

# 1.2 Measles

## Summary

Number of cases, 2011: 267  
 Number of confirmed cases, 2011: 211  
 Crude incidence rate, 2011: 5.8/100,000  
 Crude confirmed incidence rate, 2011: 4.6/100,000

In 2011, there were 267 measles cases (5.8/100,000) notified in Ireland compared to 403 cases in 2010. There was a measles outbreak in the HSE-E during 2011; the majority (87%, n=232/267) of cases notified in Ireland in 2011 and the highest crude incidence rate was in the HSE-E (table 1). Measles cases by HSE Area

and week and month of notification are shown in figure 1. Forty-nine percent (n=130/267) of cases in 2011 were notified from early August to mid-October (Weeks 32-41). This increase in cases was mainly due to a measles cluster in school-aged children attending a residential summer camp in north Dublin which then spread to the north inner city and Ballymun areas of Dublin. The HSE-E outbreak and control measures are described in detail in Epi-Insight.<sup>1</sup>

Of the 267 measles cases notified in 2011, 21% (n=56) were classified as possible while 79% (n=211) were classified as confirmed, giving a crude confirmed incidence rate of 4.6 per 100,000 population. Of the confirmed cases, it was known that 69% (n=146) were

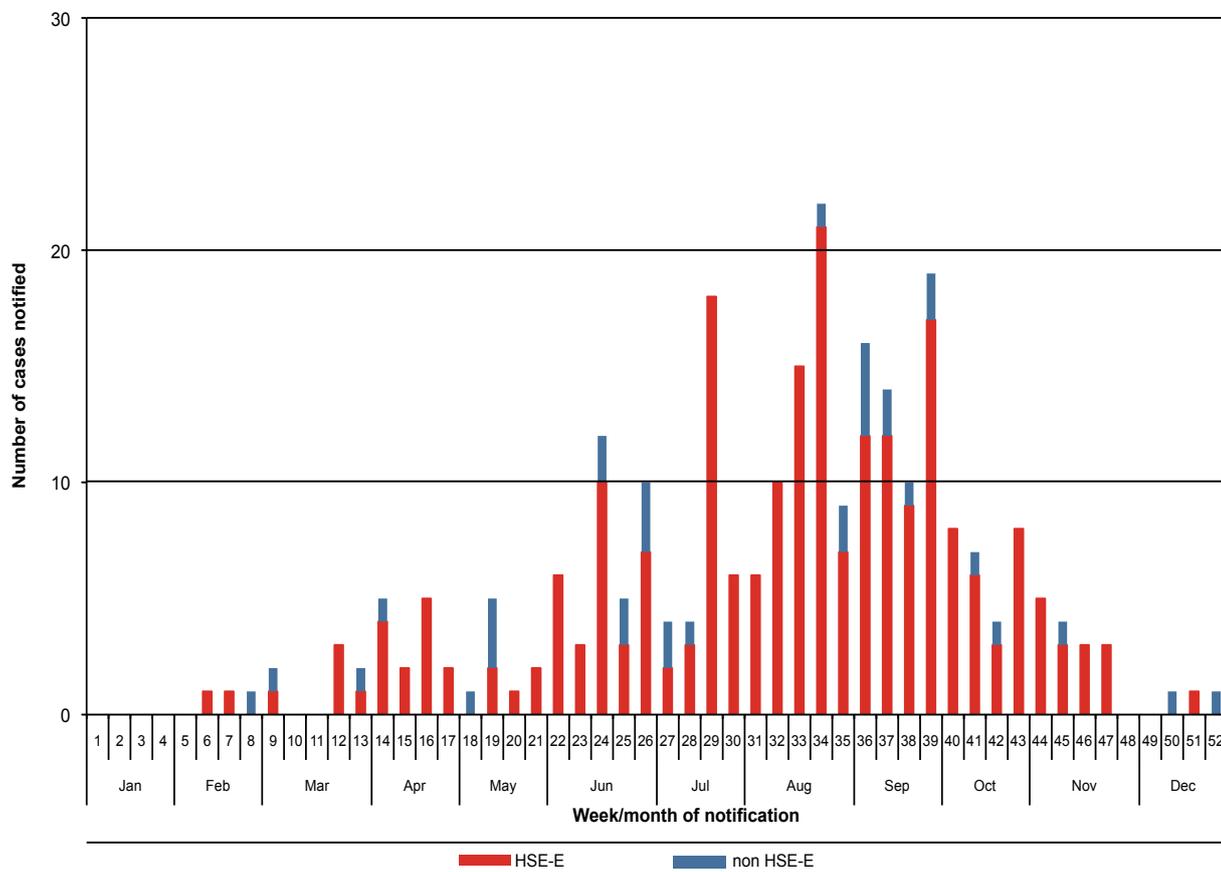


Figure 1. Number of notified measles cases by week and month in 2011 and by HSE Area  
 HSE-E indicates measles cases notified in the HSE-E  
 Non HSE-E indicates measles cases notified in the HSE-M, MW, NE, NW, SE, SA and WA

laboratory confirmed and 31% (n=65) were classified as confirmed because they were epidemiologically linked to a laboratory confirmed case.

In 2011, measles cases ranged in age from three months to 41 years; with a mean age of seven years and a median age of five years (age was unknown for one case). The number of cases by age group and the age specific incidence rates are shown in figures 2 and 3. The largest number of cases was in those aged 1-2 years (figure 2) and the highest age specific incidence rate was in those aged <1 year (figure 3). Of the 267 measles cases, 55% (n=147) were male, 45% (n=119) were female while gender was not reported for one case.

Laboratory results were provided for 69% (n=184/267) of cases in 2011. Fifty-five percent (n=146/267) of cases were laboratory test positive for measles. A further three percent (n=8/267) were specified as serology positive for measles; however, as these cases were recently vaccinated, these positive results may have represented serological responses to the measles vaccine. The laboratory results for three percent (n=9/267) were recorded as inconclusive/weakly positive.

