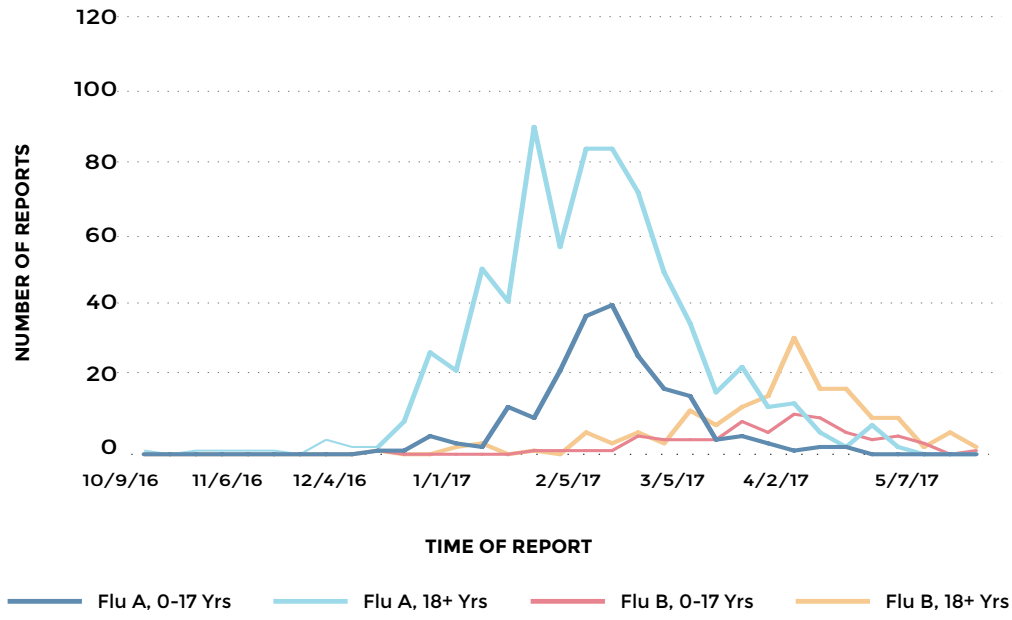
RESPIRATORY

INFECTIONS

INFLUENZA
LEGIONELLOSIS
TUBERCULOSIS

INFLUENZA

Number of Laboratory-Confirmed Influenza Reports by Week of Onset: Philadelphia, 2016-2017



Number of Hospitalized Influenza Reports by Age and Region: Philadelphia, 2016

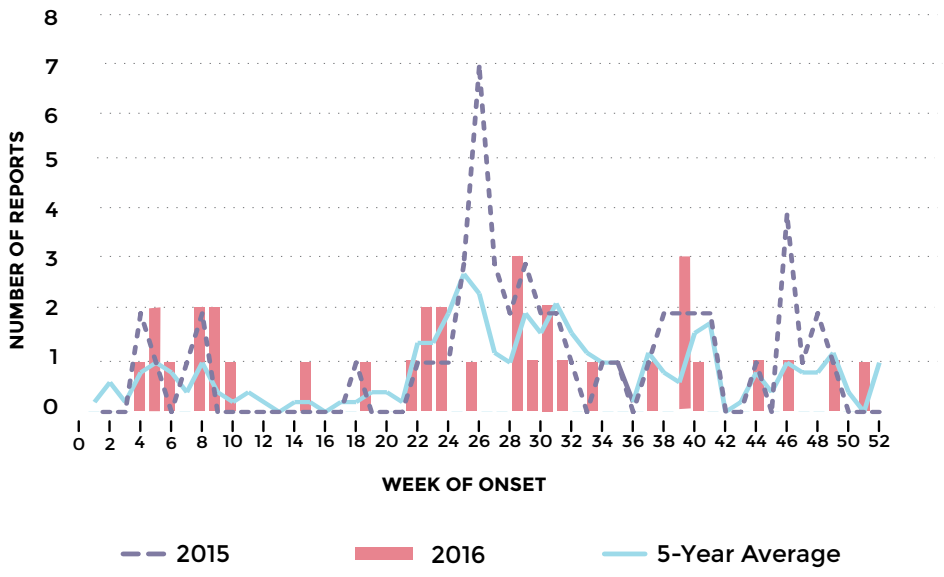
	NE		NW		N		CC		S		W/SW		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Age														
0-4 Yrs	18	1.5	<6	--	73	6.2	<6	--	12	1.0	27	2.3	136	11.6
5-17 Yrs	27	2.3	<6	--	89	7.6	<6	--	7	0.6	32	2.7	157	13.4
18-44 Yrs	21	1.8	<6	--	71	6.1	<20	1.0	27	2.3	60	5.1	195	16.7
45-64 Yrs	23	2.0	9	0.8	59	5.0	15	1.3	41	3.5	88	7.5	235	20.1
65+ Yrs	77	6.6	28	2.4	98	8.4	36	3.1	90	7.7	118	10.1	447	38.2
Total	166	14.2	45	3.9	390	33.3	67	5.7	177	15.1	325	27.8	1170	100
Rate**	46.6		44.4		72.8		93.9		*		119.1		76.7	

* South Philadelphia's rate is combined with Center City's rate
**Rate per 100,000

LEGIONELLOSIS

(*Legionella pneumophila*)

Number of Legionellosis Reports by Week of Onset: Philadelphia, 2015, 2016, And 5-Year Moving Average



Number of Legionellosis Reports by Age: Philadelphia, 2016

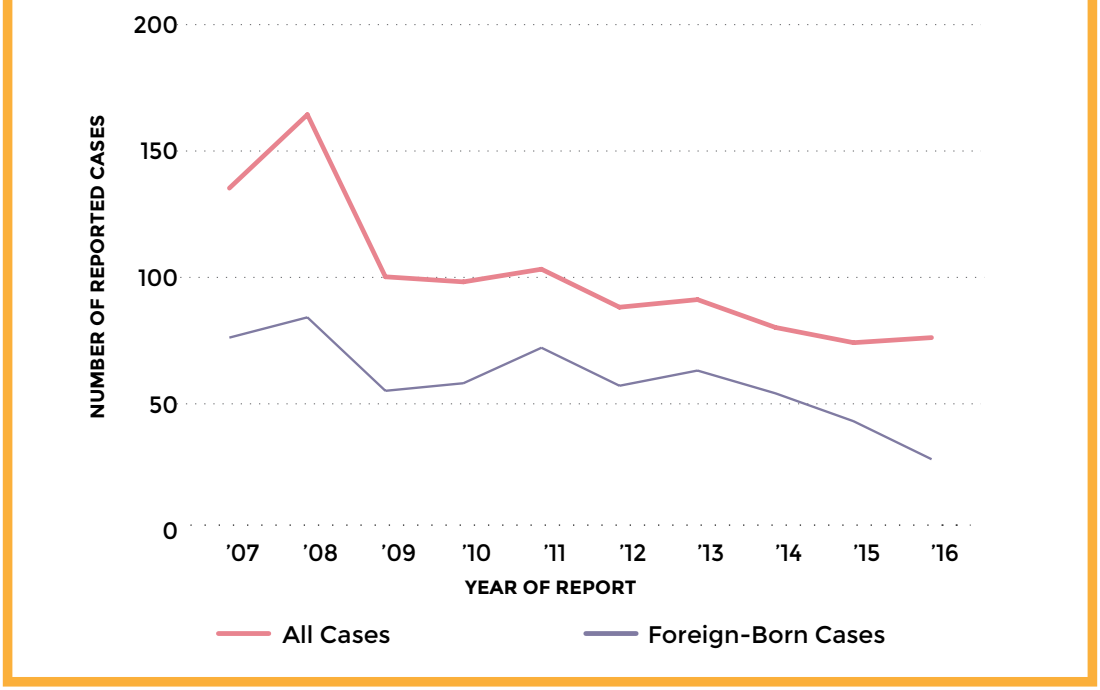
	0-50 Years		51-64 Years		65+ Years		Total	
	n	%	n	%	n	%	n	%
Total	7	20.6	13	38.2	14	41.2	34	100

Legionellosis Risk Factors: Philadelphia, 2016

	N	(%)
UNDERLYING ILLNESS		
Diabetes	7	20.6
Chronic Lung Disease	7	20.6
Heart Disease	8	23.5
Other Immunocompromised	8	23.5
OTHER RISK FACTORS		
Current/Previous Smoker	21	61.8
Male Gender	18	52.9
Retired/Unemployed	21	61.8
Nosocomial Transmission	1	2.9

TUBERCULOSIS
(*Mycobacterium tuberculosis*)

Reported Cases of Tuberculosis by Nationality: Philadelphia, 2007-2016



Number of Tuberculosis Reports by Age: Philadelphia, 2016

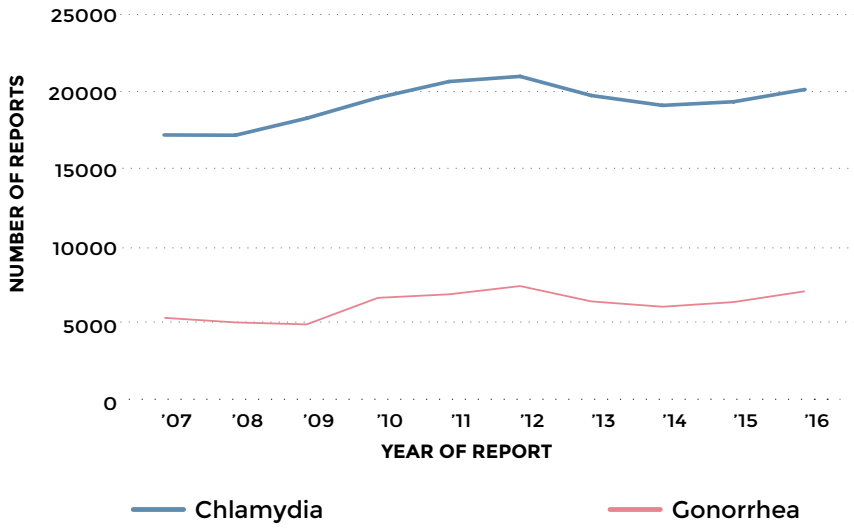
	0-18 Years		19-30 Years		31-44 Years		45-65 Years		66+ Years		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Total	6	8.1	11	14.9	16	21.6	21	28.4	20	27.0	74	100

