



Infection report / Immunisation

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Laboratory confirmed cases of measles, mumps and rubella, England: April to June 2016

Measles, mumps and rubella are notifiable diseases and healthcare professionals suspecting a case are legally required to inform the authorities. Oral fluid testing is offered to all notified cases to confirm the diagnosis. This is part of the national enhanced surveillance for these vaccine preventable diseases and is essential for the monitoring of progress towards measles/rubella elimination. Recent infection is confirmed by measuring the presence of IgM antibodies or detecting viral RNA (by PCR) in these samples.

Data presented here are for the first quarter of 2016 (ie April to June). Cases include those confirmed by oral fluid testing (IgM antibody tests and/or PCR) at the National Reference Laboratory, Colindale, and national routine laboratory reports (mumps infections only) (table 1). Analyses are by date of onset and regional breakdown figures relate to Government Office Regions.

Quarterly figures from 2013 for cases confirmed by oral fluid antibody detection only and annual total numbers of confirmed cases by region and age are available from:

<https://www.gov.uk/government/publications/measles-confirmed-cases>

<https://www.gov.uk/government/publications/mumps-confirmed-cases>

<https://www.gov.uk/government/publications/rubella-confirmed-cases>

**Table 1. Total laboratory confirmed cases of measles, mumps and rubella, and oral fluid IgM antibody tests in notified cases: weeks 14-26/2016**

Notified and investigated cases		Confirmed cases						
Infecting virus	Cases reported to Health Protection Teams in England*	Oral fluid testing				Confirmed infections	Other samples	Total
		Number Tested	% of reported cases tested	Total Positive	Recently Vaccinated			
<b>Measles</b>	846	559	66%	167	0	118	49	<b>167</b>
<b>Mumps</b>	1562	919	59%	167	0	117	50	<b>167</b>
<b>Rubella</b>	113	66	58%	0	0	0	0	<b>0</b>

\*This represents the number of infections reported as possible cases and investigated by individual PHE centres in England

## Measles

In England, 167 new measles infections were confirmed in the second quarter of 2016 compared to 67 in the first quarter [1], bringing the provisional number of measles infections with onset dates in the first half of the year to 234. This is more than four times higher than the same period in 2015 (54 cases) and more than twice as high as 2014 (87 cases), although still much lower than activity reported during the 2013 (1282 cases) national measles outbreak (figure 1). Scotland reported another case of measles this quarter while Northern Ireland and Wales remained measles free in the first half of this year.