Eight percent (n=21/267) of cases were laboratory negative for measles, however, for forty-three percent (n=9/21) of these the specimens were not taken at the optimal time following disease onset or the date of specimen collection in relation to disease onset was unknown (the optimal time following disease onset for collecting oral fluid specimens for measles IgM testing is greater than seven days to two months and the optimal time for collecting serum specimens for measles IgM testing is greater than four days to two-three months). Fifty-seven percent (n=12/21) of the cases that were laboratory negative for measles were known to have a specimen collected at the optimal time. Ninety-two percent (n=11/12) of these were classified as possible

cases and eight percent i.e. one case (n=1/12) was classified as confirmed as it was epi-linked to laboratory confirmed case.

Measles vaccine in Ireland is available as part of the combined measles-mumps-rubella (MMR) vaccine. In Ireland, vaccination with the first dose of MMR is routinely recommended at twelve months of age and the second dose at four to five years of age.

Vaccination data were reported for 85% (n=226/267) of measles cases in 2011. Fifty-seven percent (n=152/267) of cases were unvaccinated; of these 20% (n=30/152) were less than 12 months of age.

Twenty-four percent (n=64/267) of cases were reported to have one dose of MMR vaccine; the majority (70%, n=45/64) of these were less than six years of age. Seventy percent (n=45/64) of those reported to have one dose of MMR were classified as confirmed. Sixty-three percent (n=40/64) with one dose of MMR had a vaccination date reported, 20% (n=13/64) were vaccinated <14 days before onset of illness and were probably incubating measles at the time of vaccination.

Four percent (n=10/267) of cases were reported as having received two doses of MMR. Sixty-percent (n=6/10) of these cases were classified as confirmed and only a third (n=2/6) of these cases had both vaccination dates reported.

Thirty cases were reported as hospitalised, representing 11% (n=30/267) of all cases. The median age of hospitalised cases was four years and the mean age was nine years (range six months to 33 years). The majority (97%, n=29/30) of hospitalised cases were classified as confirmed. Length of hospitalisation was reported for 67% (n=20/30) with a median duration of stay of four days (range one to 14 days). Of the 30 hospitalised cases, 17% (n=5) had no MMR details reported while

Table 1. Number of notified measles cases and the crude incidence rate per 100,000 population (CIR) by HSE Area in 2011

HSE Area	Number	CIR
HSE-E	232	14.3
HSE-M	5	1.8
HSE-MW	5	1.3
HSE-NE	8	1.8
HSE-NW	1	0.4
HSE-SE	2	0.4
HSE-S	6	0.9
HSE-W	8	1.8
<b>Total</b>	<b>267</b>	<b>5.8</b>

53% (n=16) were unvaccinated. Twenty-three percent (n=7/30) were reported to have one dose of MMR; 57% (n=4/7) of these had a vaccination date recorded, one (25%, n=1/4) of these was vaccinated six days prior to onset and may have been incubating measles at the time of vaccination. The two remaining hospitalised cases (7%, n=2/30) was reported to have had two doses of MMR; however the vaccination dates and other vaccination details were only reported for one of these cases.

