

1.6 Pertussis

Summary

Number of cases, 2012: 458
 Number of cases, 2011: 229
 Crude incidence rate, 2012: 10.0/100,000

Following the introduction of pertussis vaccine in the 1950s the number of pertussis cases notified declined, however, following a pertussis vaccine scare in the mid-1970s, with a decline in pertussis vaccination uptake, the notifications started to increase again (figure 1). This trend was reversed in the 1990s as notifications decreased again to a low of 40 cases in 2003 (figure 1). Between 2004 and 2010 there was on average 87

cases notified each year. The number of pertussis cases notified doubled in 2011 (n=229) compared to 2010 (n=114) (figure 2). In 2012, the number of pertussis cases notified doubled again with 458 cases notified (figure 2).

Pertussis cases in 2012 by week of notification are shown in figure 3. The majority of the cases in Weeks 16 and 26 relate to an outbreak over several months in which clinical cases were notified in two batches to the HSE-NW.

Of the 458 cases in 2012, 58% (n=264) were classified as confirmed, 12% (n=56) were classified as probable and 30% (n=138) were classified as possible.

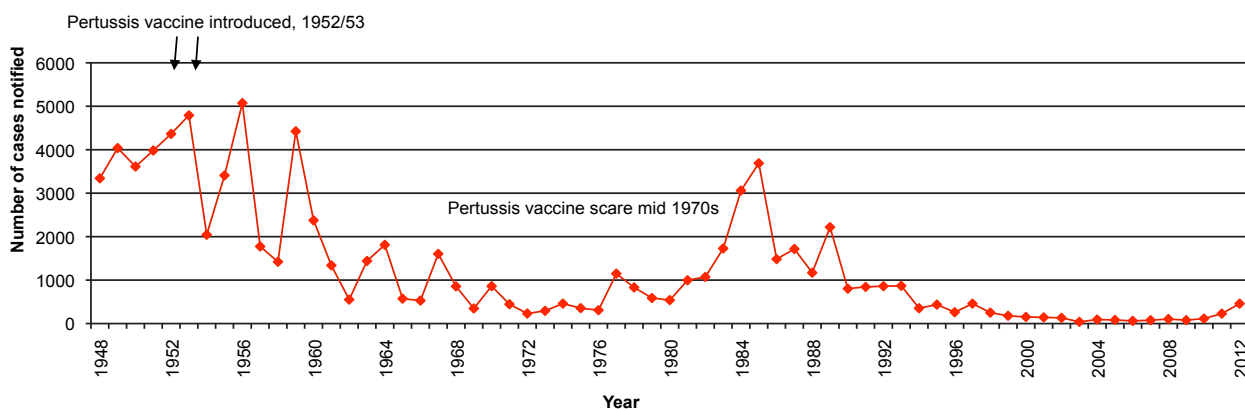


Figure 1. Number of notified pertussis cases in Ireland by year, 1948-2012
 1948-June 2000 data collated by DoHC
 July 2000-2012 data collated by HPSC

