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DEPARTMENT OF PUBLIC HEALTH, HSE SOUTH (CORK & KERRY)

IMMUNISATION FOCUS

Measles Outbreak

We have recently seen a significant increase in measles cases in Ireland with 165 cases in 2009 compared to 55 for 2008. The increase has been even more marked in Cork and Kerry with 53 cases compared to 5 in 2008. Ireland experienced its last major measles outbreak in 2000, when more than 1600 cases and three deaths occurred.

Clinical Information

Measles is an acute highly infectious viral illness transmitted via droplet infection. Almost all who are infected develop symptoms. The first symptoms of measles occur after a 10-12 day incubation period following exposure. The prodrome is heralded by the onset of fever, malaise, conjunctivitis, coryza, and tracheobronchitis and lasts 2-4 days. This clinical picture is characterized by fever, which increases in a stepwise fashion, often reaching 40.6^0C. Koplik's spots, found on the buccal mucosa are believed to be pathognomonic for measles. These salt-grain-like spots appears on the buccal mucosa 1-2 days before onset of rash and may be noted for an additional 1-2 days after rash onset. The rash is an erythematous maculopapular eruptions that usually appears 14 days after exposure and spreads from the head (face, forehead, hairline, ears and upper neck) over the trunk to the extremities during a 3-4 day period. The rash is usually most confluent on the face and upper body and initially blanches on pressure. During the next 3-4 days it fades in the order of its appearance, and assumes a non-blanching brownish appearance.

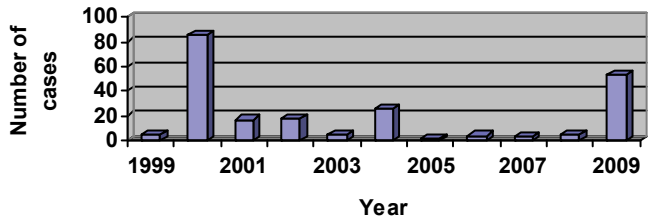
Measles is considered infectious 2 to 4 days before until 4 days after rash onset.

Complications of measles infection are common. In industrialized countries the most commonly reported complication are otitis media (7%-9%), pneumonia (1%-6%), diarrhoea, post infectious encephalitis (1 per 1,000 to 2,000 cases), subacute sclerosing panencephalitis (SSPE) (1 per 100,000 cases) and deaths (1-3 per 1000 cases). Complications are likely to be present if the fever has not decreased within 1-2 days of rash onset. The risk of serious complications and death is increased in children less than 5 years of age and adults greater than 20 years of age. Pneumonia which is responsible for approximately 60% of deaths, is more common in young patients, whereas acute encephalitis occurs more frequently in adults. Pneumonia may occur as primary viral pneumonia or as a bacterial super-infection. Other complications include thrombocytopaenia, laryngotracheobronchitis, stomatitis, hepatitis, appendicitis, ileocolitis, pericarditis and myocarditis, glomerulonephritis, hypocalcaemia, and Stevens-Johnson syndrome.

Epidemiology in Cork & Kerry

The last significant increase in cases was in 2000 as part of a national outbreak, Figure 1. All of the cases in 2009 occurred in the last five months of the year (August=2; September=8, October=2, November=13; December=28).

Figure 1. Measles Notification, Cork & Kerry, 1999-2009



Cases ranged from 4 months to 34 years. Twenty-one (40%) were under 5 years, 3 of whom were under 1 year.