5 SEXUALLY TRANSMITTED DISEASES

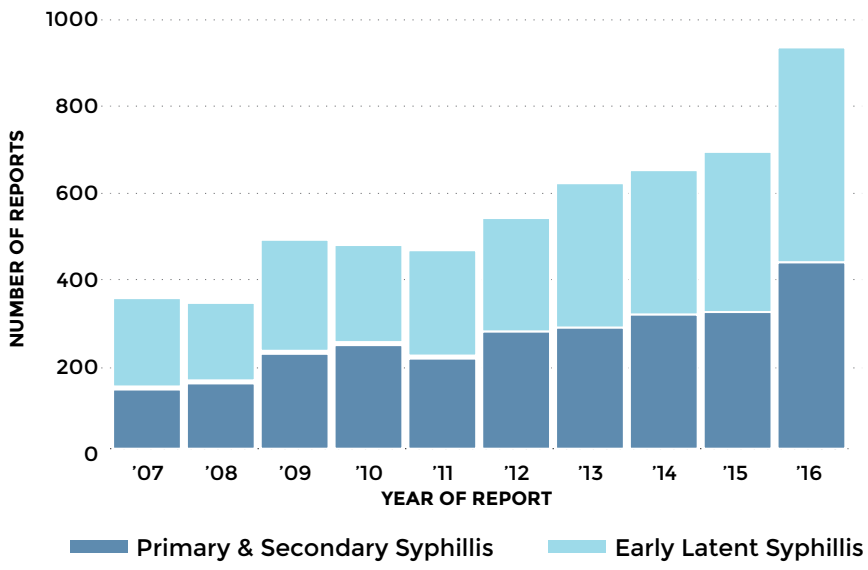
OVERVIEW
CHLAMYDIA
GONORRHEA
SYPHILIS-PRIMARY & SECONDARY
SYPHILIS-LATENT

OVERVIEW

Reported Chlamydia and Gonorrhea Cases: Philadelphia, 2007-2016

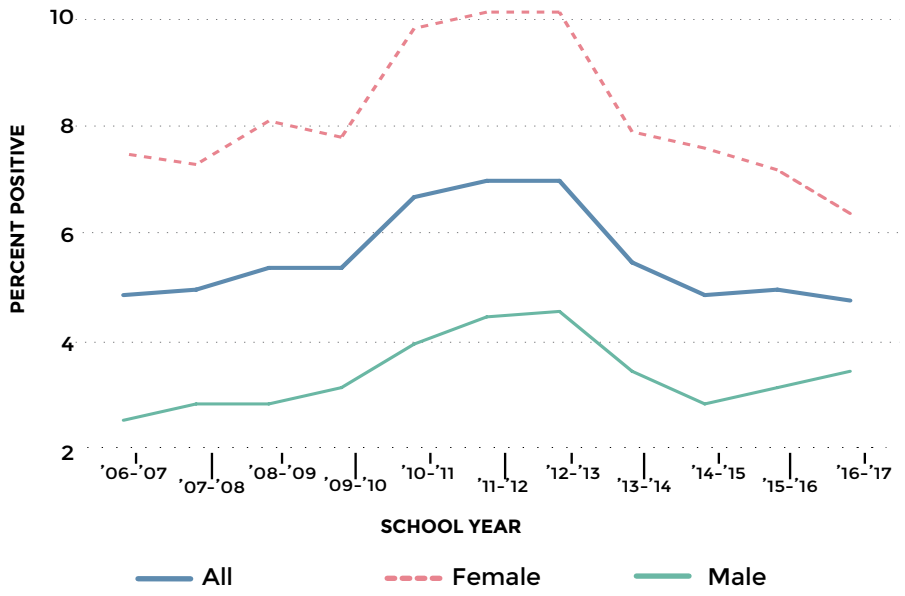


Primary & Secondary and Early Latent Syphilis: Philadelphia, 2007-2016



OVERVIEW (Cont.)

Percent of Philadelphia Public High School Students Testing Positive for Chlamydia and/or Gonorrhea: Philadelphia, by School Year 2006-2017

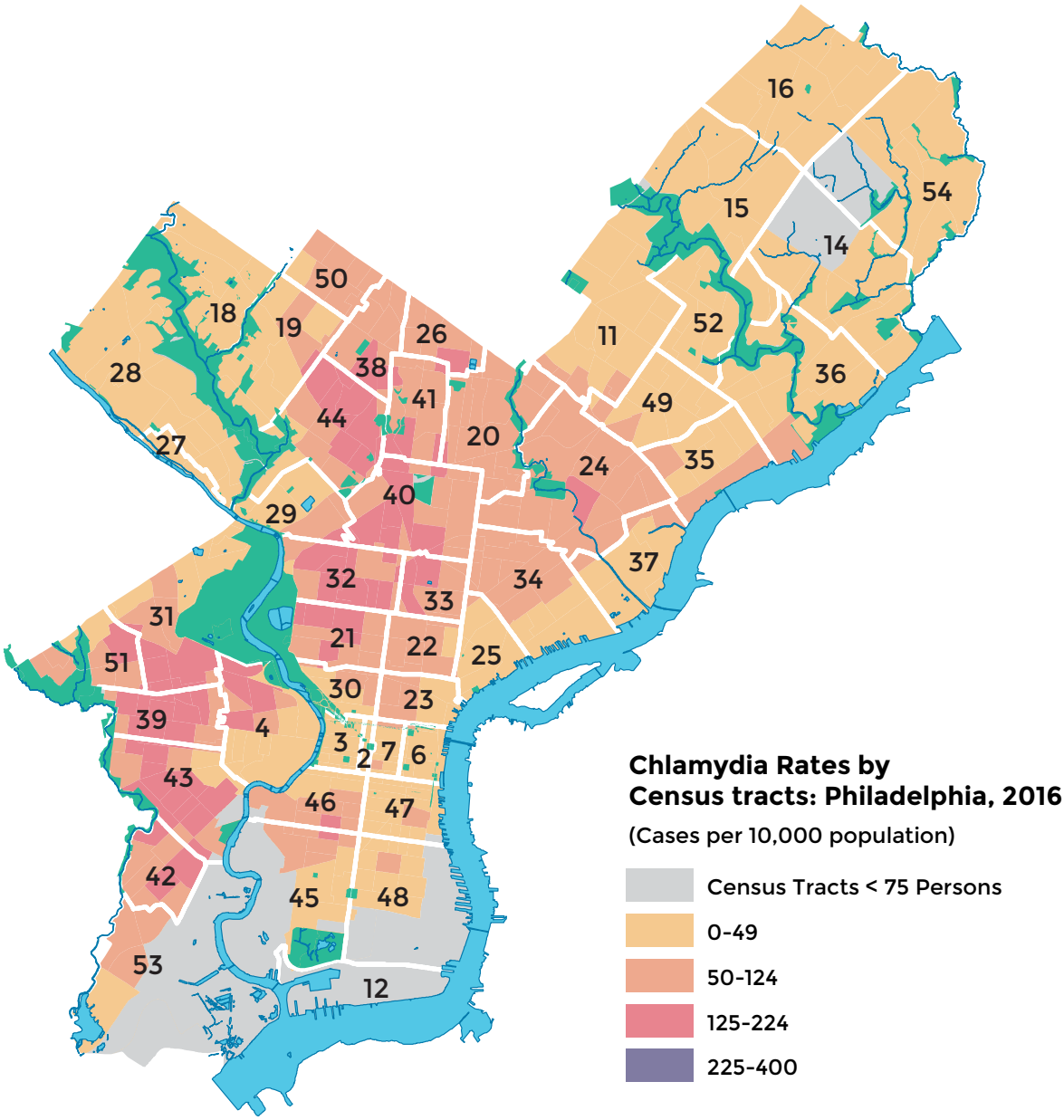


Percent of Philadelphia Public High School Students Testing Positive for Chlamydia and/or Gonorrhea: Philadelphia, by School Year 2006-2017

	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17
	%	%	%	%	%	%	%	%	%	%	%
Male	2.8	2.8	3.1	3.9	4.4	4.5	3.4	2.8	3.1	3.9	3.4
Female	7.2	8	7.7	9.7	10	10	7.8	7.5	7.1	6.6	6.3
Total	4.9	5.3	5.3	6.6	6.9	6.9	5.4	4.8	4.9	4.6	4.7

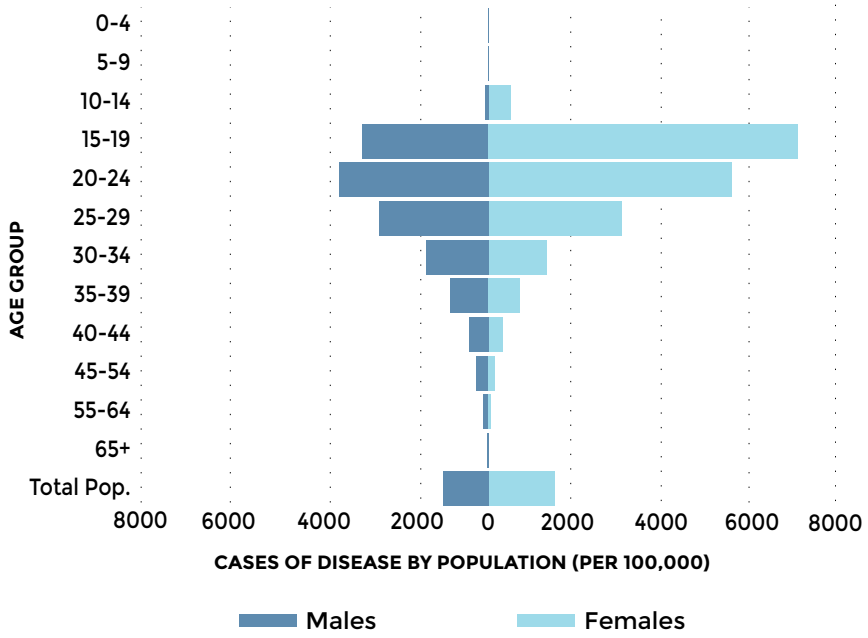
CHLAMYDIA

(*Chlamydia trachomatis*)



CHLAMYDIA (Cont.)

Rates of Chlamydia by Age and Gender: Philadelphia, 2016



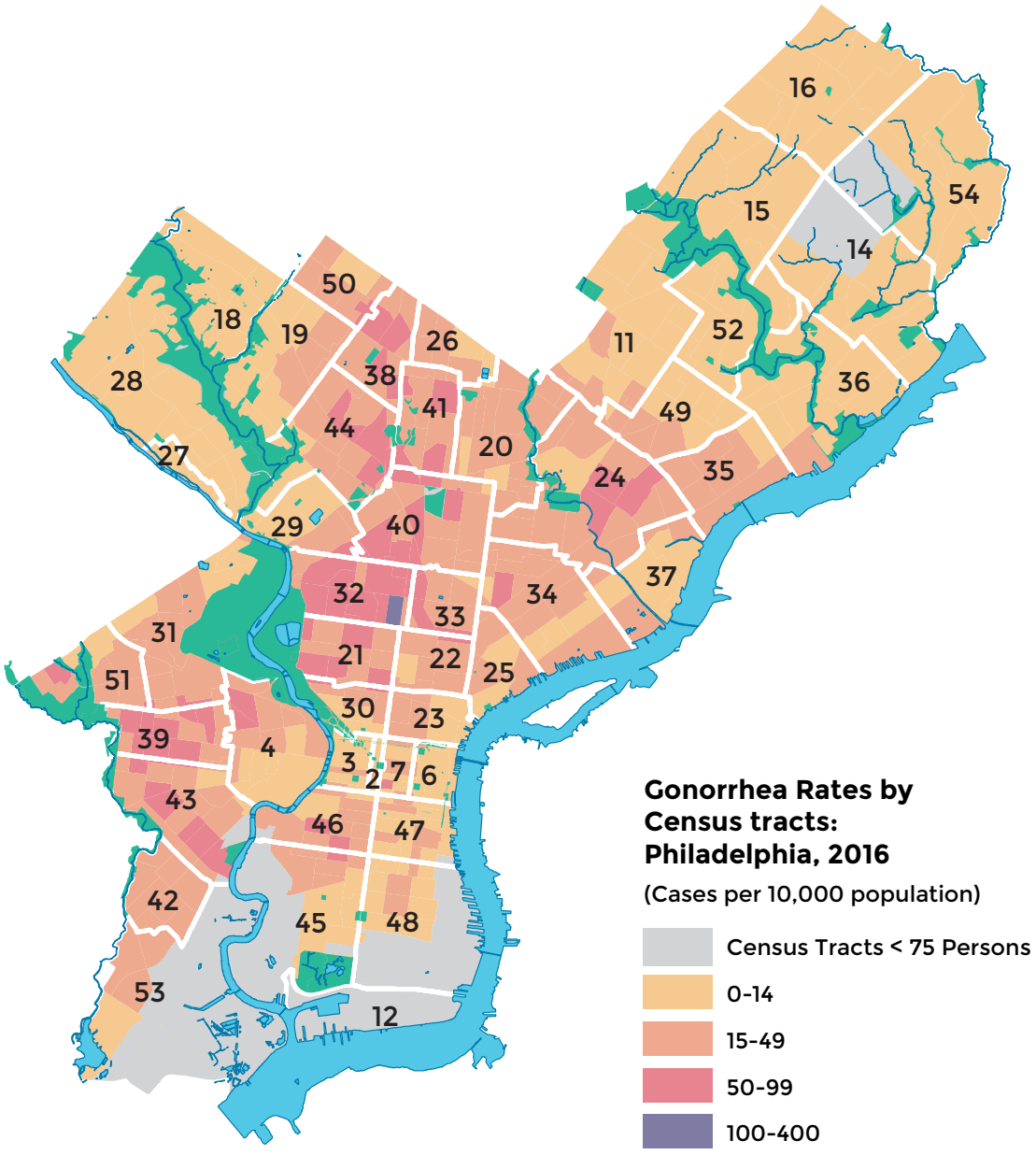
Number of Chlamydia Reports by Age, Gender, and Region: Philadelphia, 2016

