

1.2 Measles

Summary

Number of cases, 2016: 43
 Number of confirmed cases, 2016: 43
 Crude incidence rate, 2016: 0.9/100,000

There were 43 measles cases (0.9/100,000) in 2016 compared to two cases in 2015 (figure 1). All cases in 2016 were classified as confirmed.

Forty (93%) of the cases in 2016 were part of a national measles outbreak which occurred following importation of measles virus from Romania. One further case in a resident of Slovenia, exposed on a flight, was linked to the outbreak. This confirmed case is not included in the Irish data but was reported by Slovenian national public health authorities. Of the 40 cases, 27 (68%) were in the HSE S, five (13%) were in the HSE SE, four (10%) were in the HSE MW, three (8%) were in the HSE E and one (3%) was in the HSE NE. The cases ranged in age from three months to 40 years with a median age of eight years and a mean age of 12 years. Thirty (75%, n=30/40) of the cases were unvaccinated; eight of these were less than one year of age. One case (3%, n=1/40) had received one dose of MMR, three cases (8%, n=3/40) were reported to have received two doses while vaccination status was unknown for the remainder (15%, n=6/40). Of the cases reported to have received MMR vaccine only one had

vaccination dates reported. Nineteen cases (48%, n=19/40) were hospitalised. Length of hospitalisation was reported for 18 cases with a median duration of stay of four days (range two to eight days). Reported complications of measles included pneumonia (3%, n=1/33) and shortness of breath (n=1). Measles virus from 33 of the cases were genotyped by the NVRL and all were genotype B3. Information on the outbreak investigation was published in Eurosurveillance.¹

Two of the 43 cases were part of a separate localised outbreak. Genotype D8 was identified in this outbreak. The index case had arrived from the United Kingdom but reported exposure to a hospitalised measles in Germany 8-17 days before rash onset. The secondary case in Ireland was a health care student and had contact with the index case in an Emergency Department in Ireland. The index case was in the age group 20-24 years and the secondary case was in the age group 25-34 years. The index case was unvaccinated and the secondary case had one dose of MMR, however, the date of vaccination was not available.

One of the 43 cases was reported as exposed to measles cases in Pakistan. No secondary cases were identified. The case was genotyped by the NVRL and was genotype B3. The case was less than one year of age and was unvaccinated. The total 43 cases by age group and the age specific incidence rates are shown in figures 2 and 3. Nineteen of the 43 cases (44%) were hospitalised. The country of birth was recorded as Ireland for 27 cases; country of birth was

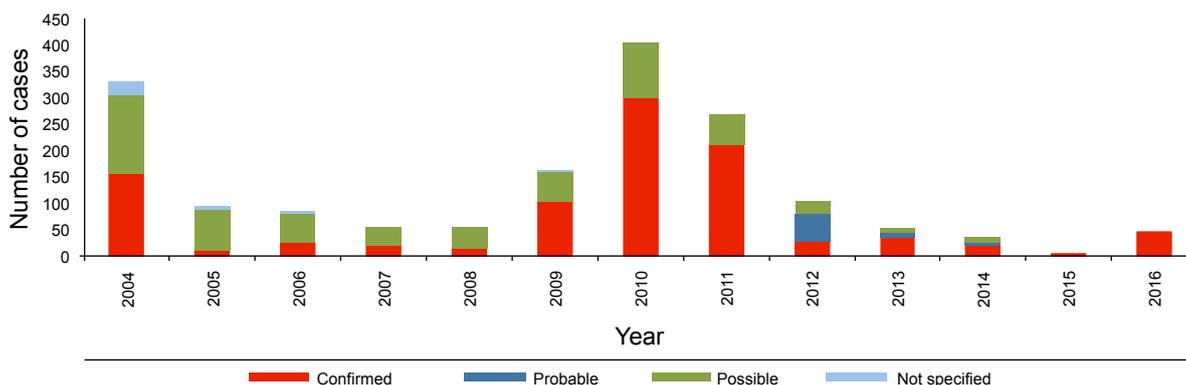


Figure 1. Number of measles cases by year and case classification, 2004-2016

outside of Ireland for twelve cases and was unknown for four cases. Of the 43 cases, the setting where the case most likely acquired measles was reported as home (42%, n=18), hospital in-patient (12%, n=5), overseas (7%, n=3), hospital out-patient (5%, n=2), work (5%, n=2), other healthcare facility (2%, n=1) and was unreported for the remainder (28%, n=12). Twenty four (56%) of the cases were male and 19 (44%) were female. A breakdown of the total cases and the crude incidence rate per 100,000 population by HSE Area is given in table 1.

The figures presented above are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) system on 25th July 2017. These figures may differ slightly from those published previously due to ongoing updating of notification data on CIDR. The 2016 census data was used here to calculate rates.

WHO require information on discarded measles cases ie measles cases investigated and who were found not to meet the case definition. The HSE Areas reported the number of discarded CIDR cases to HPSC. For 2016, 154 cases were discarded from CIDR as following investigation as they were not considered to be measles cases. Discarded cases are not available in CIDR for reporting and are not included in the analysis above.