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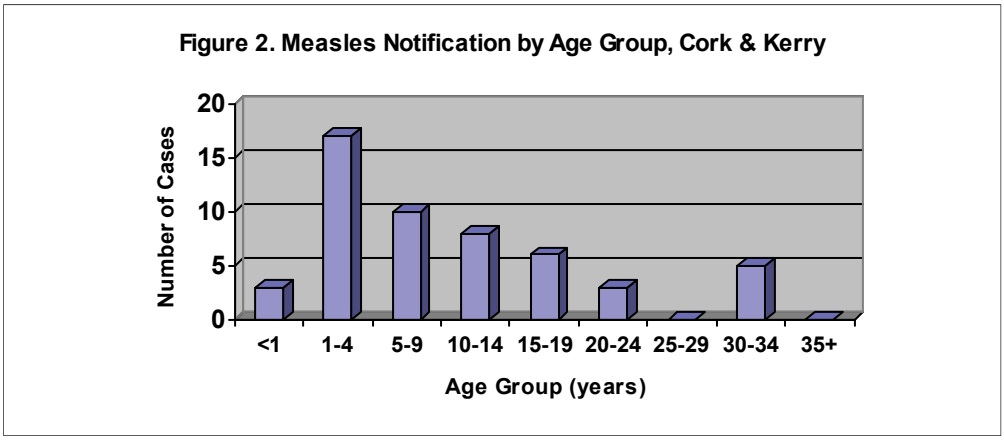
We wish to thank Dr. Suzanne Cotter and Ms. Sarah Gee, HPSC, for permission to reproduce parts of an article in EpiInsight January 2010.
Please note data for 2009 are provisional.



Enhanced information available to date:
Hospitalisations: 51% (27 of 53 cases). Two young children required ventilation.
Laboratory confirmation: 70% (37 of 53 cases).
Vaccination Status: Information available on 44 cases - all unvaccinated.

The main focus of the outbreak to date has been Kerry (35 cases) and West Cork (16 cases), particularly the Tralee and Bantry areas. The outbreak is disproportionately affecting the Traveller community, with a significant number of the cases reported originating from this community. Most of the cases in non-Travellers have been linked to the area where the outbreak is occurring (school, healthcare setting or community).
Four cases appear to have acquired measles in the healthcare setting, 2 children in hospital and 2 staff working in GP surgeries. It is a concern that in December, 2 cases were notified in the Cork City area, with no apparent links to the ongoing outbreaks in West Cork and Kerry. This is evidence of a wider spread in the community. Almost certainly additional cases are occurring which are not being recognised as measles and are not notified to Public Health.

MMR Uptake

This measles outbreak is occurring because there is still a significant number of unvaccinated children and young adults in Ireland. Although the uptake of MMR has improved and is now 92% at 24 months it is important to note that the two areas most affected have the lowest uptake of MMR at 86% in Kerry and 82% in West Cork, compared to 93% in North Cork and 95% in North/South Lee.

Control Measures

Attaining high levels of MMR uptake, particularly in communities with a history of low uptake, is vital to control this outbreak. Community Medical Services have provided special immunisation clinics in those areas most affected. We urge GPs to opportunistically vaccinate any unvaccinated children who present to surgery, particularly Traveller children.

MMR vaccination may provide protection to a susceptible contact if given within 72 hours of exposure.

In certain specific circumstances human normal immunoglobulin may be indicated for susceptible contacts within 5 days of contact. These would include those who are immunosuppressed and pregnant.

In order to prevent transmission of measles in the healthcare setting, all healthcare workers (both clinical and non clinical) are recommended to have either serological proof of immunity or evidence of having received 2 doses of MMR. Those who are not immune should receive 2 doses of MMR. Post vaccination testing is not required.

Due to its high infectivity, suspect measles cases should be quarantined. Clinical assessment should ideally be done in the home, or if not possible the patient should be seen at the end of the clinic to avoid exposing other patients to the case. In the Hospital setting, all suspect cases should be isolated upon entry to the hospital and appropriate infection control measures followed. Only those staff with documented measles immunity should provide care to a suspect measles case.

Please remember to notify all suspected cases of measles to Public Health as soon as possible. This allows us to rapidly investigate including - identification of contacts, provision of advice on MMR and immunoglobulin arranging salivary testing for measles IgM and gathering enhanced information to allow us to better track, and therefore control, the outbreak.

Conclusion

We are in the midst of a serious measles outbreak. A significant percentage of cases were hospitalised and 2 young children required ventilation. High levels of MMR uptake are required to control this outbreak.