	NE		NW		N		CC		S		W/SW		Total*	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male														
0-14 Yrs	<6	--	<6	--	18	0	<6	--	<6	--	14	0	39	0
15-19 Yrs	122	1	61	0	876	4	32	0	110	1	492	2	1693	9
20-24 Yrs	242	1	86	0	1175	6	92	0	178	1	679	3	2452	12
25-34 Yrs	199	1	95	0	1022	5	199	1	266	1	610	3	2391	12
35+ Yrs	63	0	42	0	386	2	97	0	161	1	199	1	948	5
Female														
0-14 Yrs	<20	--	<6	--	130	1	<6	--	<20	--	75	0	243	1
15-19 Yrs	401	2	144	1	2269	11	96	0	283	1	1084	5	4277	21
20-24 Yrs	462	2	163	1	2166	11	119	1	284	1	1045	5	4239	21
25-34 Yrs	323	2	116	1	1432	7	127	1	264	1	697	3	2959	15
35+ Yrs	79	0	24	0	369	2	25	0	63	0	154	1	714	4
Grand Total	1914	10	749	4	9843	49	791	4	1623	8	5049	25	19955	100

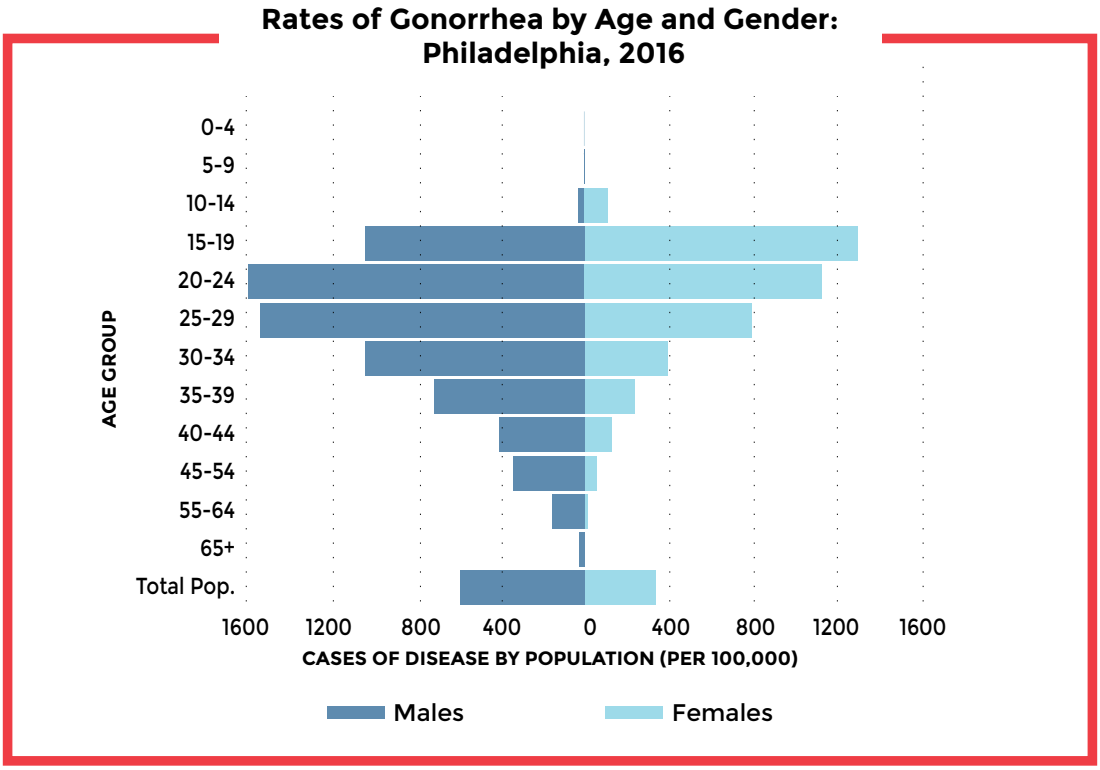
*unknown=4

GONORRHEA

(*Neisseria gonorrhoeae*)



GONORRHEA (Cont.)



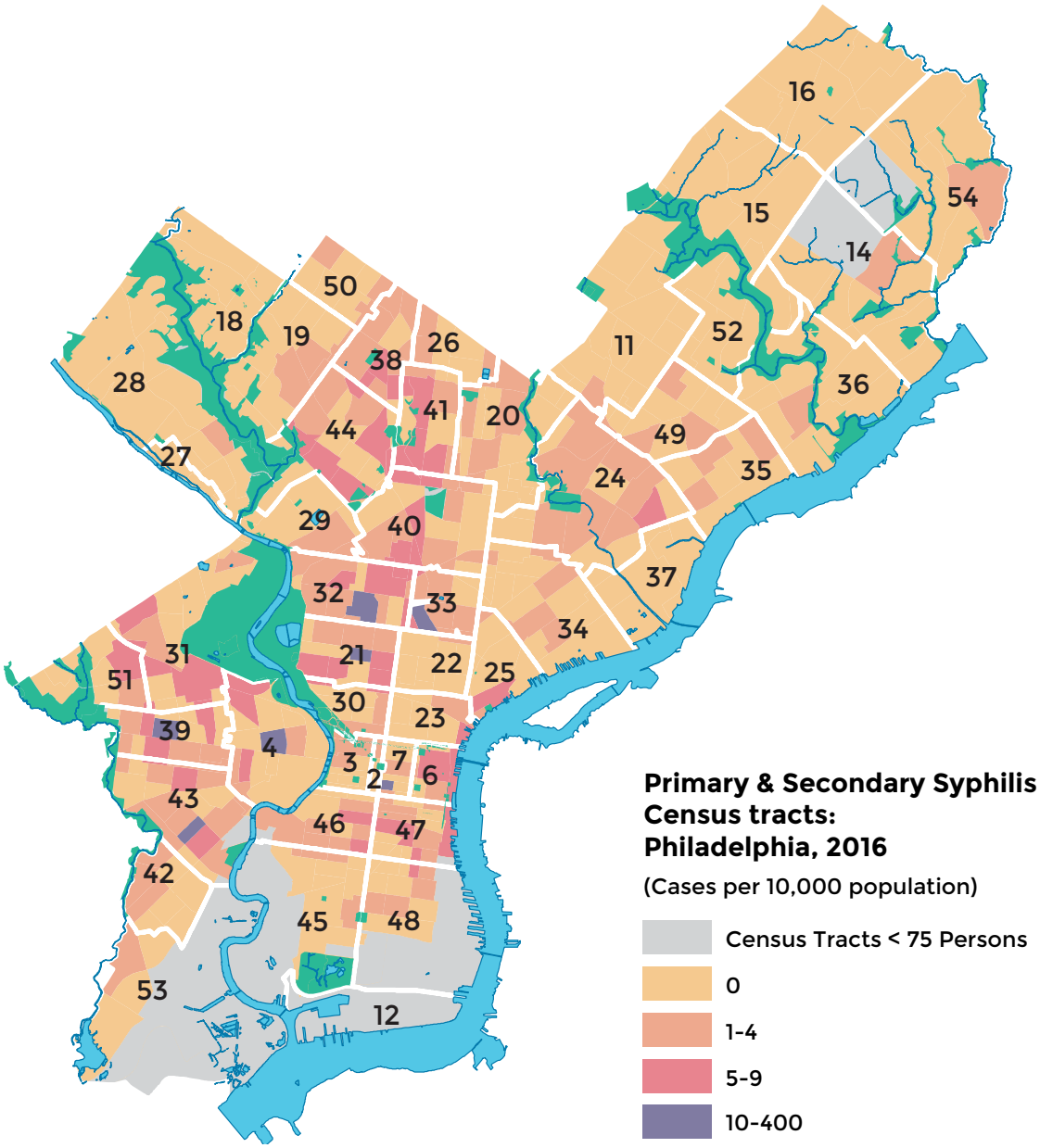
Number of Gonorrhea Reports by Age, Gender, and Region: Philadelphia, 2016

	NE		NW		N		CC		S		W/SW		Total*	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Male														
0-14 Yrs	<6	--	<6	--	9	0	<6	--	<6	--	<6	--	15	0
15-19 Yrs	45	1	14	0	348	5	17	0	25	0	156	2	605	9
20-24 Yrs	97	1	47	1	560	8	43	1	102	1	281	4	1130	16
25-34 Yrs	117	2	55	1	655	9	141	2	227	3	346	5	1541	22
35+ Yrs	85	1	39	1	401	6	87	1	155	2	183	3	950	14
Female														
0-14 Yrs	<6	--	<6	--	34	0	<6	--	<6	--	<10	--	50	1
15-19 Yrs	58	1	24	0	443	6	8	0	39	0	200	3	772	11
20-24 Yrs	57	1	22	0	453	7	14	0	62	1	239	3	847	12
25-34 Yrs	76	1	23	0	434	6	19	0	60	1	177	3	789	11
35+ Yrs	31	0	10	0	125	2	10	0	19	0	60	1	255	4
Grand Total	573	8	234	3	3462	50	339	5	692	10	1654	24	6954	100

*unknown=3

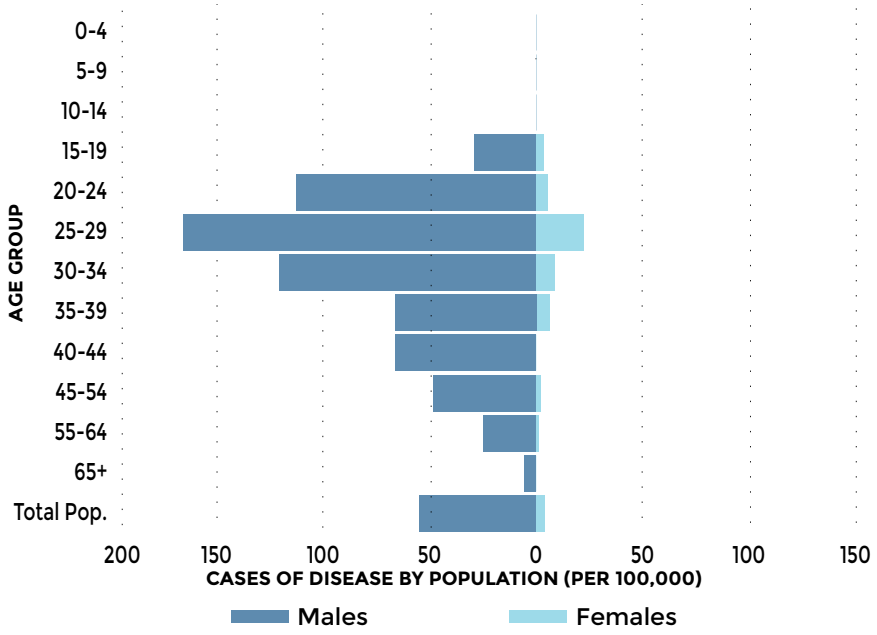
SYPHILIS-PRIMARY & SECONDARY

(*Treponema pallidum*)



SYPHILIS-PRIMARY & SECONDARY (Cont.)

