



Laboratory reports of *Mycoplasma pneumoniae* infection made to CIDSC from PHE and NHS laboratories in England and Wales: January to March 2019.

Background

Mycoplasma pneumoniae (Mpn) is a bacterium that causes acute respiratory illness ranging in severity from mild illness to severe pneumonia. It can be fatal in some cases and has rarely been associated with severe complications such as encephalitis. Further information can be found on the [PHE *Mycoplasma pneumoniae* web page](#).

These analyses are based on laboratory reports of *Mycoplasma pneumoniae* from January to March 2019 in England and Wales (EW), extracted from Public Health England's (PHE) voluntary surveillance database Second Generation Surveillance System (SGSS), with previously reported data from the past five full years shown for comparison and context.

Laboratory reports included were limited to the following methods and samples:

- Serological methods: on blood, serum or plasma
- Nucleic acid amplification testing (NAAT), including polymerase chain reaction (PCR): on blood, serum, plasma, throat, nose/nasal, bronchial, upper respiratory tract, broncho-alveolar lavage (BAL), alveolar, naso-pharyngeal aspirate (NPA), endotracheal aspirate, trachea or sputum

The data presented here may differ from those in earlier publications, due to the inclusion of late reports.

Rates of laboratory detection were calculated using mid-year resident population estimates from the Office for National Statistics (ONS) for the respective year in England [1] and Wales [2]. Geographical analyses by region were based on location of the reporting laboratory.

It is recommended that results from serological analyses are interpreted with caution, as NAAT methods are considered to produce a more robust indication of acute infection.

Overall *M. pneumoniae* cases reported: January 2014 to March 2019

Table 1: Cases of *M. pneumoniae* reported, by NAAT methods.

Year	Cases	Gender			Overall annual rate of detection/million population [#]
		Male	Female	Unknown	
2014	52	29	23	0	0.91
2015	161	78	83	0	2.78
2016	241	119	122	0	4.12
2017	65	35	30	0	1.11
2018	58	28	30	0	0.99
2019*	26	13	13	0	-

*Includes data up to the end of March 2019 only

[#]Population estimates for 1: England; 2: Wales

Table 2: Cases of *M. pneumoniae* reported, by serological methods.

Year	Cases	Gender			Overall annual rate of detection/million population [#]
		Male	Female	Unknown	
2014	377	182	193	2	6.57
2015	417	210	206	1	7.20
2016	462	232	226	4	7.91
2017	485	248	235	2	8.26
2018	335	171	161	3	5.71
2019*	122	57	65	0	-

*Includes data up to the end of March 2019 only

[#]Population estimates for 1: England; 2: Wales

Table 3: Cases of *M. pneumoniae* by age group, reported by NAAT methods.

Year	Number of cases per age group in years (%)							Total cases
	0-4	5-9	10-14	15-44	45-64	65+	Unknown	
2014	20 (38.5)	9 (17.3)	0 (0.0)	19 (36.5)	3 (5.8)	1 (1.9)	0 (0.0)	52
2015	53 (32.9)	17 (10.6)	6 (3.7)	58 (36.0)	16 (9.9)	11 (6.8)	0 (0.0)	161
2016	76 (31.5)	22 (9.1)	7 (2.9)	103 (42.7)	27 (11.2)	6 (2.5)	0 (0.0)	241
2017	17 (26.2)	4 (6.2)	5 (7.7)	22 (33.8)	13 (20.0)	4 (6.2)	0 (0.0)	65
2018	26 (44.8)	5 (8.6)	3 (5.2)	16 (27.6)	5 (8.6)	3 (5.2)	0 (0.0)	58
2019*	5 (19.2)	4 (15.4)	3 (11.5)	8 (30.8)	4 (15.4)	2 (7.7)	0 (0.0)	26

*Includes data up to the end of March 2019 only

Table 4: Cases of *M. pneumoniae* by age group, reported by serological methods.

Year	Number of cases per age group in years (%)							Total cases
	0-4	5-9	10-14	15-44	45-64	65+	Unknown	
2014	27 (7.2)	36 (9.5)	27 (7.2)	152 (40.3)	60 (15.9)	74 (19.6)	1 (0.3)	377
2015	26 (6.2)	49 (11.8)	32 (7.7)	162 (38.8)	87 (20.9)	60 (14.4)	1 (0.2)	417
2016	38 (8.2)	47 (10.2)	42 (9.1)	181 (39.2)	81 (17.5)	69 (14.9)	4 (0.9)	462
2017	51 (10.5)	69 (14.2)	59 (12.2)	158 (32.6)	76 (15.7)	72 (14.8)	0 (0.0)	485
2018	20 (6.0)	44 (13.1)	27 (8.1)	110 (32.8)	55 (16.4)	79 (23.6)	0 (0.0)	335
2019*	5 (4.1)	10 (8.2)	5 (4.1)	49 (40.2)	27 (22.1)	26 (21.3)	0 (0.0)	122

*Includes data up to the end of March 2019 only

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This report is only made possible by the weekly contributions from microbiology colleagues in laboratories across England and Wales.

Information is available to the public about the specific work that PHE do and why we require information about people's health. It also explains who we sometimes share the information with, how we protect the information we use, and what the public's options are with regards to any information we may hold about them.

(https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/421854/PHE_fair_processing_notice.pdf).

References

1. Office for National Statistics (ONS) mid-year population estimates for England
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/timeseries/enpop/pop>
2. Office for National Statistics (ONS) mid-year population estimates for Wales
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/timeseries/wapop/pop>

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Figure 1: Laboratory detection of *M. pneumoniae* in England and Wales (3-weekly moving average) January 2010 March 2019.

