Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

hpsc

Preventing measles transmission in health care settings

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Key points

- Measles is highly infectious vaccine preventable disease that is targeted for elimination[1]
- Two doses of MMR (measles-mumps-rubella vaccine) are needed[2]
- MMR is routinely offered at 12 months of age and again at 4-5 years of age
- Transmission in the health care setting is well documented in the literature but can be prevented if case isolation is instituted immediately[3,4]

Measles cases are infectious from 4-5 days before until 4 days after rash onset. The usual incubation period is 10 days (range 7-18 days). Transmission is both airborne and respiratory. Airborne transmission via aerosolised droplet nuclei has been documented in closed areas (e.g., schools, day care facilities, waiting areas and clinic examination rooms) for up to 2 hours after a person with measles last occupied the area.

The following recommendations are based on recommendations from the National Measles and Rubella Elimination Committee of the Department of Health and Children (2007)[1] and recommended infection control best practice guidelines

Recommendations to minimise risk of measles spread in health care settings:

1. Suspect or confirmed measles case seeking clinical assessment (GP surgery or A&E)

- As far as possible, children in the community should be seen either
  - at home by the GP or
  - at the GP's surgery at the end of the day
  - in A&E departments children should be triaged rapidly (ideally at reception) and isolated in separate room while waiting for nurse or doctor to assess them.
- Suspect measles cases (fever, cough, coryza, conjunctivitis, erythematous rash illness) in clinical setting should not wait or be assessed in common areas where they may expose other children or non-immune adults to the infection.
- Notify public health upon identification of a suspect case

2. Prevent nosocomial transmission in hospital settings- general

- Isolate case in separate room until 4 days after rash onset
- Airborne and droplet precautions should be employed

- Patients with potentially infectious measles should wear masks during transport to other areas of the hospital
- Because measles is highly infection, clinical examination rooms should not be used for 2 hours after occupied by a patient with known or suspect measles while infectious (within 4 days of rash onset)
- Notify public health

3. Prevent measles transmission to staff[1]

- All health care workers born after 1978 should have documented evidence of measles immunity or of having received two doses of MMR vaccine. Staff without such documentation should be vaccinated with 2 doses of MMR, separated by at least one month
- Only healthcare workers known to be immune to measles should provide care for patients with known or suspect measles
- Any staff member who has been exposed to measles and does not have evidence of immunity should receive MMR immediately unless contraindication to vaccination
- Susceptible staff who have been exposed to measles should be removed from patient contact and excluded from the 5th to the 21st day after exposure regardless of whether they received vaccine or immunoglobulin after exposure[1]
- If an outbreak occurs in the institution or area served by the institution all personnel should receive d a dose of MMR if they do not have evidence of immunity[1]

4. Prevent measles transmission to other patients

- All elective admissions to an institution associated with an outbreak should be immunised prior to admission[1]
- All unimmunised children who require urgent admission should be immunised if there are no contraindications[1]

5. Post exposure immunisation to prevent measles

- MMR vaccine may be effective at preventing measles when administered to a susceptible person within 72 hours following exposure.
    - Serological testing of staff during an outbreak is not generally recommended[1]
- In certain situations human normal immunoglobulin (HNIG) may be required as post exposure prophylaxis. HNIG may prevent or modify measles disease in susceptible persons when given at least within 5 days following exposure[1]
    - HNIG is recommended only for susceptible close contacts, particularly infants, pregnant women, and immune compromised persons for whom the risk of complications is highest. HNIG is not routinely recommended for susceptible healthcare workers.
    - How to obtain immunoglobulin. HNIG is not procured at a national level. Hospital pharmacies may stock the product or can procure the product from the following companies:
        - Promedicare (01) 4147520 supply Subgam which will be available within 48 hours once in stock in BPL.
        - Intrapharma (01) 4520505 supply Intratect which they carry a small quantity here in Ireland.

6. Healthcare workers with measles symptoms

- A healthcare worker who develops known or suspect measles should be excluded from work until four days after rash onset, or until measles is ruled out.

- Identification of non-immune contacts in the 4 days before rash onset should be done so that immunisation can be provided if needed

7. Visitors exposed to measles in health care settings

- Visitors exposed to measles in health care settings should be informed of their possible exposure, recommended to contact their GP if unsure of their susceptibility to measles, and to notify GP if they develop symptoms within 18 days of exposure (contact by phone prior to presenting in clinic).
- Non-immune persons exposed to measles should be advised to limit contact with others that may be susceptible from 7 through 18 days following exposure.

References

1. Eliminating Measles and Rubella and preventing rubella infection. Strategy for Ireland. Recommendations of the measles and rubella elimination committee of the Department of Health and Children 2007. Click here
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