Rates of Primary & Secondary Syphilis by Age and Gender: Philadelphia, 2016

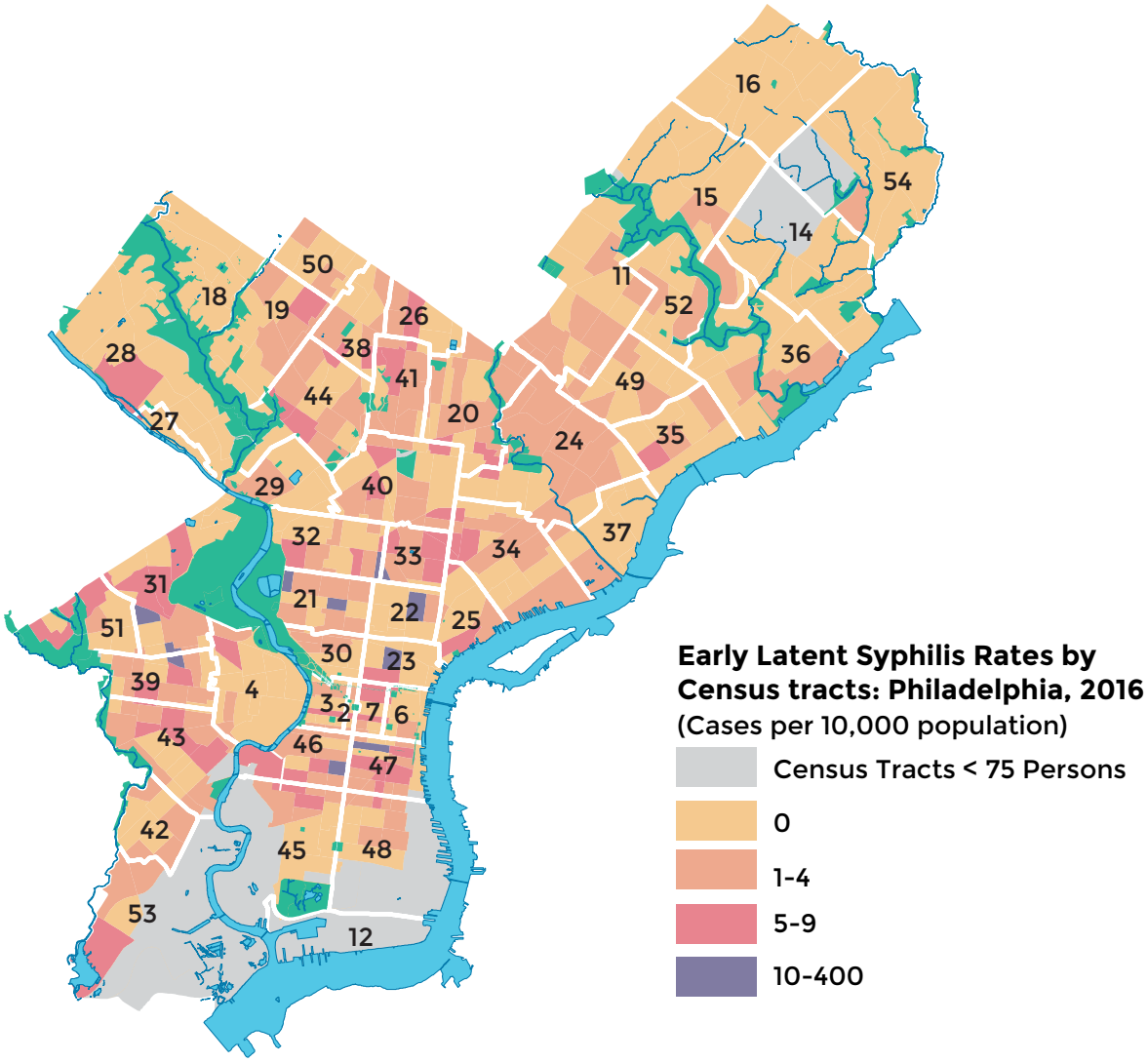


Number of Primary & Secondary Syphilis Reports by Age and Region: Philadelphia, 2016

	NE		NW		N		CC		S		W/SW		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Age														
0-24 Yrs	7	2	<6	--	52	12	<10	--	12	3	25	6	103	24
25-34 Yrs	10	2	<6	--	92	21	<20	--	19	4	50	12	192	45
35+ Yrs	9	2	10	2	39	9	16	4	30	7	29	7	133	31
Total	26	6	15	4	183	43	39	9	61	14	10	24	428	100

SYPHILIS-EARLY LATENT

(*Treponema pallidum*)



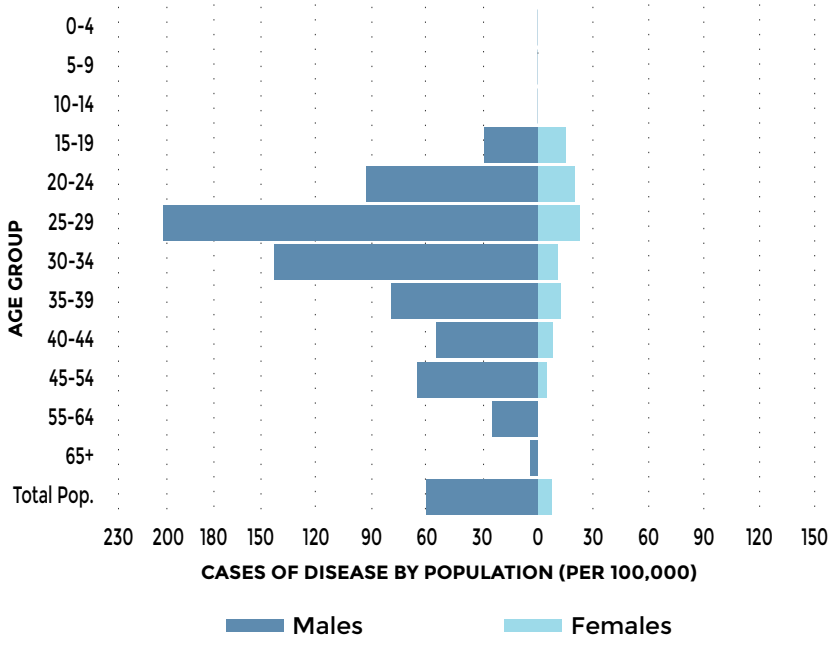
Number of Early Latent Syphilis Reports by Age and Region: Philadelphia, 2016

	NE		NW		N		CC		S		W/SW		Total*	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Age														
0-24 Yrs	13	3	<6	--	56	11	<6	--	9	2	20	4	107	22
25-34 Yrs	27	5	<10	--	90	18	<20	--	37	7	51	10	227	46
35+ Yrs	8	2	9	2	67	14	14	3	30	6	30	6	158	32
Total	48	10	21	4	213	43	33	7	76	15	101	20	492	100

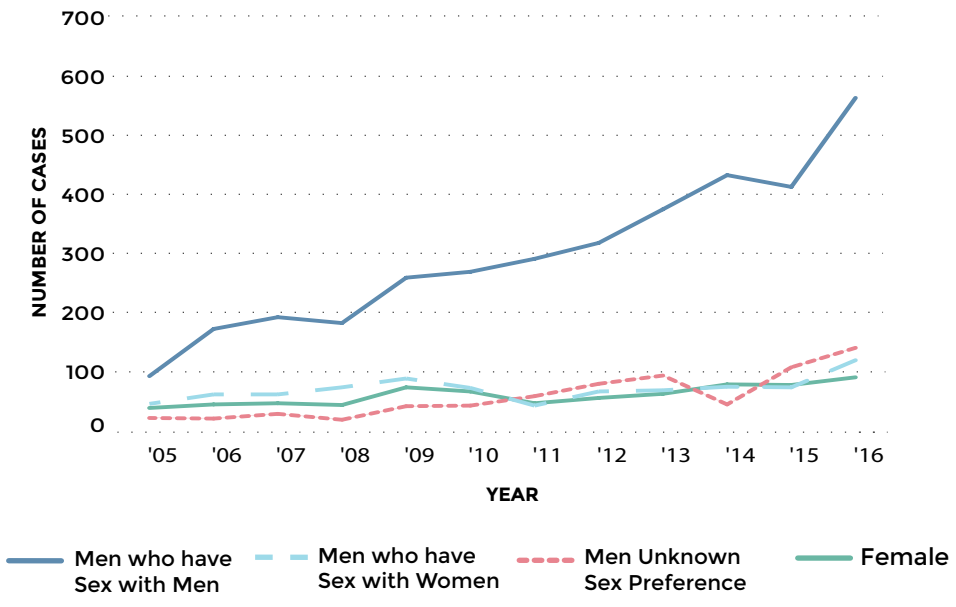
*unknown=2

SYPHILIS-EARLY LATENT (Cont.)

Rates of Early Latent Syphilis by Age and Gender: Philadelphia, 2016



Early Syphilis Cases by Year and Risk Group: Philadelphia, 2005-2016

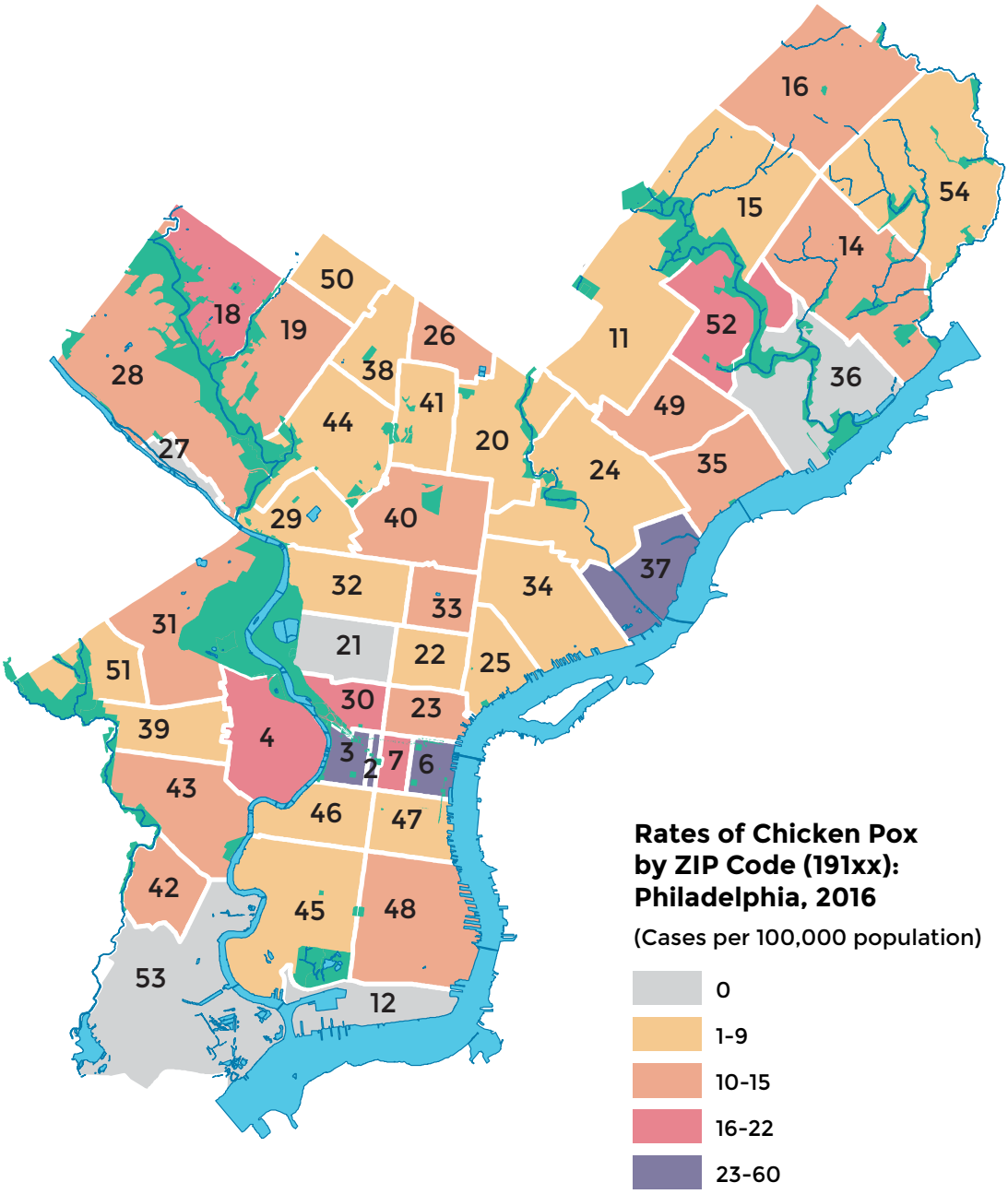


6 VACCINE-PREVENTABLE DISEASES

CHICKEN POX & SHINGLES
MENINGOCOCCAL DISEASE
PERTUSSIS

CHICKEN POX

(Varicella zoster virus)



CHICKEN POX & SHINGLES (Cont.)

Number of Chicken Pox Reports by Age and Gender: Philadelphia, 2016

	0-4 Years		5-17 Years		18-30 Years		30+ Years		Total*	
	n	%	n	%	n	%	n	%	n	%
Male	20	18.2	17	15.5	<6	--	<10	--	49	44.5
Female	21	19.1	15	13.6	12	10.9	12	10.9	60	54.5
Total	41	37.3	32	29.1	<18	--	<22	--	110	100

*unknown=1

OF NOTE

In 2016, **a varicella outbreak** was identified in a pre-school. **Five of the 6 individuals (ages 1-5 years)** with confirmed varicella were unvaccinated due to religious or philosophical exemptions. An additional 26 unvaccinated asymptomatic students were excluded from school for 21 days in light of low varicella vaccination coverage and ongoing disease transmission. Three students were permitted to return to school after they received a dose of varicella vaccine.