Reported complications of measles included pneumonia (2%, n=3/160), seizures (1%, n=1/161), chest infection (n=1), near cot death (n=1), extremely high temperature (n=1), tonsillitis and chest infection (n=1) and vomiting and diarrhoea resulting in dehydration (n=1).

Of the 267 cases, the setting where the case most likely acquired measles was reported as home (31%, n=82), daycare or pre-school (7%, n=19), summer camp/school (3%, n=7), overseas (2%, n=6), secondary school (2%, n=6), hospital in-patient (2%, n=5), hospital out-patient (2%, n=5), primary school (2%, n=5), third level (1%, n=2), work (1%, n=2), after school club/community club (0.4%, n=1), other healthcare facility (0.4%, n=1) and was unreported for the remainder (47%, n=126).

Twenty-six localised measles outbreaks were notified during 2011, with 152 associated cases of illness. The outbreak locations included four community outbreaks (with 47 ill), four crèche outbreaks (with 25 ill), four outbreaks occurring among extended families (with 25 ill), six private houses (with 19 ill), three school outbreaks (with 16 ill), one hospital outbreak (with four ill), one associated with an after school youth club (with eight ill), one university/college (with two ill), one workplace (with two ill) and for one outbreak the location was not specified but was reported to have cases (with four ill) that had links to a separate outbreak.

The figures presented in this summary are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) system on 13<sup>th</sup> September 2012. These figures may differ slightly from those published previously due to ongoing updating of notification data on CIDR.

#### Reference

1. Ward M, Ennis O, Fitzgerald M on behalf of the outbreak control team. Measles outbreak in Eastern Ireland, 2011. *Epi-Insight*. 2011;12(11). Available online: <http://ndsc.newsweaver.ie/epiinsight/17vq05154uf?a=1&p=18519355&t=17517774>

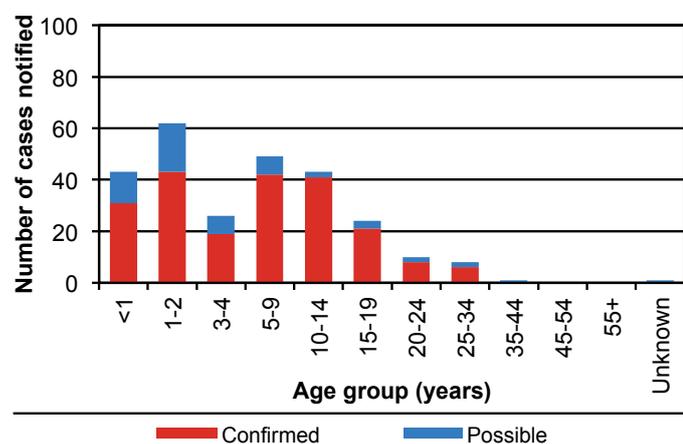


Figure 2. Number of notified measles cases in 2011 by age group and case classification

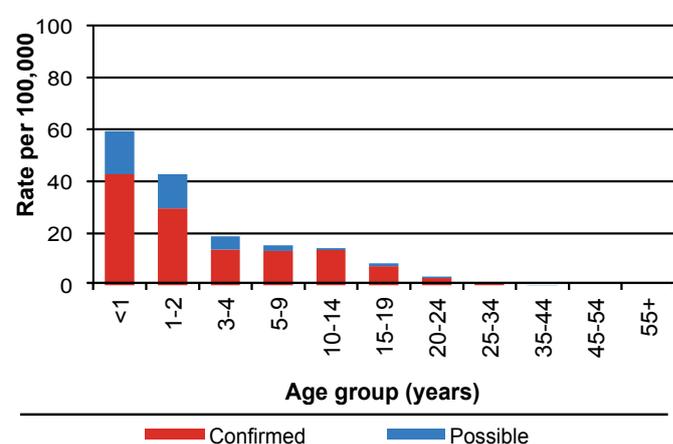


Figure 3. The age specific incidence rate (per 100,000) of notified measles cases in 2011 by case classification