



Measles

Summary

Number of cases, 2014: 33

Number of confirmed cases, 2014: 20

Crude incidence rate, 2014: 0.7/100,000

Crude confirmed incidence rate, 2014: 0.4/100,000

There were 33 measles cases (0.7/100,000) in 2014. This is the lowest annual number reported since 1948 (figures 1 and 2).

Fifteen (45%) of the cases in 2014 were linked to an outbreak associated with a university/college. Of the 15 cases, 12 were in the HSE W and three were in the HSE S. The cases ranged in age from 14 years to 33 years with a median age of 19 years and a mean age of 20 years. Eleven (73%) of the cases were unvaccinated, one (7%) had received one dose of MMR and three (20%) were reported to have received two doses. Of the cases reported to have received two doses of MMR vaccine only one had both vaccination dates reported. Of the 15 cases, ten were classified as confirmed and five were classified as probable. Measles virus from four of the cases were genotyped by the NVRL and all were genotype D8.

Two other localised measles outbreaks were notified during 2014. One of these was an outbreak in a workplace with two ill. One of the cases in this outbreak occurred in 2013 and was therefore in the 2013 data and 2013 annual report. The cases were in the age groups 25-34 years and 35-44 years and the vaccination status of both cases was reported as unknown. Measles virus from both of these cases was genotyped by the NVRL and both were genotype D8.

The remaining outbreak was associated with a private house with two ill. Both cases were laboratory confirmed. These cases were in the age groups 20-24 years and 25-34 years and both were unvaccinated.

Measles cases by HSE Area are shown in table 1. The largest number (45%, n=15/33) of cases in 2014 and the highest crude incidence rate was in the HSE W (table 1). The majority of the cases in the HSE W (80%, n=12/15) and the HSE S (75%, n=3/4) were linked to the university/college outbreak.

Of the 33 measles cases 24% (n=8) were classified as possible, 15% (n=5) were classified as probable while 61% (n=20) were classified as confirmed, giving a crude confirmed incidence rate of 0.4 per 100,000 population.

The cases ranged in age from six months to 37 years; with a median age of 19 years and a mean age of 16 years. The number of cases by age group and the age specific incidence rates are shown in figures 3 and 4. Seventy one per cent (n=15/21) of the cases aged 10-34 years were linked to the university/college outbreak. Of the 33 measles cases, 67% (n=22) were male and 33% (n=11) were female.

Laboratory results were provided for 25 cases in 2014. Sixty one per cent (n=20/33) of cases were laboratory test positive for measles. Three cases were laboratory negative for measles, however, for all three of these the specimens were not taken at the optimal time following disease onset. For two cases the laboratory tests were inconclusive for measles.

Isolates from eight cases were genotyped by the NVRL. Five were genotype D8, four of these had country of infection recorded as Ireland, while for one the country of infection was recorded as unknown. Three cases were genotype B3; the country of infection of these cases was Philippines (n=2) and Japan (n=1).

Of the 33 cases, the country of infection was recorded as Ireland for 15 cases, Philippines for two cases, Japan for one case and was unknown or not reported for the remainder.

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. A MMR catch up campaign started in the academic year 2012/2013 and continued during the academic year 2013/2014. During the MMR catch up campaign the HSE offered a dose of MMR vaccine to children/students attending primary schools, second level schools and special schools and home-schooled students who had not completed (or were not sure they had) their two dose MMR vaccination schedule.

Vaccination data were reported for 88% (n=29/33) of measles cases in 2014. Sixty one per cent (n=20/33) of cases were unvaccinated; of these 30% (n=6/20) were less than 12 months of age.

Twelve percent (n=4/33) of cases were reported to have one dose of MMR vaccine; the majority (75%, n=3/4) of these were less than three years of age. One of those reported to have one dose of MMR was classified as confirmed. All four cases had a MMR vaccination date reported.

Fifteen per cent (n=5/33) of cases were reported as having received two doses of MMR. Only two of these cases had both vaccination dates reported. Three of the cases with two MMR doses were classified as confirmed, one case was classified as probable and one as possible.

Of the 33 cases, the country of birth was recorded as Ireland for seven cases, Romania for one, Japan for one and was unknown or not specified for the remainder.

Seven cases were reported as hospitalised, representing 21% (n=7/33) of all cases. The mean and median age of hospitalised cases was 23 years with cases ranging in age from 11 months to 37 years. All seven cases were classified as confirmed. Length of hospitalisation was reported for four cases with a median duration of stay of six days (range three to eight days). Four hospitalised cases were unvaccinated and three had no MMR details reported.

Reported complications of measles included pneumonia and seizures (4%, n=1/25), dehydration (n=1) and abnormal liver function tests and hematemesis (vomiting blood) (n=1).