Number of Shingles Reports by Age and Gender: Philadelphia, 2016

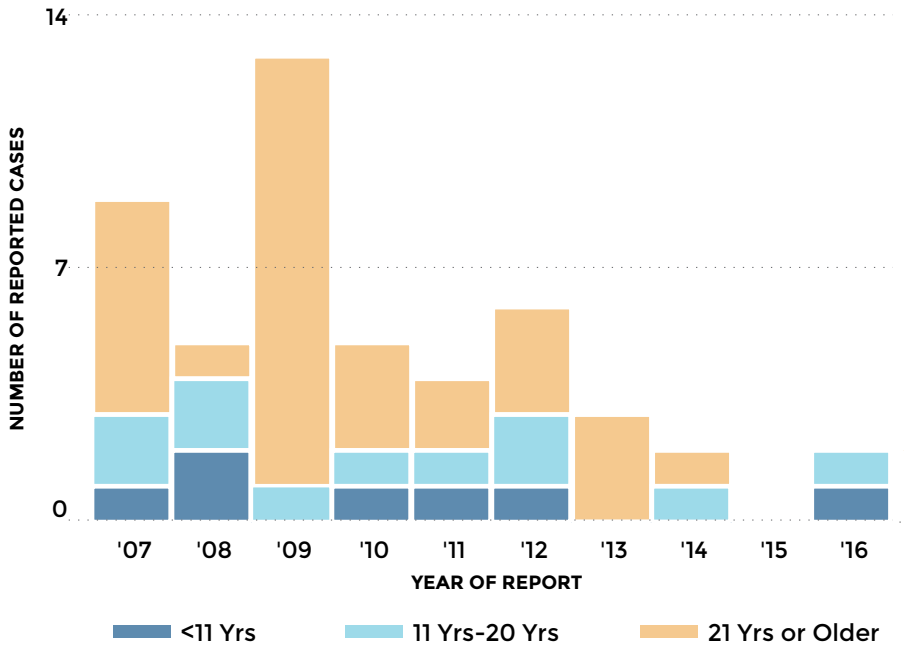
	0-14 Years		15-30 Years		31-45 Years		46-60 Years		61+ Years		Total*	
	n	%	n	%	n	%	n	%	n	%	n	%
Male	9	5.8	14	9.1	12	7.8	15	9.7	21	13.6	71	46.1
Female	6	3.9	19	12.3	12	7.8	28	18.2	18	11.7	83	53.9
Total	15	9.7	33	21.4	24	15.6	43	27.9	39	25.3	154	100

*unknown=1

MENINGOCOCCAL DISEASE

(*Neisseria meningitidis*)

Invasive Meningococcal Disease by Age Group: Philadelphia, 2007-2016

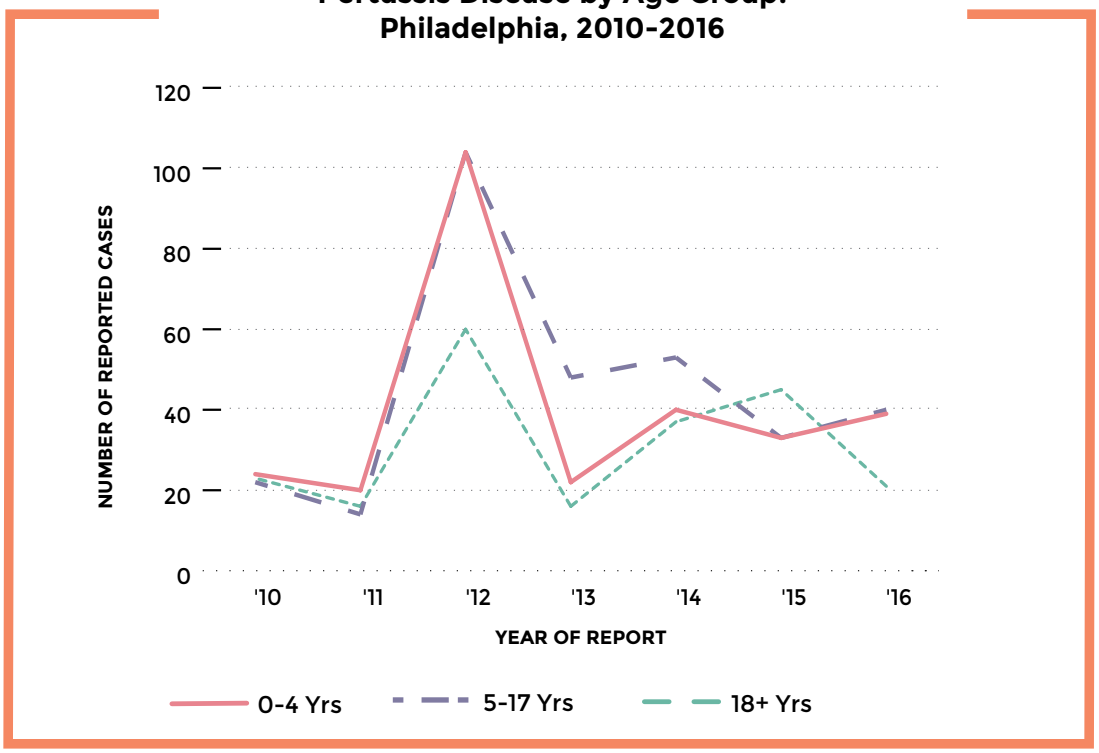


Reports of Meningococcal Disease by Serogroup Per Year: Philadelphia, 2007-2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total N (%)
Serogroup											
B	0	1	8	1	1	2	0	1	0	1	15 (31%)
C	4	0	1	1	0	1	0	0	0	0	7 (15%)
W	0	0	1	0	0	0	0	0	0	0	1 (2%)
X	0	0	0	0	1	0	0	0	0	0	1 (2%)
Y	2	2	2	2	2	2	2	0	0	0	14 (29%)
Z	1	0	0	0	0	0	0	0	0	0	1 (2%)
Nontypeable	2	2	0	1	0	1	1	1	0	1	9 (19%)
Total	9	5	12	5	4	6	3	2	0	2	48 (100%)

PERTUSSIS
(*Bordetella pertussis*)

Pertussis Disease by Age Group: Philadelphia, 2010-2016



Number of Pertussis Reports by Age and Gender: Philadelphia, 2016

	0-4 Years		5-17 Years		18+ Years		Total*	
	n	%	n	%	n	%	n	%
Male	16	16	17	17	9	9	42	42
Female	23	23	23	23	12	12	58	58
Total	39	39	40	40	21	21	100	100

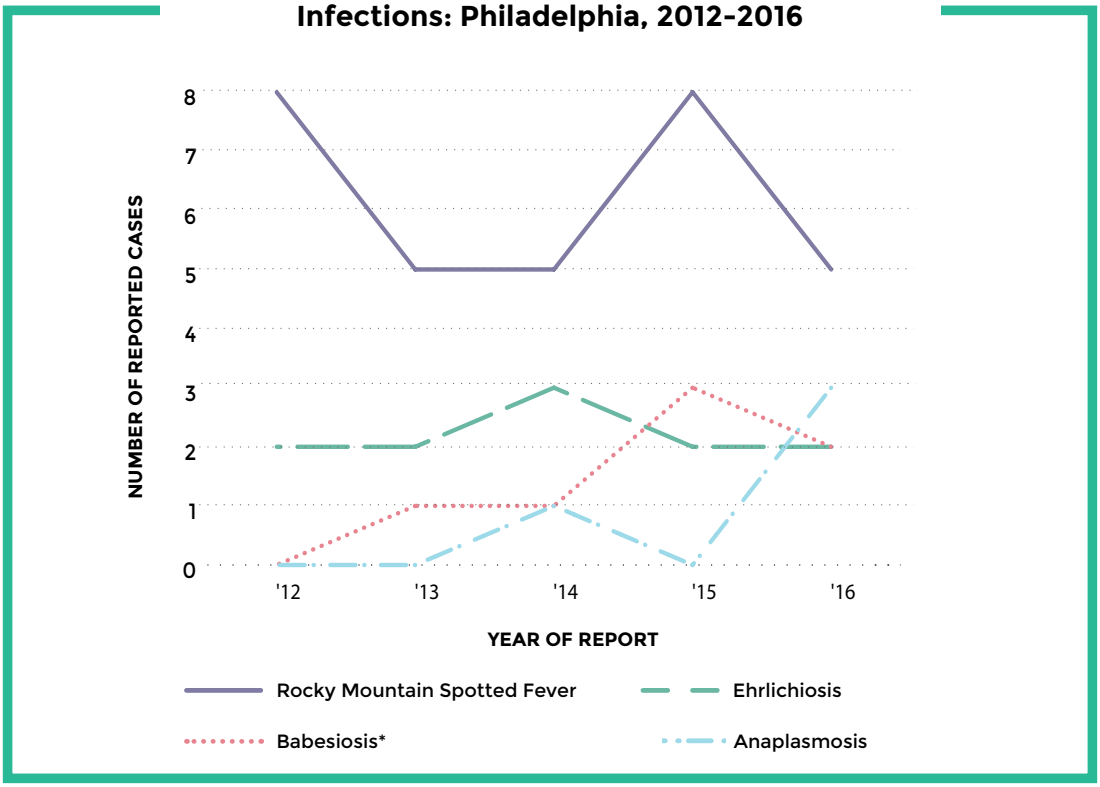
*unknown=1

7 VECTOR-BORNE DISEASES

TICKBORNE INFECTIONS
ARBOVIRAL INFECTIONS
ZIKA VIRUS
LYME DISEASE
MALARIA
WEST NILE VIRUS

TICKBORNE INFECTIONS

Reported Cases of Other Non-Lyme Tickborne Infections: Philadelphia, 2012-2016



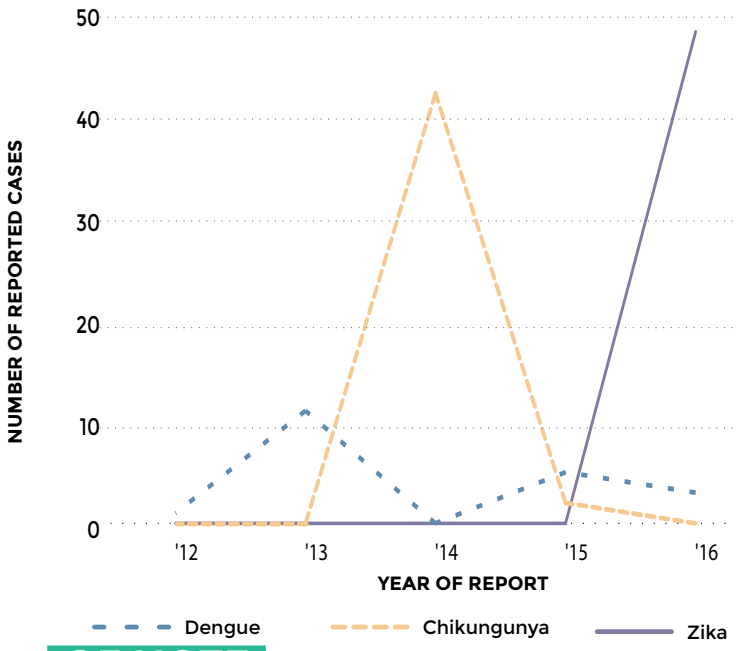
Reported Cases of Other Non-Lyme Tickborne Infections: Philadelphia, 2012-2016

	2012	2013	2014	2015	2016	Total
Anaplasmosis	0	0	1	0	3	4
Babesiosis*	0	1	1	3	2	7
Ehrlichiosis	2	6	3	2	2	15
Rocky Mountain Spotted Fever	10	5	5	8	5	33
Total	12	12	10	13	12	59

*Babesiosis includes locally-acquired and travel-associated tickborne infections as well as transfusion-associated cases

ARBOVIRAL INFECTIONS

Reported Cases of Travel-associated Arboviral Infections: Philadelphia, 2012-2016



OF NOTE

There were **2** Zika cases aquired through sexual contact with a returning traveler. One Zika probable case was an infant with asymptomatic congenital infection and no identified birth defects. All other Zika cases traveled to an affected area.