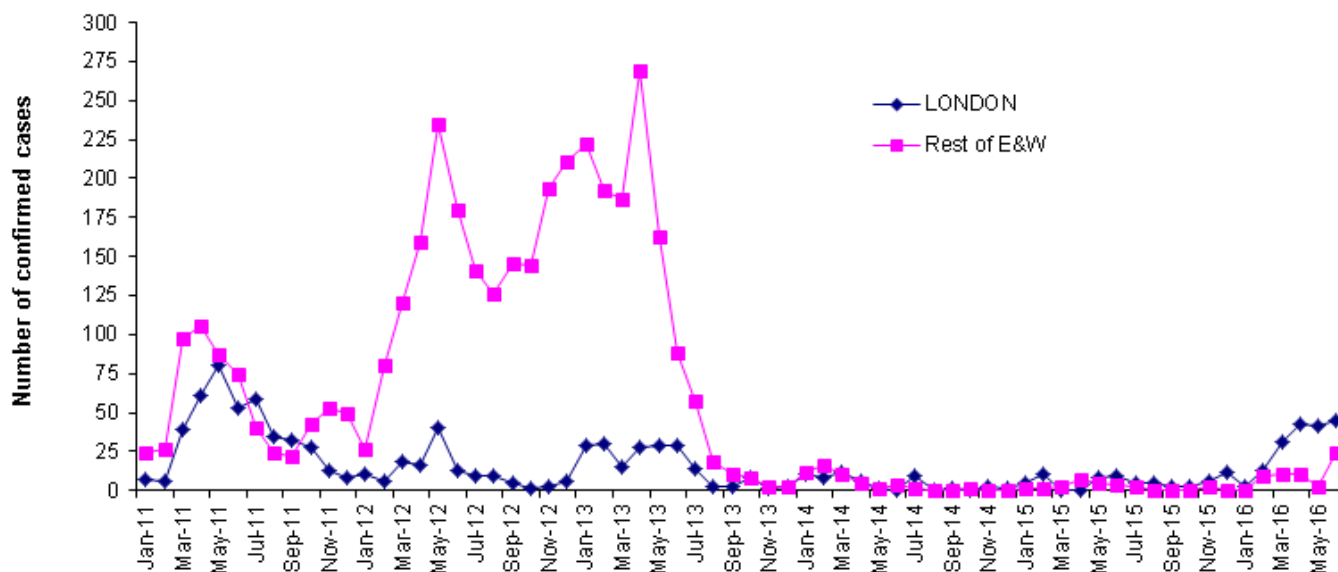
Just under half (78/167, 47%) of the measles diagnoses in England were in adults (aged  $\geq 19$  years), the majority of whom were born abroad and unimmunised (see table 2). A significant increase in the proportion (91/234, 39%) hospitalised in the first half of 2016 was observed compared to that in 2015 (26%) and 2014 (22%), reflecting the larger proportion of adults affected. Only nine (5%) of the cases reported this quarter were in children under the age of one, however a 10-month-old infant with onset of symptoms in late March 2016 suffered complications due to a secondary infection and died.

**Table 2. Laboratory confirmed cases of measles by age group and region (April to June 2016)**

Region	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	Total
North East	–	–	–	–	–	–	–	–	–	0
North West	1	–	–	–	–	1	–	–	–	2
Yorkshire & Humber	–	1	–	–	–	–	–	–	–	1
East Midlands	–	–	–	1	–	–	–	–	–	1
West Midlands	–	–	–	–	–	–	–	–	–	0
East of England	2	1	–	–	2	–	–	–	1	6
London	6	19	14	13	12	17	19	9	20	129
South East	–	1	2	1	–	2	2	–	1	9
South West	–	–	–	3	11	3	2	–	–	19
<b>Total</b>	9	22	16	18	25	23	23	9	22	167

Apart from six imported cases, the remainder are all virologically linked to the measles outbreak first reported in February 2016 [2], which started in the East of England following an importation from Italy and then spread into the London region [1]. The cluster of cases in the London area has continued this quarter with the same measles strain (MVs/Cambridge.GBR/5.16/[D8]) spreading to the South West region. Measles activity in London has not been this high since the 2013 national outbreak (see figure 1). In addition, since June a significant number of measles cases have been reported in teenagers and young adults that are linked to music and arts festivals around England [3]

Figure 1: Laboratory confirmed cases of measles in England by date of onset (January 2011 to June 2016)



PHE Health Protection Teams (HPTs) should be aware of the recommendations of the National Measles Guidelines [4] and the Guidance for Post-exposure Prophylaxis for Measles [5] on the management of all suspected cases. HPTs are also reminded to use the congregation context “Measles 2016” for all measles cases until the end of the year. A new congregation “Festivals 2016” context has also been created to help us monitor all measles cases linked to music and arts festivals. The details of the specific festival should be added as an additional context as appropriate.