The Regional Verification Commission for Measles and Rubella Elimination (RVC) was established in the WHO European Region in 2011 to evaluate the documentation submitted by Member States with a view to verifying the elimination of measles and rubella at the regional level. The RVC has recommended establishment of national verification committees (NVC) in all Member States and suggested a standard format for annual status reports from countries.

These reports include information on measles and rubella epidemiology, virologic surveillance supported by molecular epidemiology, the analysis of vaccinated population cohorts and the quality of surveillance, and the sustainability of the country's National Immunisation Programme. The review and evaluation of annual national reports will continue for at least three years after the RVC confirms that, according to established criteria, endemic measles and rubella transmission have been interrupted in all Member States of the Region. Only then can Regional elimination be declared.² The WHO European RVC concluded at the sixth meeting of the European RVC for measles and rubella elimination in June 2017 that Ireland provided evidence for interrupted transmission of measles virus for 24 months.³

The NVRL is the WHO accredited National Measles Rubella laboratory for Ireland. Laboratories that perform measles/ rubella investigations in their own laboratories are requested to send all positive samples for measles or rubella to the NVRL for confirmatory testing. In addition, a selection of negative specimens should also be referred. Genotyping is undertaken in the NVRL on a selection of specimens.

Table 1. Number of measles cases and the crude incidence rate per 100,000 population (CIR) by HSE Area in 2016

| HSE Area | Number | CIR |
|----------|--------|-----|
| HSE E | 4 | 0.2 |
| HSE M | 0 | 0.0 |
| HSE MW | 4 | 1.0 |
| HSE NE | 1 | 0.2 |
| HSE NW | 0 | 0.0 |
| HSE SE | 5 | 1.0 |
| HSE S | 27 | 3.9 |
| HSE W | 2 | 0.4 |
| Total | 43 | 0.9 |

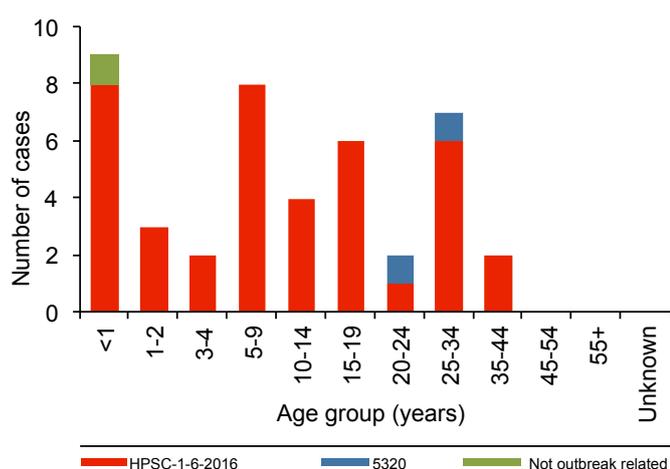


Figure 2. Number of measles cases in 2016 by age group and outbreak identifier

HPSC-1-6-2016 is the outbreak identifier for the 2016 national measles outbreak

5320 is the outbreak identifier for a 2016 localised measles outbreak with two cases

One case in 2016 was not related to an outbreak in Ireland

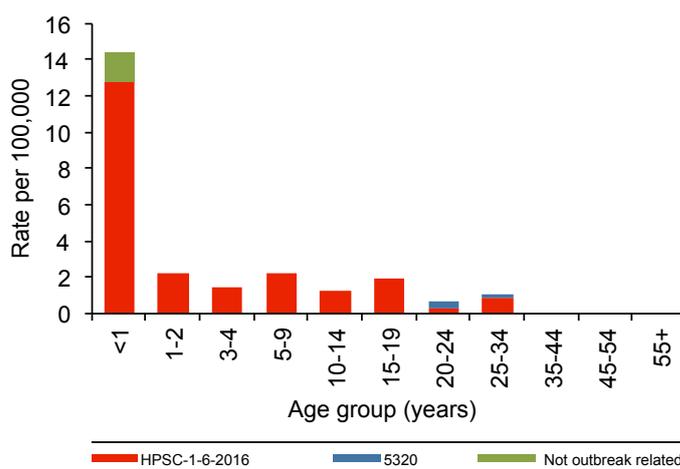


Figure 3. The age specific incidence rate (per 100,000) of measles cases in 2016 by age group and outbreak identifier

HPSC-1-6-2016 is the outbreak identifier for the 2016 national measles outbreak

5320 is the outbreak identifier for a 2016 localised measles outbreak with two cases

One case in 2016 was not related to an outbreak in Ireland

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References

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2. WHO. Regional Verification Commission for Measles and Rubella Elimination (RVC). Available at <http://www.euro.who.int/en/health-topics/communicable-diseases/measles-and-rubella/activities/regional-verification-commission-for-measles-and-rubella-elimination-rvc>
3. WHO. 6th Meeting of the European Regional Verification Commission for Measles and Rubella Elimination (RVC). Available at <http://www.euro.who.int/en/health-topics/communicable-diseases/measles-and-rubella/publications/2017/6th-meeting-of-the-regional-verification-commission-for-measles-and-rubella-elimination-rvc>