Travel-associated Arboviral Infections: Philadelphia, 2012-2016

	Chikungunya		Dengue		Zika	
	n= 44	%	n= 20	%	n= 48	%
Female	34	77	11	55	36	75
Foreign Born	31	70	7	35	35	73
Hospitalized	9	20	12	60	0	0
Death	0	0	1	5	0	0
Median Age (Range) Years	42.5	(5-78)	41.5	(10-79)	35	(0-73)

* The following countries had more than 1 case with documented travel (n=102): Puerto Rico, Dominican Republic, India, Jamaica, Trinidad, Haiti, Brazil, Costa Rica, Mexico, Guatemala, and Colombia

ZIKA VIRUS

OF NOTE

In 2016, PDPH began Zika-related surveillance activities that includes exposure classification, symptomology, and providing laboratory testing guidance to providers (Table 1).

In addition, PDPH began tracking pregnancy and infant outcomes for women with evidence of confirmed, probable, or suspected Zika infection during pregnancy as part of the CDC's US Zika Pregnancy Registry. By the close of the year, pregnancy outcomes had occurred for 15 women and among the 12 live births, no infant abnormalities were identified (Table 2).

Table 1: Zika Virus Cases
Philadelphia, PA, 2016

	N	(%)
TOTAL IDENTIFIED CASES	48	100
STATUS		
Confirmed	24	50
Probable	24	50
EXPOSURE TYPE		
Travel-associated, mosquito-borne transmission	45	94
Locally-acquired, mosquito-borne transmission	0	0
Sexual transmission	2	4
Congenital infection	1	2
SYMPTOMATIC	36	75

Table 2: Zika Pregnancy Registry Cases
Philadelphia, PA, 2016

	N	(%)
TOTAL	48	100
STATUS		
Confirmed	4	18
Probable	13	59
Suspect	5	23
TRIMESTER OF EXPOSURE		
Preconception	16	73
1st Trimester	16	73
2nd Trimester	14	64
3rd Trimester	8	36
SYMPTOMATIC	7	32

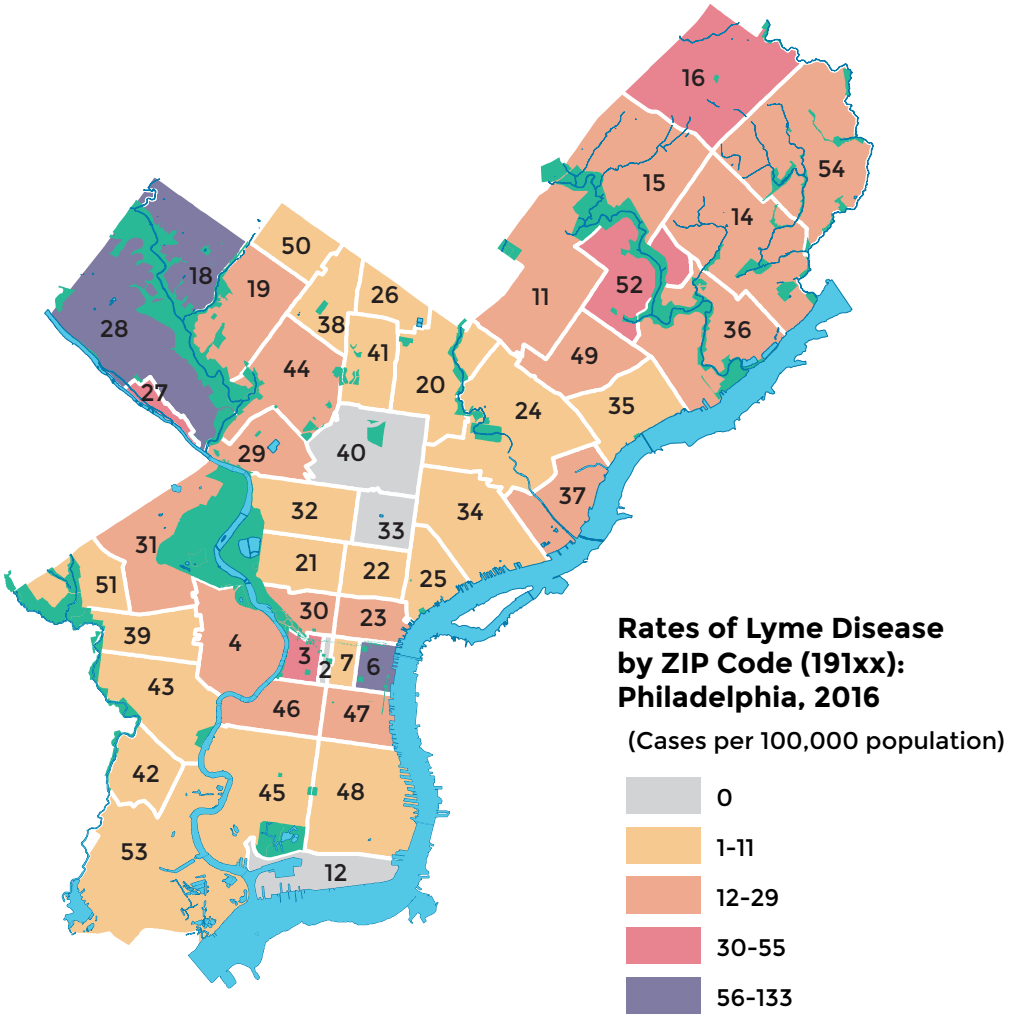
* Confirmed: Zika Nucleic Acid Test (NAT) positive Zika and negative Zika and negative Dengue neutralizing antibodies

** Probable: Zika IgM positive with positive Zika and positive Dengue neutralizing antibodies

***Suspect: Zika IgM equivocal with positive Zika and Positive Dengue neutralizing antibodies

LYME DISEASE

(*Borrelia burgdorferi*)

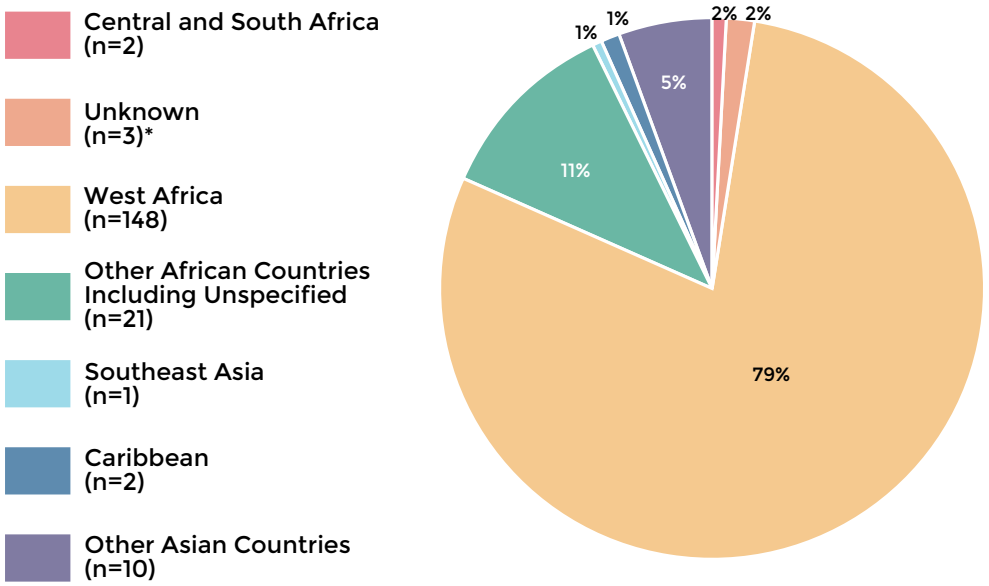


Number of Lyme Disease Reports by Age and Gender: Philadelphia, 2016

	0-14 Years		15-34 Years		35-60 Years		61+ Years		Total	
	n	%	n	%	n	%	n	%	n	%
Male	26	11.0	39	16.5	46	19.5	25	10.6	136	57.6
Female	21	8.9	27	11.4	35	14.8	17	7.2	100	42.4
Total	47	19.9	66	27.9	81	34.3	42	17.8	236	100

MALARIA
(*Plasmodia spp.*)