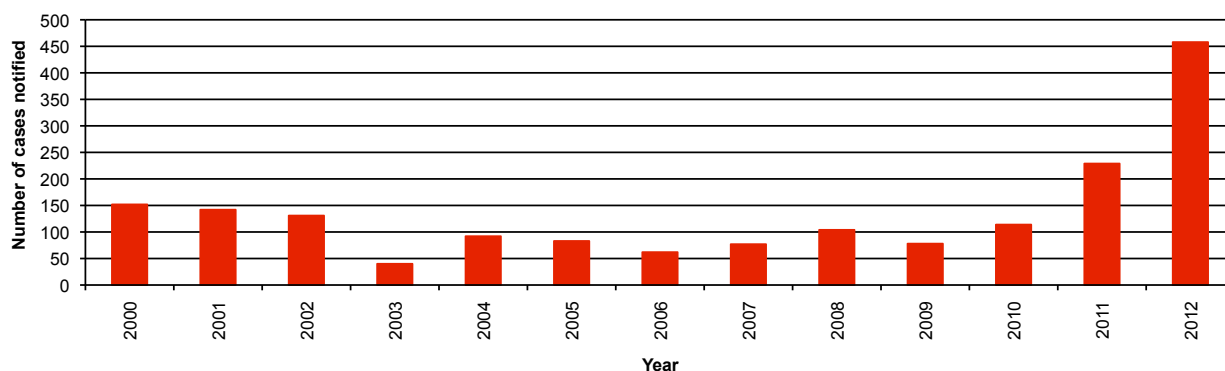


Figure 2. Number of notified pertussis cases in Ireland by year, 2000-2012

The largest number of cases was notified in the HSE-E while the highest crude incidence rate was in the HSE-NW (table 1).

In 2012, the largest number of cases (n=162/458, 35%) and the highest age-specific incidence rate (224/100,000) were in children aged less than one year with nearly a third (n=143/458, 31%) of all cases aged less than six months (figures 4 and 5). Fifty-four percent of cases (n=247) were female and 46% (n=211) were male.

Two deaths occurred in children less than three months of age, both children were born prematurely.

In Ireland it is recommended that children be vaccinated with an acellular pertussis-containing vaccine at two, four and six months of age and a booster dose at four to five years of age. In 2008 the National Immunisation Advisory Committee (NIAC) recommended a booster with low dose acellular pertussis vaccine for children aged 11-14 years. The adolescent pertussis booster was introduced into the school programme (in 19 LHOs) in 2011 and to all schools in 2012. In August 2012, an additional pertussis booster was recommended for health care workers and pregnant women; please see www.immunisation.ie for additional information on pertussis vaccination recommendations.

In 2012, the vaccination status was reported for two-thirds (n=308/458, 67%) of pertussis cases. Nearly one third of cases (n=145/458, 32%) were unvaccinated; these cases ranged in age from four weeks to 72 years, with 71% (n=105/145) of these cases aged less than six months. Twenty-eight percent of the unvaccinated cases (n=41/145) were less than two months of age and were therefore not eligible for pertussis vaccine in the Irish schedule.

Twelve percent (n=53/458, 12%) of cases were reported as incompletely vaccinated, with 45% (n=24/53, 45%) of these less than six months of age and were therefore not eligible for three doses of pertussis vaccine in the Irish schedule.

Twenty-four percent (n=110/458, 24%) of cases were reported as completely vaccinated for their age; 49% (n=54/110) of these were reported to have had three doses of pertussis vaccine, 19% (n=21/54) were reported as having four doses while the number of doses was not specified for the remainder. Of the cases reported as having four doses, 33% (n=7/21, 33%) were classified as confirmed.

Forty-four localised pertussis outbreaks were notified during 2012, with 164 associated cases of illness. Forty one were family outbreaks (with 107 ill), two were