## Mumps

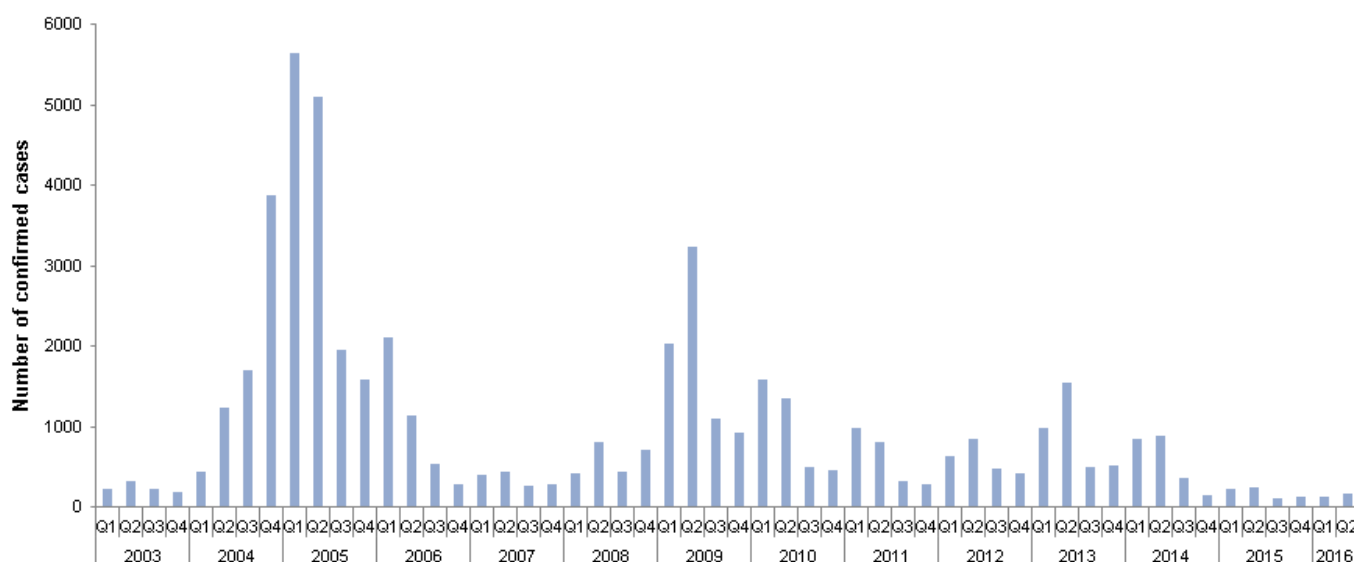
There were 167 laboratory confirmed mumps infections in England with onset dates in the period between April and June 2016, compared to 122 in the first quarter (figure 2) [1]. An additional four cases were confirmed in oral fluid samples from Wales.

Cases this quarter remain predominantly in young adults between 18 and 30 years of age (97/167 58%). About a third (59/167 35%) of all cases this quarter reported receiving one or two doses of MMR vaccination in childhood. For those cases where the vaccination date was known, the average number of years since last MMR vaccination was 16.5 years. Mumps cases were reported in all regions of England (table 3).

**Table 3. Laboratory confirmed cases of mumps by age group and region (weeks 14-26, 2016)**

Region	<1	1-4	5-9	10-14	15-19	20-24	25+	Total
North East	–	–	1	–	2	2	4	9
North West	–	–	–	–	3	7	8	18
Yorkshire & Humber	–	–	–	3	2	–	1	6
East Midlands	–	–	–	–	1	–	2	3
West Midlands	–	–	–	2	1	5	8	16
East of England	–	–	–	–	2	4	7	13
London	–	–	–	–	3	5	16	24
South East	–	–	–	1	2	10	9	22
South West	–	1	–	3	14	17	21	56
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>30</b>	<b>50</b>	<b>76</b>	<b>167</b>

**Figure 2. Laboratory confirmed cases of mumps by quarter, England, 2003-2016**



## Rubella

There were no new rubella infections confirmed in the period between April and June 2016.

## References

1. PHE (March 2016). '[Laboratory confirmed cases of measles, mumps and rubella, England: January to March 2016](#)', *HPR* 10(18): immunisation.
2. [Measles clusters in London and East of England](#), *HPR* 10(10): news, 11 March 2016.
3. [Measles associated with summer festivals](#), *HPR* 10(25): news, 5 August 2016.
4. Health Protection Agency (2010). [HPA National Measles Guidelines: Local and Regional Services](#).
5. Health Protection Agency (2009). [Post-exposure measles prophylaxis](#).