Reported Cases of Malaria by Travel History: Philadelphia, 2007-2016

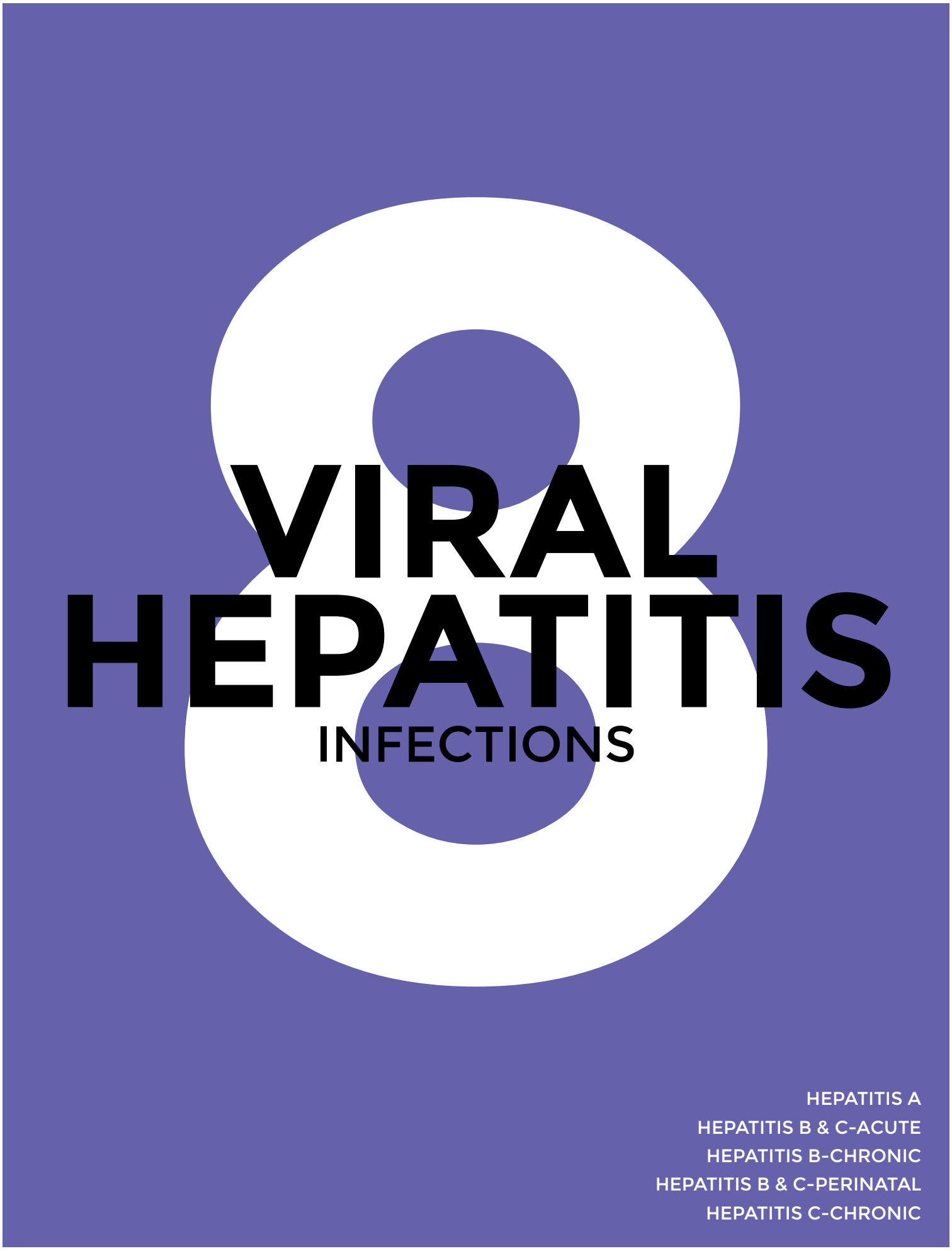


*Includes one cryptic case with unknown source of infection

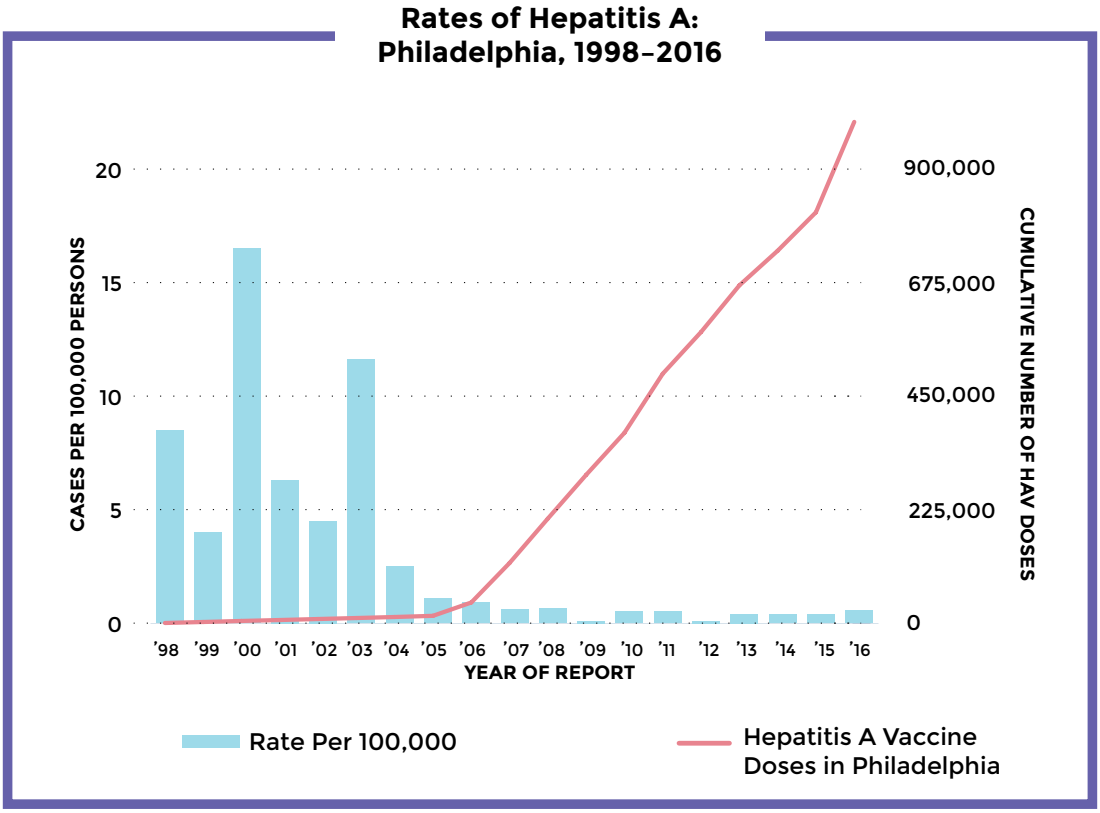
WEST NILE VIRUS

OF NOTE

During the 2016 season, **4 Philadelphia residents developed West Nile Virus (WNV) infections** (4 neuro-invasive WNV and 0 WNV fever). All 4 cases occurred in adults >50 years of age and required hospitalization. One case was fatal. Cumulative WNV positivity in mosquitoes collected during the 2016 season was **lower** than 2015 (8% vs. 19%), though higher than the historic median (3%).


VIRAL
HEPATITIS
INFECTIONS
HEPATITIS A
HEPATITIS B & C-ACUTE
HEPATITIS B-CHRONIC
HEPATITIS B & C-PERINATAL
HEPATITIS C-CHRONIC

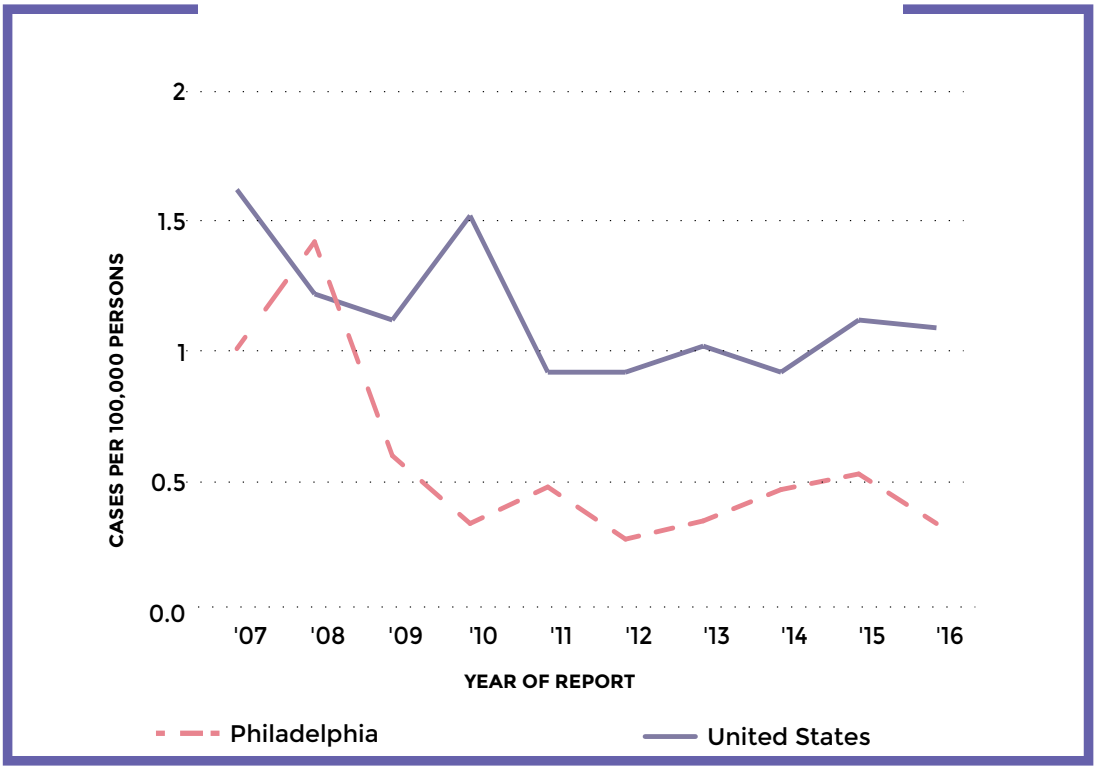
HEPATITIS A
(Hepatitis A virus)



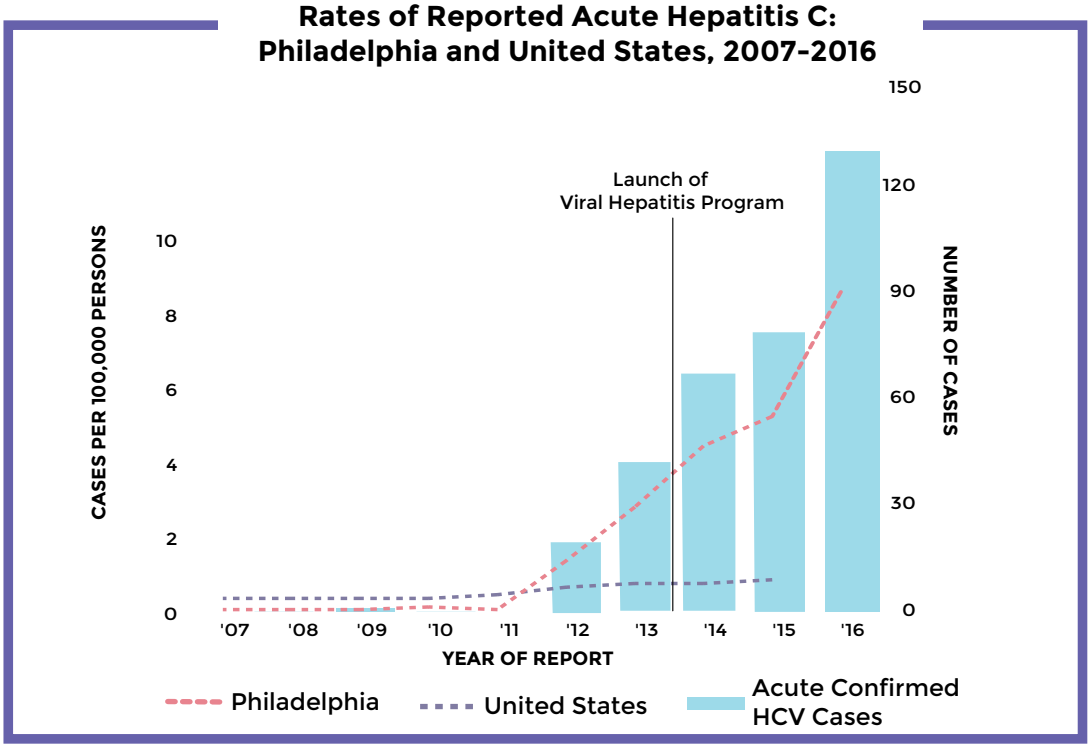
HEPATITIS-ACUTE

(Hepatitis B &C virus)

**Rates of Reported Acute Hepatitis B:
Philadelphia and United States, 2007-2016**

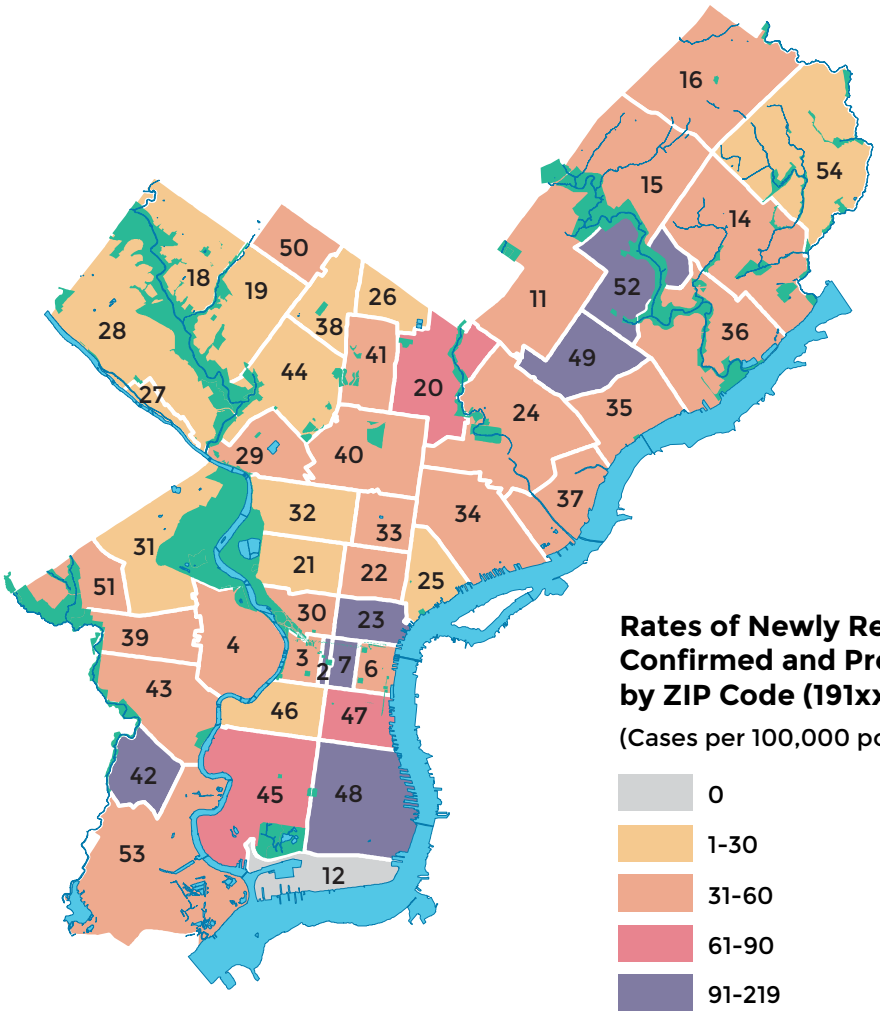


**Rates of Reported Acute Hepatitis C:
Philadelphia and United States, 2007-2016**



HEPATITIS B-CHRONIC

(Hepatitis B virus)



Rates of Newly Reported Chronic Confirmed and Probable HBV Infection by ZIP Code (191xx): Philadelphia, 2016

(Cases per 100,000 population)

- 0
- 1-30
- 31-60
- 61-90
- 91-219

Number of Newly-reported Chronic Hepatitis B Reports by Age and Gender: Philadelphia, 2016

	0-30 Years		31-45 Years		46-65 Years		66+ Years		Total*	
	n	%	n	%	n	%	n	%	n	%
Male	96	11.1	174	20.1	181	20.9	48	5.6	499	57.7
Female	114	13.2	120	13.9	106	12.3	24	2.8	364	42.1
Total	210	24.3	294	34.0	287	33.2	72	8.3	863*	100

*Missing 2

HEPATITIS-PERINATAL
(Hepatitis B & C virus)

Comparison of Perinatal Hepatitis B: Philadelphia 2008-2015

	2008	2009	2010	2011	2012	2013	2014	2015
Total Mother-Child Pairs Followed	162	173	161	131	171	153	164	155
Total Children Receiving HBIG Within One Calendar Day of Birth	162 (100%)	168 (97%)	159 (99%)	129 (98%)	154 (90%)	140 (92%)	23 (14%)	81 (52%)
Total Children Receiving Birth HBV Within One Calendar Day of Birth	162 (100%)	171 (99%)	161 (100%)	129 (98%)	167 (98%)	150 (98%)	22 (23%)	128 (83%)
Total Children Receiving 3 HBV Vaccines in 1 Year	153 (94%)	156 (90%)	140 (87%)	114 (87%)	167 (98%)	134 (88%)	139 (85%)	120 (77%)
Children HBsAg+ at Screening	0	0	3 (2%)	0	1 (<1%)	0	0	1 (<1%)
Household Contacts Identified and Educated	167	182	130	79	-	-	-	-
Household Contacts Tested	117	115	86	75	-	-	-	-
Household Contacts Susceptible	17 [9]	6 [4]	8 [2]	10 [6]	-	-	-	-

Note: Due to the nature of the program, complete 2016 Perinatal Hepatitis B Prevention Program results will not be available until 2018.