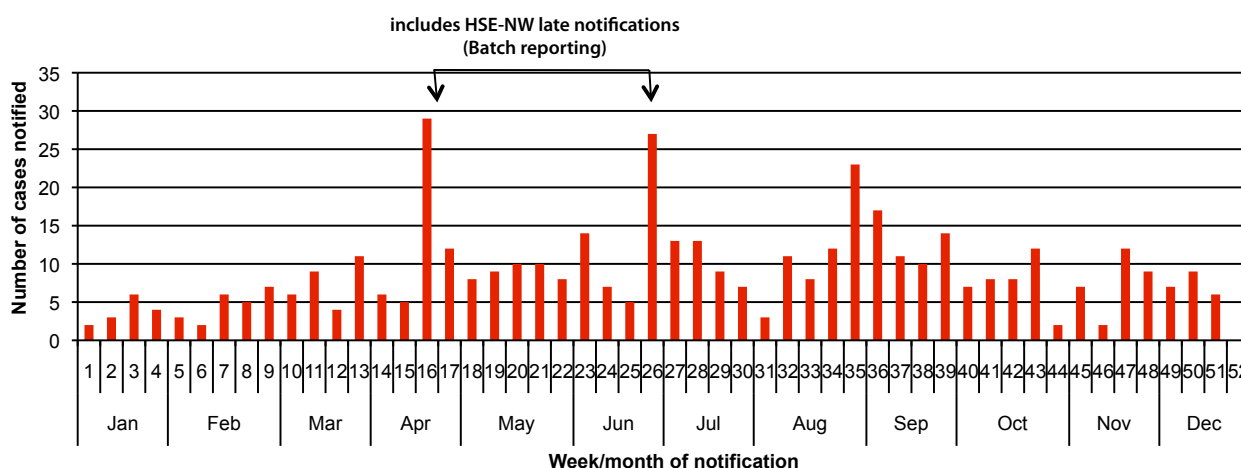


Figure 3. Number of notified pertussis cases in 2012 by week and month of notification.

Table 1. Number of pertussis cases notified and the crude incidence rate per 100,000 population (CIR) by HSE Area in 2012

HSE Area	Number	CIR
HSE-E	159	9.8
HSE-M	13	4.6
HSE-MW	13	3.4
HSE-NE	21	4.8
HSE-NW	74	28.6
HSE-SE	54	8.1
HSE-S	79	15.9
HSE-W	45	10.1
Total	458	10.0

community outbreaks (with 54 ill) and one was a crèche outbreak (with three ill).

The figures presented in this summary are based on data extracted from the Computerised Infectious Disease Reporting (CIDR) system on 2nd August 2013. These figures may differ slightly from those published previously due to ongoing updating of notification data on CIDR.

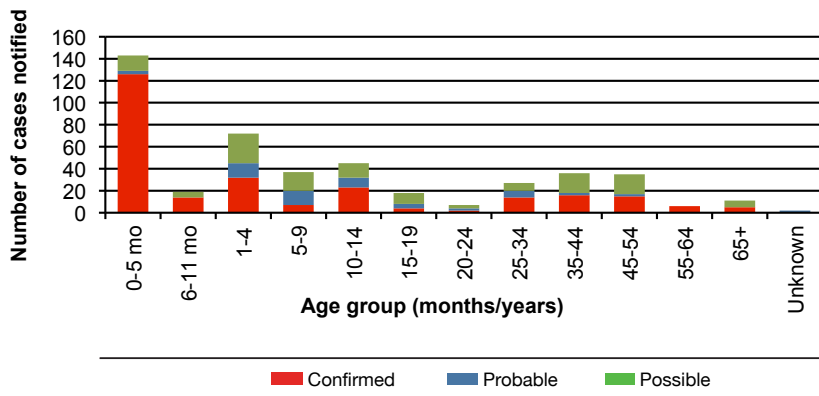


Figure 4. Number of notified pertussis cases in 2012 by age group and case classification. "Mo" in graph indicates months i.e. 0-5 months and 6-11 months, the remaining age groups are in years

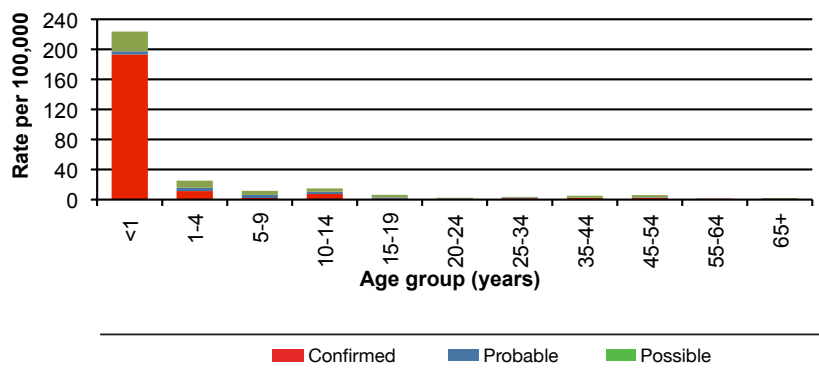


Figure 5. The age specific incidence rate (per 100,000 population) of notified pertussis cases in 2012 by case classification