Of the 33 cases, the setting where the case most likely acquired measles was reported as third level (18%, n=6), home (9%, n=3), overseas (9%, n=3), work (9%, n=3), and was unreported for the remainder (55%, n=18).

The figures presented above are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) system on 19th August 2015. These figures may differ slightly from those published previously due to ongoing updating of notification data on CIDR.

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 2014, 59 cases were discarded from CIDR as following investigation they were not considered to be measles cases. Discarded cases are not available in CIDR for reporting and are therefore not included in the analysis above.

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 IgM to the NVRL for confirmatory testing. In addition, a selection of IgM negative specimens should also be referred. Genotyping is undertaken on a selection of specimens.

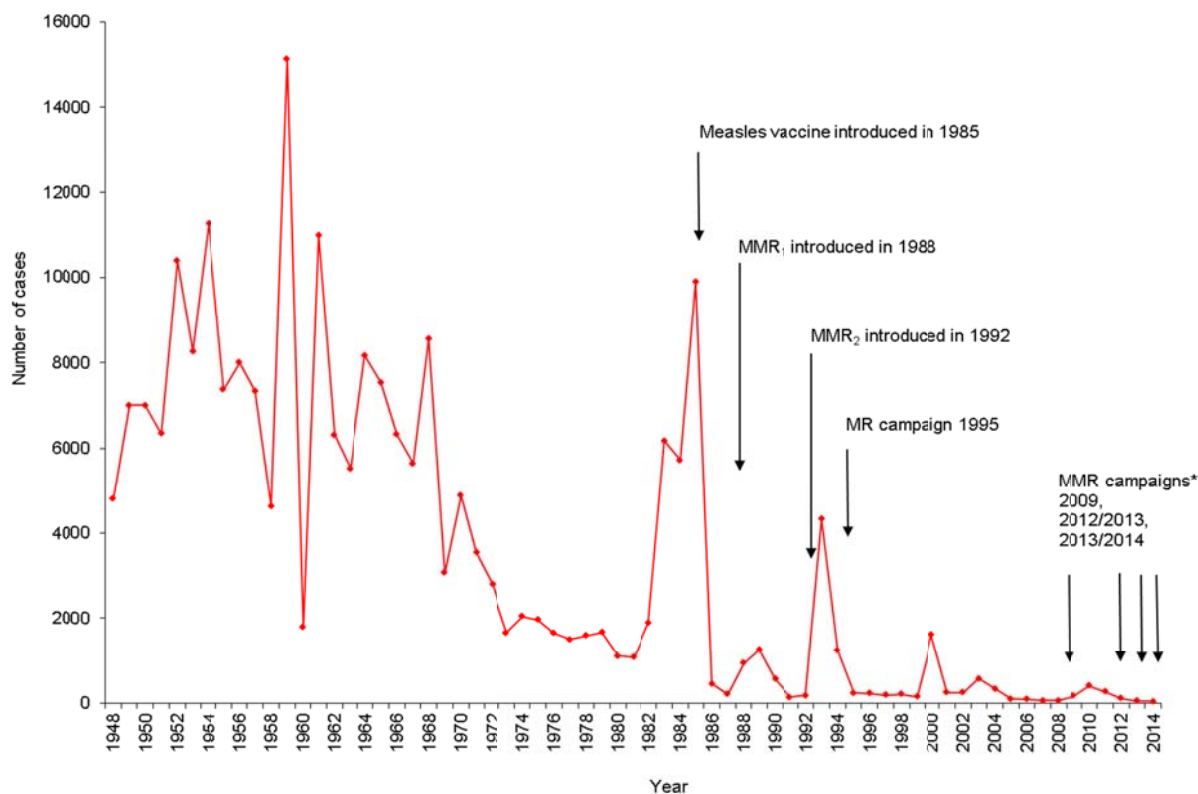


Figure 1. Annual number of measles cases in Ireland 1948-2014, the year of introduction of the measles vaccine and the measles mumps rubella (MMR) vaccine and vaccination campaigns years
 A measles and rubella (MR) campaign for primary school age children was conducted in 1995

*A MMR vaccination campaign started in April 2009 for students in fourth, fifth and sixth year of second level schools

*A MMR catch-up campaign was conducted during the 2012/2013 and 2013/2014 academic years for children/students attending primary schools, second level schools and special schools and home-schooled students who had not completed (or were not sure they had) their two dose MMR vaccination schedule.