OF NOTE

In 2016, PDPH formed the **nation's first Perinatal Hepatitis C Program.** The program aims to work with healthcare providers and mothers to: (1) identify hepatities C-positive pregnant women, (2) encourage them to recieve hepatitis C care, (3) work to ensure infants are tested appropriately for hepatitis C, (4) ensure hepatitis C-positive infants are linked to a specialist, and (5) characterize perinatal hepatitis C in Philadelphia.

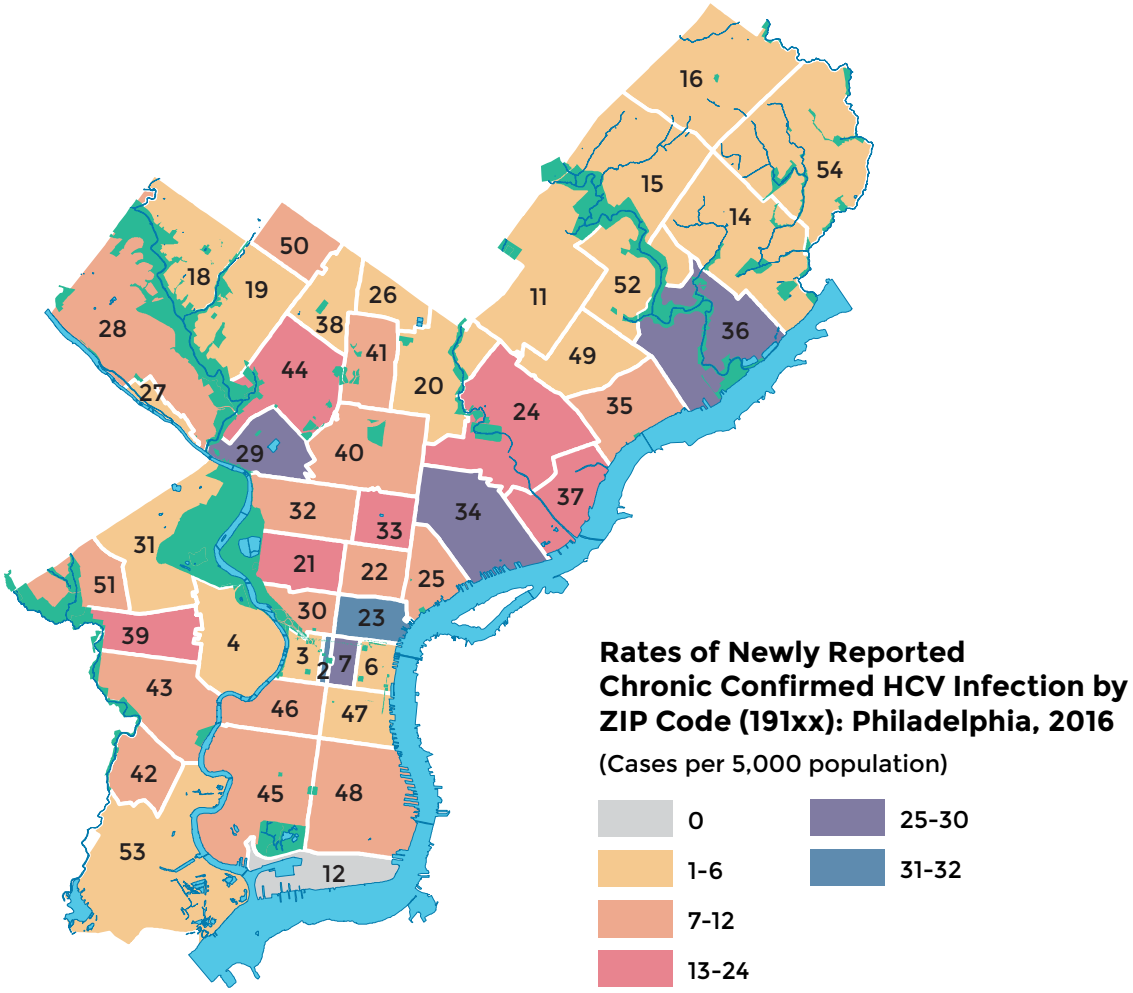
Hepatitis C-positive Babies After Perinatal Exposure: Philadelphia, 2016

Year of Birth	2013	2014	2015
Number of Positive Perinatal Exposure	2	3	9

Note: The data above was prior to the formation of the Perinatal Hepatitis C program. Due to the nature of the program, complete 2016 Perinatal Hepatitis C Program results will not be available until 2018.

HEPATITIS C-CHRONIC

(Hepatitis C virus)



Number of Newly-reported Chronic Hepatitis C Reports by Age and Gender: Philadelphia, 2016

	0-18 Years		19-30 Years		31-45 Years		46-65 Years		66+ Years		Total*	
	n	%	n	%	n	%	n	%	n	%	n	%
Male	12	0.4	240	8.4	494	17.2	862	30.0	204	7.1	1812	63.7
Female	10	0.3	237	8.3	273	9.5	407	14.2	107	3.7	1034	36.3
Total	22	0.7	477	16.7	767	26.7	1269	44.2	311	10.8	2846	100

*Missing 29

9 REPORTING DISEASES & CONDITIONS

NOTIFIABLE DISEASE LIST
REPORT FORM

PHILADELPHIA DEPARTMENT OF PUBLIC HEALTH
DIVISION OF DISEASE CONTROL (DDC)

Phone: 215-685-6748 **Fax: 215-238-6947**

For after hours immediate reporting & consultation: 215-686-4514 – ask for Division of Disease Control on-call staff

Reportable Diseases and Conditions

- Acquired Immunodeficiency Syndrome (AIDS/HIV) ‡
- Amebiasis
- Animal bites (wild/stray/domestic)
- Anthrax *
- Babesiosis
- Botulism *
- Brucellosis *
- Campylobacteriosis
- *Chlamydia trachomatis* including lymphogranuloma venereum
- Chancroid
- Cholera *
- Creutzfeldt-Jakob Disease
- Cryptosporidiosis
- Cyclosporiasis
- Dengue
- Diphtheria *
- Ehrlichiosis/Anaplasmosis
- Encephalitis including all arboviruses *
- *Escherichia coli* O157:H7 and Shiga toxin-producing bacteria *
- Food poisoning *
- Giardiasis
- Gonococcal infections
- Guillain-Barré Syndrome
- *Haemophilus influenzae*, invasive disease *
- Hantavirus Pulmonary Syndrome *
- Hepatitis A
- Hepatitis B
- Hepatitis C
- Hepatitis, other viral
- Histoplasmosis
- Influenza – novel influenza A *
- Influenza – pediatric mortality and institutional outbreaks *
- Lead poisoning †
- Legionnaires' disease
- Leprosy (Hansen's disease)
- Leptospirosis
- Listeriosis
- Lyme disease
- Malaria
- Measles (rubeola) *
- Melioidosis *
- Meningitis (viral, fungal, bacterial)
- Meningococcal infections *
- Mumps
- Novel coronavirus (SARS, MERS-CoV) *
- Pertussis (whooping cough)
- Plague *
- Poliomyelitis *
- Psittacosis (ornithosis)
- Rabies *
- Rickettsial diseases (including Rocky Mountain Spotted Fever, rickettsial pox, typhus fever)
- Rubella (German Measles) & Congenital Rubella *
- Salmonellosis
- Shigellosis
- Smallpox *
- *Staphylococcus aureus*, vancomycin insensitive
- Streptococcal disease, invasive group A
- Streptococcal disease, invasive group B (neonatal)
- *Streptococcus pneumoniae*, invasive disease
- Syphilis
- Tetanus
- Toxic Shock Syndrome
- Trichinosis
- Tuberculosis §
- Tularemia *
- Typhoid (*Salmonella typhi* and *paratyphi*) *
- Vibriosis
- West Nile Virus *
- Varicella, including zoster
- Yellow Fever and other viral hemorrhagic fevers *
- Yersiniosis

* Report suspected and confirmed cases within **24 hours**

† Report to Lead Poisoning Prevention at **215-685-2788**

‡ Report to AIDS Activities Coordinating Office at **215-685-4789**

§ Report to TB Control Program at **215-685-6744 or -6873**

All other cases should be reported within 5 days

All unusual disease clusters, disease outbreaks, and unusual disease occurrences should be reported immediately

To Report a Case to DDC, Call, Fax or Submit through PA-NEDSS the Following Information:
Patient Name | Condition | Age/DOB, Sex, Address & Phone | Clinician Name, Address & Phone | Laboratory Testing

For more information, please visit https://hip.phila.gov/xv

Effective 06/14

Notifiable Disease Case Report

(Confidential)

Philadelphia Department of Public Health
Division of Disease Control
Communicable Disease Control Program
500 S. Broad Street, Philadelphia, PA. 19146

Identification of Patient

Report Date *(Mo., Day, Yr.)*	Name *(Last, First, M.I.)*	Parent or caretaker (if applicable)

Address *(Number, Street, Apt #,City, Zip Code)*	Telephone (H) _____ (W)_____ (C) _____

DOB *(Mo., Day, Yr.)*	Age	Sex ☐ M ☐ F	Occupation

Name of Employer or School	Address *(Number, Street, City, Zip Code)*

Medical Information

Disease or Condition	Date of Onset *(Mo., Day, Yr.)* *(If animal bite, Date it Occurred)*	Diagnosis (check one) ☐ Clinical ☐ Lab confirmed	Fatal (check one) ☐ Yes ☐ No

Chief Symptoms / Complaints	Suspected source of Infection (if known)

If Case Hospitalized *(Name of Hospital)*	Admission Date	Discharge Date

Laboratory Information If Pertinent *(Attach Copies If Applicable)*

Name of Tests Done	Site/Source	Results	Dates Done

Animal Exposures

Parts of Body Bitten	Type of Animal	Breed of Animal	Current Location Of Animal *(Indicate if available for testing)*

Name of Owner	Address of Owner *(Number, Street, Apt #, City, Zip Code)*

Reporter Information

Name of Person Reporting Case	Reporter ☐ ICP ☐ ED ☐ Other_____	Phone

Reporting Institution	Address (Number, Street, City, Zip Code)

DO NOT WRITE IN AREA BELOW - FOR DEPARTMENT USE

Name *(Person Receiving Report)*	Method of reporting ☐ Phone ☐ Fax ☐ Mail ☐ Active Surveillance ☐ Other_____

Any unusual illness, disease clusters or possible outbreaks should be reported *immediately* by telephone.
Please fax all completed reports to 215-238-6947, or call 215-685-6748 to report case by phone.