MMR₁-first dose of MMR

MMR₂-second dose of MMR

1948-June 2000 data collated by DoHC

July 2000-2014 data collated by HPSC

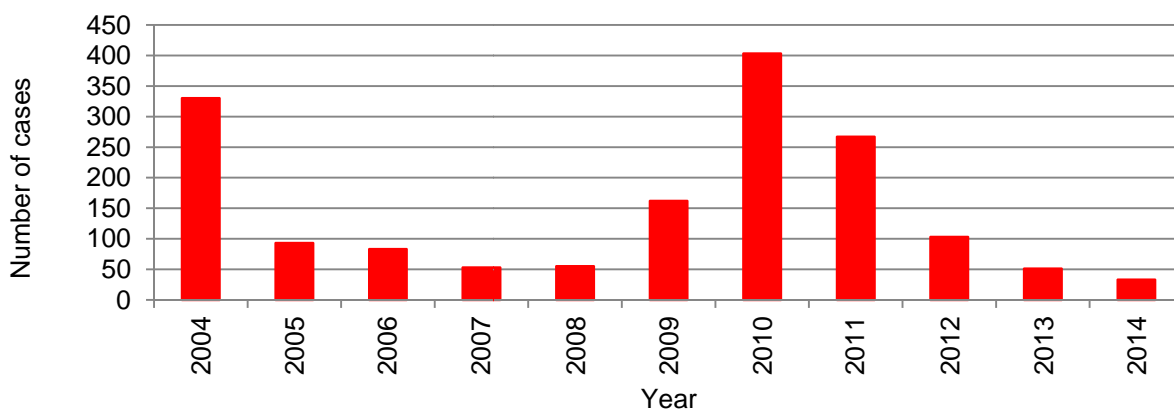


Figure 2. Number of measles cases by year, 2004-2014

Table 1. Number of measles cases and the crude incidence rate per 100,000 population (CIR) by HSE Area in 2014

HSE Area	Number	CIR
HSE E	9	0.6
HSE M	1	0.4
HSE MW	2	0.5
HSE NE	1	0.2
HSE NW	0	0.0
HSE SE	1	0.2
HSE S	4	0.6
HSE W	15	3.4
Total	33	0.7

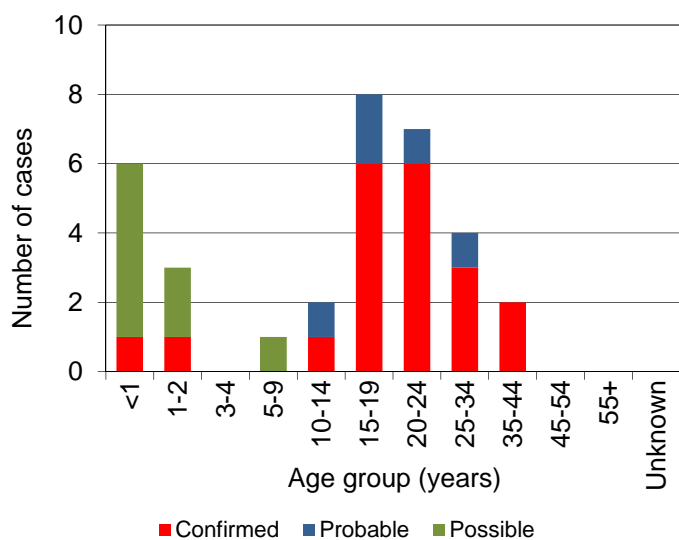


Figure 3. Number of measles cases in 2014 by age group and case classification

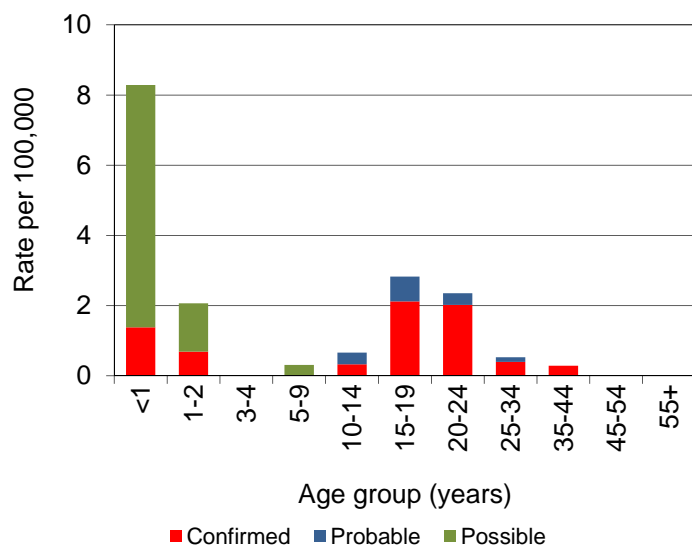


Figure 4. The age specific incidence rate (per 100,000) of measles cases in 2014 by case classification